

Iran Missile Chronology

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Last update: August 2011

This annotated chronology is based on the data sources that follow each entry. Public sources often provide conflicting information on classified military programs. In some cases we are unable to resolve these discrepancies, in others we have deliberately refrained from doing so to highlight the potential influence of false or misleading information as it appeared over time. In many cases, we are unable to independently verify claims. Hence in reviewing this chronology, readers should take into account the credibility of the sources employed here.

Inclusion in this chronology does not necessarily indicate that a particular development is of direct or indirect proliferation significance. Some entries provide international or domestic context for technological development and national policymaking. Moreover, some entries may refer to developments with positive consequences for nonproliferation

2011-2010

15 March 2011

Iranian official news agency IRNA reports the test launch of a Kavoshgar-4 (Explorer) rocket, aimed at testing the performance of the engine, the launch pad, the capsule and the electronic systems. Data and images are reportedly transmitted to a ground control station from a 75-mile orbit. The rocket is reportedly equipped with a capsule for a live animal, a test run for a future launch carrying a monkey in preparation for a possible manned space mission.

—"Iranian Satellite-Launch Rocket Lifts Off in Trial," *Global Security Newswire*, 17 March 2011; "Iran Test Fires Latest Space Rocket – IRNA," Reuters, 17 March 2011.

16 May 2011

Reportedly, an unpublished document submitted to the United Nations Security Council by the panel of experts monitoring Iran's compliance with Resolution 1929 (2010) asserts that Iran conducted two unreported test launches of long-range ballistic missiles in October 2010 and February 2011. In October 2010, Iran tested a Sejil/Ashura missile, and either a Sejil-1 or Sejil-2 in February 2011. A Shahab-3 test launch also occurred in February 2011. The document also cites close cooperation between North Korea and Iran in the development of ballistic missile systems. Reportedly, China opposes the official release of the document.

—"UN Report Cites Two Unreported Long-Range Iranian Missile Launches," Institute for Science and International Security, 17 June 2011, www.isis-online.org; Dan Bilefsky, "China Tried to Bar Report Critical of North Korea; Beijing Rallies to its Ally, U.N. Diplomats Say, over Transfers of Technology," *The International Herald Tribune*, 16 May 2011.

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24 May 2011

The latest IAEA report on Iran asserts that the Agency has received new information regarding possible Iranian efforts to fit a nuclear payload to a ballistic missile. Specifically, the Agency expresses concerns about Iranian activities aimed at redesigning the Shahab-3 ballistic missile to carry a nuclear payload.

—"Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran," IAEA, 24 May 2011; David E. Sanger and William J. Broad, "Watchdog Finds Evidence that Iran Worked on Nuclear Triggers," *The New York Times*, 25 May 2011.

16 June 2011

Iran launches a Rasad I (Observation) satellite, the country's second satellite launch after the Omid (Hope) satellite in February 2009. The satellite is launched on a Safir rocket and goes 260km into orbit. The satellite reportedly carries imaging equipment that could be used for reconnaissance and mapping.

—Julian Borger, "Iran Launches Second Satellite," *The Guardian*, 17 June 2011; Yaakov Katz, "Iran Launches Rasad 1 'Observation' Satellite," *Jerusalem Post*, 16 June 2011.

27 June 2011

In an unprecedented move, Iranian state television broadcasts images showing underground Iranian missile silos for Shahab-3 missiles. The images are shown as Iran begins its annual "Great Prophet" war games. According to an Iranian official, the missiles are ready to be launched on short notice. The broadcast does not specify the location of the silos.

—William J. Broad, "Iran Unveils Missile Silos as It Begins War Games," *The New York Times*, 27 June 2011; Yaakov Katz, "Iran Reveals Underground Ballistic Missile Silos, Shahab-3 has 2,000 km Range," *Jerusalem Post*, 28 June 2011.

3 February 2010

The Iranian official news agency reports the unveiling of Iran's newest satellite launch vehicle (SLV), the Simorgh, stating that it is "a 27-meter-long, multi-stage, liquid-fuel missile with a thrust of 143 metric tons." The Simorgh is designed to carry a 60kg (132lb) satellite into low earth orbit (LEO) and could be enhanced to carry a 700kg satellite. State Press TV in Iran shows the Simorgh being launched with a capsule containing a mouse, worms and two turtles, which later return safely to the earth. Iranian President Ahmadinejad says that Iran will soon send its own astronauts into space. Western states express concern about the potential for Iran to turn these satellite capabilities into an ICBM program.

—Aron Ben-David, "Iran Tests New Launcher," *Aviation Week*, 17 February 2010; "Launch Sight-Iranian Rocket Capabilities Advance," Jane's Information Group, 16 March 2010; "Iran Building Potential ICBM Launch Facility with Help from North Korea," *World Tribune*, 8 March 2010; Parisa Hafezi and Reza Derakhshi, "Iran Says Launches Satellite Rocket," Reuters, 3 February 2010; Adam Gabbatt, "Iran Rocket Launch Opens Can of Worms in Space Race with West," *The Guardian*, 3 February 2010.

6 February 2010

Iranian state TV reports the unveiling of two new missiles, marking the 31st anniversary of the Iranian Revolution. Iranian Defense Minister Vahidi tells reporters that both missiles will go into production at newly constructed

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facilities. The missiles, which include the Qiam (Qaem) ground-to-air missile designed to hit helicopters flying at low to mid altitudes and the Toofan-5 surface-to-surface missile designed to penetrate armored vehicles, will begin production and are expected to be made available to the Iranian Army this year.

—Edward Yeranian, "Iran Announces Production of 2 New Missiles," *Voice of America News*, 6 February 2010; "Iran Opens Two New Missile Plants," AFP, 6 February 2010; McParry, "Iran Starts Production of Qaem and Toofan-5 Missiles," Reuters, World Military Forum, 6 February 2010.

7 March 2010

Iran states it has started mass production of the highly accurate short-range cruise missile Nasr 1. Defense Minister Vahidi says the missiles could be fired from ground-based launchers or ships but would eventually be modified to be fired from helicopters and submarines. Vahidi also asserts that the short-range cruise missiles are capable of destroying a 3,000 ton target. Tehran frequently makes announcements about new advances in military technology that cannot be independently verified.

—Nasser Karimi, "Iran Begins Cruise Missile Production," *The Huffington Post*, 7 March 2010; "Iran Begins Cruise-Missile Production," *The Washington Times*, 7 March 2010.

11 April 2010

Iranian Defense Minister Ahmad Vahidi reveals Iran's first indigenous operational air defense system, called Mersad. Vahidi asserts that the Mersad system uses Iran's Shahin missiles and is capable of hitting aircraft flying at low to mid altitudes. Iran has begun mass production of the Shahin missiles and is expected to deliver them to the Iranian armed forces soon. However, Israeli experts say the "new" Mersad system does not represent a significant breakthrough in air defense capabilities.

—"Iran's First Advanced Air Defense System Becomes Operational," *Tehran Times*, 12 April 2010; "Iran Starts Production of New Mersad Missile System," Associated Press, 11 April 2010; "Iran Producing New Anti-Aircraft Missile: Report," Agence France-Presse, *Defense News*, 11 April 2010; Alon, Ben-David, "Hawk Watch," *Aviation Week and Space Technology*, 19 April 2010.

20 August 2010

Iran says it successfully test fired a new surface-to-surface missile called Qiam-1. Iranian Defense Minister Ahmad Vahidi says the liquid fueled missile is of a "new class." It is a short-range missile with no wings or fins giving it "tactical power."

—Michael Elleman, "Generation Qiam: Iran's New Missile," The International Institute for Strategic Studies (IISS), 26 August 2010; "Iran Test Fires Surface-to-Surface Missile," AFP, 20 August 2010.

22 August 2010

Iran unveils its first domestically-built unmanned bomber or drone called Karrar. Iranian TV reports that the Karrar can travel 620 miles (1,000km) and carry two 250-pound bombs, one 500-pound precision bomb, or up to four cruise missiles. Iranian President Mahmoud Ahmadinejad states the unmanned vehicle should serve as both an offensive weapon and a deterrent against attack: "the jet, as well as being an ambassador of death for the enemies of humanity, has a main message of peace and friendship."

—Michael Sheridan, "Iran Unveils 'Karrar,' Unmanned Bomber Dubbed 'Ambassador of Death' By President

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Ahmadinejad," *NY Daily News*, 22 August 2010; "Iran Unveils First Bomber Drone," BBC News, Middle East, 22 August 2010; Keith Thomson, "How Iran's 'Ambassador of Death' Compares to Other Drones," *The Huffington Post*, 22 August 2010.

23 August 2010

Iran begins mass-production of two new assault boats, Seraj and Zolfaqar, with missile launching capabilities aimed at increasing Iranian defense and security in the Persian Gulf, the Sea of Oman and the Strait of Hormuz. According to Iranian sources, the Zolfaqar was built for speed and fast attacks on ships and includes "two missile launchers, two machine guns and a computer system to control the missiles." The Seraj, which also has rocket launching capabilities, was built for fast attacks and "designed for a tropical climate."

—Farhad Pouladi, "Iran Launches Assault Boats, Warns 'Don't Play with Fire,'" AFP, *Defense News*, 23 August 2010; "Iran Inaugurates Mass Productions of 2 Types of Assault Boats," *Tehran Times*, 24 August 2010.

25 August 2010

Iranian state television shows the Fateh 110 missile being launched, although reports did not indicate where or when the launch took place. Iranian Defense Minister Ahmad Vahidi says the new version of the Fateh is a "single stage solid propellant missile" with a "longer" and "more accurate" range. It will be made available to the Iranian Armed Forces by mid-September 2010.

—"Iran Test Fires Surface-to-Surface Missile," *Al-Manar TV*, 25 August 2010; "Iran Successfully Tests Fateh-110 Missile," *The Indian News*, 25 August 2010.

22 September 2010

Russian President Dmitry Medvedev issues a decree canceling the sale of S-300 air defense missile systems to Iran, initially concluded in 2007. Russia came under pressure from the United States and Israel over the deal, who feared that Iran could reverse engineer the missile system and turn it into an offensive weapon. Russia supported the imposition of new UN sanctions on Iran and promised not to deliver the missiles. The cancelled sale will cost Russia over \$1 billion in revenue and has drawn criticism from Iran.

—"Russia Bans Iran Missile Delivery," *Al-jazeera*, 22 September 2010; Rasha Reslan, "Banned Iran Missile Sale Costs Russia \$1 Billion," *KippReport News*, 29 September 2010.

23 October 2010

Iran Defense Minister Ahmad Vahidi announces that Iran has improved upon its Mersad air defense missile system. According to Vahidi, the "new generation of Mersad system covers higher altitudes and hits more targets simultaneously." The upgrade includes target tracing and tracking radars, software and hardware networks and new launch pads for Shahin missiles. Critics, however, doubt Iran's enhancements saying it was unlikely the new Mersad was significantly different from the original.

—Alan Elsner and Jennifer Packer, "Iran Improves Range of Mersad Missile System," *The Israel Project*, 24 October 2010; "Iran to Manufacture Mersad Missile System with Longer Range," *Trend*, 25 October 2010; "Iran Improves Mid-Range Missile Defense System 'Mersad'," *Saudi News Today*, 23 October 2010; "Iran Talks Big on Missile Capabilities," *Security Industry*, United Press International, 2010.

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8 November 2010

In Iran's first public reaction to the cancellation of the sale of S-300 missiles by Russia, President Ahmadinejad accuses Russia of "selling out" to the United States. The Iranian President states that Iran "still considered the deal to be valid," and if not executed the Iranian people "will seek its rights, the losses and the fines on it." Russia has stated that it will reimburse Iran for its pre-payments on the deal and had begun "preparing the necessary documents." Russia promised to return Iran's advance payment of \$166.8 million in a timely manner, but stated it was under no obligation to make any further compensation.

—"Iran Lashes Out at Russia for Missile Deal," United Press International, Security Industry, 8 November 2010; Anna Smolchenko, "Russia to Reimburse Iran Over Missile Deal," *Defense News*, 7 October 2010; "Russia to Refund Iran over Missile Deal: Arms Export Chief," *Missiles and Bombs News, Defense Talk*, 8 October 2010.

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2009

21 January 2009

The Federation of American Scientists, after obtaining secret Iranian documents, confirm the long-held suspicion that Iran's Hoot underwater missile is derived from the Russian VA-111 Shkval missile. Iran has officially denied any link between the weapons systems. The weapons both use supercavitation to reach velocities much higher than those of a traditional torpedo. The newly-disclosed reports reveal that there were several Shkval trials conducted in Iran in January and February 2004. The documents also contain a 2007 contract awarded to Iran's Aerospace Industries Organization, covering the "design, production and testing of model hydro-reactive compound engines [presumably the missile's gas generator] for the Hoot missile," according to the FAS. Experts predict that due to the high cost of building the missile's power plant, an Iranian-made Hoot missile will likely not be in production until 2010. While the Russian Shkval missile is capable of carrying a nuclear warhead, it is unclear whether the Iranian Hoot has the same capability.

—Doug Richardson, "Leaked documents show origins of Iran's Hoot missile," *Jane's Missiles and Rockets*, 3 February 2009; "Iran's Testing of Russian Shkval Torpedo Documented," *Secrecy News* from the FAS Project on Government Secrecy, 21 January 2009; "VA-111 Shkval torpedo," *Military Periscope*, www.periscope.ucg.com; "Iran Claims to Have Test-Fired Missile That Can Destroy Warships," Associated Press, 3 April 2009; www.fas.org.

2 February 2009

Iranian president Mahmoud Ahmadinejad announces the launch of the country's first domestically-built satellite into orbit. The 27-kilogram telecommunications satellite, named Omid, was launched by an Iranian Safir-2 rocket. The first stage of the rocket is very similar to the liquid-propellant Shahab-3 ballistic missile. Some analysts say that such a launch indicates that Iran has the technology to launch long-range ballistic missiles: "there's almost always a link between satellites and nuclear weapons. It's the same delivery vehicle," says James Lewis, an expert on defense technology at the Center for Strategic and International Studies. The U.S. State Department and other Western governments have expressed similar concerns.

—Borzou Daragahi, "Iran satellite launch raises alarm in West," *The Los Angeles Times*, 4 February 2009; Richard

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Spencer and Michael Levitin, "Iran satellite launch raises West's fears of long-range nuclear missiles," *The Daily Telegraph*, 4 February 2009.

16 February 2009

Iranian Defense Minister Mostafa Mohammed Najjar makes an official visit to Moscow to push for the delivery of Russia's S-300 anti-missile system. [See NTI Iran Missile Chronology 21 May 2005, 1 September 2008, 8 October 2008, 21-22 December 2008.]

—Lauren Gelfand and Vladimir Petrov, "Iran Lobbies Moscow for Missiles to Arm New Air Defence Unit," *Jane's Missile and Rockets*, 19 February 2009.

25 February 2009

Analyst Sean O'Connor locates a silo facility at the Imam Ali missile base with features that indicate an operational missile launch facility. The facility has "a more survivable form of silo basing for [Tehran's] ballistic missile force," according to the *Jane's Missiles and Rockets* report on the story. Imam Ali, which is located west of Khorramabad, is more highly secured than Iran's missile facility near Tabriz. It may be the location of an operational Shahab unit and a storage facility for missiles and warhead components. "The combination of presurveyed launch points and hardened storage facilities provides the Shahab-3 unit with a more secure existence," says O'Connor, "further reducing the time required to fire a missile."

—Doub Richardson, "More survivable type of missile silo detected in Iran," *Jane's Missiles and Rockets*, 6 March 2009, Sean O'Connor, "Khorramabad Missile Silos," IMINT & Analysis, 25 February 2009, geimint.blogspot.com.

4 March 2009

Mohammad Ali Jafari, commander-in-chief of the Iranian Revolutionary Guards, says that Iran's missiles can reach Israeli nuclear sites, warning that "Tehran will respond firmly to any attack," according to a report by the Canadian newspaper the *National Post*. However, independent defense analyst Paul Beaver (former editor of *Jane's Defence Weekly*) expresses doubts about the ability of Iranian missiles to carry and accurately deliver warheads to sites in Israel.

—"Missiles Can Hit Israel, Iran Says," *The National Post*, 5 March 2009; "Iran can strike Israel nuke sites: commander," *Al Arabiya*, 4 March 2009; Zahra Hosseinian, "Iran missiles can reach Israel atom sites: commander," Reuters, 4 March 2009.

10 March 2009

Russia's Interfax News Agency reports that Moscow may indefinitely postpone delivery of S-300 surface-to-air missile systems to Iran. Due in part to concerns expressed by the United States and Israel, the 2005 contract between Moscow and Tehran has been delayed. "Such a possibility [of a freeze on the sale] cannot be ruled out. A decision on this issue should be made at the political level, because the contract has moved outside the purely commercial framework," an unnamed Moscow source tells Interfax. [See NTI Iran Missile Chronology 21 May 2005, 1 September 2008, 8 October 2008, 21-22 December 2008, 16 February 2009.]

—David C. Isby, "Iran awaits Russian move on S-300PMU1 SAM systems," *Jane's Missiles and Rockets*, 27 March 2009; "Russia gets cold feet on Iran S-300 delivery?," [Iran's] *Press TV*, 18 March 2009; Yoav Stern, "Report: Russia may put on hold Iran missile deal," *Ha'aretz*, 10 March 2009.

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29 March 2009

Japanese newspaper *Sankei Shimbun* reports that a group of about 15 Iranian missile experts is in North Korea helping Pyongyang prepare to launch the Taepodong-2 communications satellite, which is timed for President Obama's trip to the G20 summit in London. The satellite will be launched over northern Japan before April 8, according to North Korean officials. American warships have been patrolling the Sea of Japan since yesterday, and Japanese guided-missile destroyers are prepared to intercept a missile if necessary. Pyongyang insists the satellite launch is peaceful.

—"Iranian experts to help launch North Korean missile," *The Australian*, 30 March 2009; "Iranian missile experts in N. Korea," *Agence France-Presse*, 29 March 2009; "Iranian experts in Pyongyang ahead of missile launch," *Taipei Times*, 30 March 2009

19 May 2009

The EastWest Institute publishes a Joint Threat Assessment of Iran's nuclear and missile potential. The study was carried out by a group of U.S. and Russian experts. The report includes a technical addendum on Iran's ballistic missile program.

—"Iran's Nuclear and Missile Potential: A Joint Threat Assessment by U.S. and Russian Technical Experts," (EastWest Institute, 2009), <http://docs.ewi.info/JTA.pdf>; Theodore Postol, "Technical Addendum to the Joint Threat Assessment on Iran's Nuclear and Missile Potential: A Technical Assessment of Iran's Ballistic Missile Program," (EastWest Institute, 2009), http://docs.ewi.info/JTA_TA_Program.pdf.

20 May 2009

Iran successfully tests the Sejil-2, a two-stage solid propellant ballistic missile. The Obama administration says that the test of the Sejil, which has a range between 1,200 and 1,500 miles, is "a significant step" and indicates that Tehran is enhancing its weapons delivery capability. "This is the first time they have successfully launched [a solid-fuel missile] of this range," says an anonymous American official.

— Doug Richardson, "Iran launches two-stage Sejil-2," *Janes Missiles and Rockets*, 1 June 2009; Nicholas Kralev, "Tehran missile test stokes debate; Weapon may reach 1,500 miles," *The Washington Times*, 21 May 2009; David E. Sanger and Nazila Fathi, "Launching Of Missile Shows Iran Is Advancing," *The New York Times*, 21 May 2009; Martin Sieff, "Iran tests new Sajil-2 missile that can hit Tel Aviv, Athens," *United Press International*, 20 May 2009.

31 May 2009

The EastWest Institute publishes another technical addendum to its joint threat assessment of Iran's missile potential. [See NTI Iran Missile Chronology 19 May 2009.] The new addendum focuses on Iran's solid-propellant Sejil ballistic missile. Author Theodore Postol claims "it is almost certain that Iran obtained substantial and extensive technological help from abroad in developing the solid propellant rocket motors for the Sejil." He does not believe the technology could easily be used to build long-range missiles or ICBMs.

—Theodore Postol, "Technical Addendum to the Joint Threat Assessment on Iran's Nuclear and Missile Potential: The Sejil Ballistic Missile," (EastWest Institute, 2009), http://docs.ewi.info/JTA_TA_Sejil.pdf.

11 June 2009

Lt. Gen. Patrick O'Reilly, head of the U.S. Missile Defense Agency, reports that Iran and North Korea have formed

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an information-sharing coalition to enhance their ballistic missile capabilities. In "an international effort...to develop ballistic missile capability," Iran and North Korea trade technical information on avionics, propulsion systems and other missile components, according to O'Reilly. He adds that while these two countries seem to be racing with each other to improve their respective missile capabilities, neither country is clearly ahead.

—"Iran, North Korea Cooperating on Missile Programs, Says U.S. General," Global Security Newswire, 12 June 2009, www.nti.org; Jim Wolf, "North Korea, Iran Joined on Missile Work: U.S. General," Reuters, 11 June 2009.

6 June 2009

Iranian Defense Minister Mostafa Mohammed-Najjar inaugurated the production line for a supersonic surface-to-air missile called the Shahin. The missile appears to be reverse engineered from the Raytheon MIM-23B which was supplied to Iran prior to the 1979 revolution as well as in the 1980s as part of the arms-for-hostages scheme.

—Robert Hewson, "Iran Claims Indigenous SAM Production," *Jane's Defence Weekly*, 11 June 2009; Doug Richardson, "Iran Reverse-Engineers HAWK SAM," *Jane's Missiles and Rockets*, 15 June 2009. Lauren Gelfand, "Iran Flexes Military Muscles ahead of UN Talks," *Jane's Defence Weekly*, 24 September 2009.

20 August 2009

Uzi Rubin, the former head of Israel's missile defense program and a leading authority on Iran's missile program, says that Iran may be able to strike many parts of Europe with a ballistic missile in three or four years. To do so, the nation would need to make an all-out push on its missile program. According to Rubin, Iran has achieved "a technological and strategic breakthrough" with its Sejil missile. American officials have predicted that it would take longer for Iran to achieve such a capability. Rubin, along with David Montague and Dean Wilkening has drafted a paper questioning the EastWest Institute's assessment of Iran's ballistic missile potential. [See NTI Iran Missile Chronology 19 May 2009 and 31 May 2009.]

— Jim Wolf, "Iran missile said to pose Europe threat in 3-4 years," Reuters, 20 August 2009; "Israeli expert says Iran could hit Europe in 3-4 years," *Washington TV*, 21 August 2009; "Europe Could Face Iranian Missiles in 3-4 Years, Former Israeli Official Warns," Global Security Newswire, 21 August 2009, www.nti.org; David Montague, Uzi Rubin, and Dean Wilkening, "Iran's Ballistic Missile Potential," [www.ewi.info/system/files/IRans Ballistic Missile Potential.pdf](http://www.ewi.info/system/files/IRans%20Ballistic%20Missile%20Potential.pdf).

22 August 2009

David Holloway and Theodore Postol post a paper rebutting some of the assertions made by Montague, Rubin, and Wilkening. [See NTI Iran Missile Chronology 20 August 2009.] Montague et al. subsequently respond.

— David Holloway and Theodore Postol, "Comments on 'Iran's Ballistic Missile Potential': A Paper by David Montague, Uzi Rubin, and Dean Wilkening," www.ewi.info; David Montague, Uzi Rubin, and Dean Wilkening, "Response to David Holloway's and Theodore Postol's *Comments on 'Iran's Ballistic Missile Potential'*," www.ewi.info.

15 September 2009

Brigadier General Ahmad Miqani, commander of Khatam-ul-Anbia, airbase tells reporters that Iran has developed a new anti-cruise missile system. He claims the system incorporates surface-to-air missiles, air-defense artillery, and

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radar.

—David C. Isby, "Iran Claims Anti-Cruise Missile Capability," *Jane's Missiles and Rockets*, 2 October 2009.

22 September 2009

Iran holds a military parade showing off its Shahab-3 and Sejil ballistic missiles and for the first time, the Russian-built Tor-M1 air defense system. The Shahin surface-to-air missile which entered production in June 2009 is also on display. [See NTI Iran Missile Chronology 6 June 2009.]

—Lauren Gelfand, "Iran Flexes Military Muscles ahead of UN Talks," *Jane's Defence Weekly*, 24 September 2009; Nasser Karimi, "Ahmadinejad Warns against Military Attack on Iran," Associated Press, 21 September 2009; Dan Murphy, "Could an Israeli Air Strike Stop Iran's Nuclear Program?" *Christian Science Monitor*, 14 October 2009.

27-28 September 2009

Iran carries a series of missile tests as part of a military exercise called the Great Prophet IV. Short range missiles including the Shahab-1, Shahab-2, Fateh-110, and Tondar-69 are fired. The exercise culminates with tests of the Shahab-3 and Sejil-2 missiles. This is Iran's third test of the two-stage solid propellant Sejil [see NTI Iran Missile Chronology 20 May 2009 and 12 November 2008], but the first time it is fired in an operational scenario.

—Lauren Gelfand, Allison Puccioni, and Alon Ben-David, "Iran Stands Firm on Nuclear Program Despite International Clamour," *Jane's Defence Weekly*, 2 October 2009; Alan Cowell and Nazila Fathi, "Iran Test-Fires Missiles that Put Israel in Range," *New York Times*, 28 September 2009; William Branigin, Thomas Erdbrink, and Walter Pincus, "Iran Test-Fires Its Most Advanced Missiles," *Washington Post*, 28 September 2009; Amy Kellogg, "Behind Iran's Missile Tests," *Fox News*, 28 September 2009.

11 October 2009

It is reported that Russia has agreed to suspend the delivery of the S-300 anti-missile system and Tor-M1 air defense system to Iran. [See NTI Iran Missile Chronology 21 May 2005, 1 September 2008, 8 October 2008, 21-22 December 2008, 19 February 2009, 10 March 2009.] This suspension is allegedly demanded during negotiations involving the lucrative sale of the more advanced S-400 anti-missile system to Saudi Arabia.

— "Russia halts TOR-M1, S-300 air, missile defense missiles to Iran, *DEBKAfile*, 19 October 2009; "Saudis Consider Russian Air Defense System," UPI, 7 October 2009; Charles Clover and Andrew England, "Saudis Seek Russian Pledge on Missiles," *Financial Times*, 29 September 2009.

16 December 2009

Iran carries out another successful test of its Sejil-2, a two-stage solid propellant ballistic missile. The Iranian Defense Ministry claims the missile is an "upgraded version," although a U.S. Department of Defense spokesman remarks that it is not "particularly different than anything we've seen in the past." This is Iran's fourth test of the missile in only 13 months [see NTI missile chronology 27-28 September 2009, 20 May 2009, and 12 November 2008], indicating significant investment and high-level commitment to the program.

—Ali Akbar Darenini, "Iran tests missile, stoking tensions with the West," AP, 16 December 2009; "Iran test-fires advanced Sejil-2 missile," Tehran Times, 17 December 2009; "Iran's missile test aimed at U.S., Israel," UPI, 16 December 2009.

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2008

4 February 2008

Iran conducts a successful test launch of the Kavoshgar-1 (Explorer-1) research rocket to inaugurate its first domestically built space center 60 km southeast of Semnan City. The Kavoshgar-1 is a variant of the single stage Shahab-3 intermediate-range ballistic missile, specifically the Shahab-3B variant with the "baby bottle" nose. According to President Mahmoud Ahmadinejad the launch is the "first and determined step towards an Iranian satellite."

— "Iran Launches Rocket to Commemorate New Space Center," The New York Times, 5 February 2008; Joseph Bermudez, "Iran Inaugurates Space Terminal and Launches Research Rocket," Jane's Defense Weekly, 13 February 2008; "Smoke and Mirrors- Analyzing the Iranian Missile Test," Jane's Intelligence Review, 14 March 2008.

29 June 2008

Iran has moved its Shahab-3 missiles into launch positions and targeted Israel's Dimona nuclear reactor, according to Israeli defense sources. The sources indicate that Iran is prepared to use these missiles in the event of any military strike on its nuclear facilities by Israel or the United States. According to Major-General Mohammad Jafari, the commander of the Revolutionary Guard, "This country [Israel] is completely within the range of the Islamic Republic's missiles. Our missile power and capability are such that the Zionist regime - despite all its abilities - cannot confront it."

— "Iran Ready to Strike at Israel's Nuclear Heart," The Sunday Times, 29 June 2008; "Tehran Targeting Israeli Reactor," The Australian, 30 June 2008.

8-10 July 2008

Tehran conducts a series of missile tests, dubbed Payambar-e Azam-e III (Holy Prophet III), in the Strait of Hormuz. Testing includes the firing of Shahab-3, Fateh and Zelzal missiles. Iranian Revolutionary Guards Commander Hossein Salami tells an Iranian reporter that the Shahab-3 had undergone further improvements, including to its navigation and ignition systems, and featured enhanced maneuverability and reaction time. Iranian media claims that the Shahab-3 can now be launched "at night and in adverse weather conditions."

— "Report: Iran Sends Missile Test Warning," BBC News, 10 July 2008; Alex Vatanka, "Iran Launches Dual-Purpose Missiles," Jane's Intelligence Review, 18 July 2008; Lauren Gelfand, "Tensions Rise in the Wake of Iranian Missile Tests," Jane's Defense Weekly, 11 July 2008.

5 August 2008

The recent Holy Prophet III missile tests have displayed Iran's ability to close the Strait of Hormuz "easily and on an unlimited basis," according to General Mohammad Ali Jafari, the commander of the Islamic Revolutionary Guard Corp. "No vessel would be safe and would be sent to the depths." He further claims that Iran has indigenously produced a new ground-to-sea missile that is capable of traveling 180 miles.

— "Iran Threatens to Close Oil Route from Gulf," Daily Telegraph, 5 August 2008; "Iran Threatens to Close Strait of

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Hormuz with Missile Launch," Oil and Gas Journal, 11 August 2008; Doug Richardson, "Iran Claims New Submarine and Sea-Launch Missile Capabilities," Jane's Missiles and Rockets, 1 September 2008.

16 August 2008

Iran successfully launches the Safir (Messenger) rocket into space from its new space center 60 km southeast of Semnan City. According to Reza Taghizadeh, "the firing paved the way for placing the first Iranian satellite in orbit." The Safir is based on the Shahab-3 ballistic missile and TV footage of the launch indicates that Iran has mastered the transition from first- to second-stage rocket power. Prior to this test launch, Iran had not tested a two-stage rocket system.

— "Iran Ministry Confirms Satellite Carrier Rocket," BBC News, 17 August 2008; Lauren Gelfand and Alon Ben-David, "Iranian Two-Stage SLV Passes Test Launch," Jane's Defense Weekly, 20 August 2008; Doug Richardson, "Safir Launch Paved Way for Placing Iranian Satellite in Space," Jane's Missiles & Rockets, 1 September 2008.

1 September 2008

Russia may proceed with plans to deliver the S-300 missile defense system to Iran by the end of 2008. According to Iranian Defense Minister Mostafa Mohammad Najjar, Russia has agreed to deliver to Iran an unspecified number of advanced S-300 air defense complexes under a previously signed contract.

— "U.S. Fears Russian Missiles in Iran," The Jerusalem Post, 1 September 2008; "Russia may push forward with S-300 Sales to Iran," Russian News and Information Agency Novosti, 1 September 2008.

8 September 2008

Iran's armed forces begin a three day exercise to test air and missile defenses. Participating in the exercise are both the Iranian Revolutionary Guard Corp and regular military units. According to the Iran Daily the aim is to maintain and upgrade the combat readiness of relevant units as well as to "test new weapons and defense plans."

— "Report: Iran to Hold Three Day War Game," Reuters, 7 September 2008; "Army- IRGC Drills Begin," Iran Daily, 8 September 2008.

16 September 2008

Herman Nackaerts, head of Middle East Monitoring for the IAEA, shows pictures and diagrams to IAEA representatives of Iran's retrofits to the Shahab-3 missile. The retrofits would enable the missile to carry a nuclear warhead. Mohamed El-Baradei calls the information "very credible" and has asked Iran for a "political explanation." Iran's representative to the IAEA Ali-Asghar Soltaniyeh calls the diagrams and pictures baseless and ridiculous.

— "Envoy says Linking Iran Nuclear Activities and Missile Program Baseless," BBC Monitoring Middle East, 17 September 2008; "Iran says IAEA Photos are Forgeries," BBC Monitoring Middle East, 17 September 2008; "Iran not to take single step beyond commitments — Soltaniyeh," *Islamic Republic News Agency*, 18 September 2008.

21 September 2008

Iran displays a variety of Shahab-3 missiles and unmanned aerial vehicles during the annual Holy Defense Military Parade. The parade is held to commemorate the twenty-eighth anniversary of the Iran-Iraq war.

— "Iranian Military Parade to Showcase Weaponry at Khomeyni Mausoleum," BBC Monitoring Middle East, 19

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September 2008; "Sacred Defense Week Kicks off with Inaugural Parade," *Islamic Republic News Agency*, 21 September 2008.

24 September 2008

President Ahmadinejad announces Iran will soon launch a sixteen-engine-rocket capable of carrying satellites into space. No details are given about what type of satellite the rocket will carry or when the launch will take place.
— "Iran will soon Launch 16-Engine-Rocket," BBC Monitoring Middle East, 25 September 2008; "Iran to Launch Satellite with own Rocket to Space," *Fars News Agency*, 26 September 2008.

7 October 2008

Brigadier General Esmā'il Ahmadi-Moqaddam says that ninety-five percent of the engineering, construction and fabrication of Iran's missiles is carried out by Iranian experts. According to Ahmadi-Moqaddam, "There were days when we had to beg the Koreans and other countries for a long time to receive parts for our missiles. Fortunately today, all of those countries depend on us in the missile industry."
— "Iranian Police Commander: 95 Percent of Missiles Made in Iran," Iranian Students News Agency, 7 October 2008.

8 October 2008

Russia's Foreign Ministry states that Moscow will not sell Iran advanced S-300 missile systems. Russian Foreign Ministry spokesman Andrei Nesterenko says, "we have declared more than once at the very highest political level that we do not intend to supply those types of armaments to countries located in regions that are, to put it mildly, uneasy." The Russian statement comes on the heels of a visit to Moscow by Israeli Prime Minister Ehud Olmert, who raised the issue of the S-300 sale.
— "Russia Indicates no S-300's for Iran," The Associated Press, 8 October 2008; "No Russian Game Changer Sold to Iran: Moscow," *Tehran Times*, 9 October 2008.

18 October 2008

The Iranian Air Force tests several surface-to-air missiles during the first stage of the Fadayan-e Harim-e Velayat (Devotees of Guardianship) military exercise. Iranian F-14's, F-4's and F-5's hit land targets with smart missiles during the second stage of the exercises.
— "Iranian Air Force Hold Second Stage of Exercise in Tabriz," BBC Monitoring Trans Caucasus Unit, 18 October 2008.

1 November 2008

The Wall Street Journal reports that in August 2008, the United States persuaded India to deny clearance to a North Korean jet traveling to Iran. U.S. officials suspected that the North Korean plane was carrying sophisticated and sensitive missile components. The jet stopped in Burma on 7 August 2008 and sought permission to cross Indian airspace in order to reach Iran. India is not part of the U.S.-led Proliferation Security Initiative (PSI), but U.S. officials say that New Delhi agreed to the U.S. request.
— Jay Solomon, Krishna Pokharel, Peter Wonacott, "North Korean Plane was Grounded at U.S. Request," *The Wall*

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Street Journal, 1 November 2008; Glenn Kessler, "U.S. Efforts Divert Iran Bound Cargo," *The Washington Post*, 4 November 2008.

8 November 2008

Iran successfully tests a new missile near the Iraqi border during war games. Iranian media claims that the Samen missile was domestically designed and manufactured and further boosts Iran's combat readiness.

— "Iran Test-Fires Newly Designed Missile," *Fars News Agency*, 8 November 2008; "Iran Test Fires New Missile near Iraq: State Media," Reuters, 11 November 2008.

12 November 2008

Iran tests fires a new surface-to-surface dual stage solid fuel missile that it claims can travel 1,200 miles. According to Brigadier General Mostafa Mohammad Najjar, "other features of the missile were its [special] launch pad, the short time needed for mounting the missile and its very high speed in being launched and leaving the platform. All of the stages of the design and building of Sejil missile and its launch pad were carried out by Iranian experts."

— Zahra Hosseinian, "Iran Test Fires New Missile, Israel Within Reach," Reuters, 12 November 2008; "Iran 'Successfully' Tests New Missile," *The Jerusalem Post*, 12 November 2008, "Iran Successfully Tests New Surface to Surface Missile," *Iranian Students News Agency*, 12 November 2008.

26 November 2008

Iran successfully launches the Kavosh-2 (Explorer-2) rocket, designed to send environmental data back to earth and test engine separation technology.

— Parisa Hafezi, "Iran Reports Rocket Launch Amid Nuclear Tension," Reuters, 26 November 2008; "Iran says Successfully Launched Explorer Rocket," BBC Worldwide Monitoring, 26 November 2008.

1 December 2008

Iran test fires an air-to-air heat seeking missile. Brigadier General Hassan Shahsafi claims that the new missile has a range of twenty-five miles, but can be extended to sixty miles. Western analysts say it is difficult to assess Iranian missile claims, because Iran releases little information on its tests.

— "Iran Tests Air-to-Air Missile," *Mehr News Agency*, 1 December 2008; "Air Chief Claims Radar Evading Plane," *The Washington Times*, 2 December 2008.

2 December 2008

The Iranian Revolutionary Guard Navy begins 6-day naval exercises in the Sea of Oman, according to the official state news agency IRNA. In the maneuver, named "Ettehad 87," Iranian missile boats will simulate surface warfare against attacking ships and airplanes and practice using anti-ship missiles and guns. The exercises will include Nasr-1 surface-to-surface missiles. This type of navy maneuver "has been rare in the past 30 years both in its size and commissioning of new weapons," says Iranian military spokesman Adm. Ghasem Rostamabadi.

—Tim Fish, "Iranian navy exercises in Sea of Oman," *Jane's Navy International*, 8 December 2008; "Iran naval exercise to continue till 6 Dec," *IRNA*, 3 December 2008; "Iran launches massive naval maneuver," *Jerusalem Post*, 2 December 2008.

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21 December 2008

Deputy Head of the National Security and Foreign Policy Commission in Iran's parliament, Esmā'il Kowsari, reports that Russia has begun delivering S-300 surface-to-air missile systems to Iran. The advanced missile system is capable of intercepting and firing at ballistic missiles and aircraft more than 120km (75 miles) away, and "would be used to enhance Iran's defense capabilities," says Kowsari. Russia earlier claimed no such deal had occurred with Iran [See NTI Iran Missile Chronology 8 October 2008], and a "senior Russian official" reportedly recently denied to the Israelis that any deliveries have taken place.

—"Russia gives anti-aircraft missile defense system to Iran," [Iran's] *Press TV*, 21 December 2008; Conor Sweeney, "Russia 'begins delivering missiles to Iran' to defend nuclear sites from any attack," *The Birmingham Post*, 22 December 2008; Nazila Fathi, "Tehran Says It's Getting Missiles," *The New York Times*, 22 December 2008.

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22 December 2008

Russia states that it is not selling missile defense systems to Iran, despite an Iranian report to the contrary [See NTI Iran Missile Chronology 21 December 2008]. According to a statement issued by Moscow's Federal Military and Technical Cooperation Service, "information that has appeared in several media outlets about deliveries of the S-300 anti-aircraft system to Iran does not correspond to reality." Rosoboronexport, Russia's primary weapons exporter, says that "Russia conducts military-technical cooperation with Iran in strict compliance" with its commitments under all nonproliferation regimes, and as such only supplies Iran with defensive weapons and weapons systems.

—Michael Schwartz and Nazila Fathi, "Russia Denies Selling Missile System to Iran," *The New York Times*, 23 December 2008; "Russia denies supplying S-300 missile systems to Iran," *RIA Novosti*, 22 December 2008; "Russia-Iran S-300 deal shrouded in mystery," [Iran's] *Press TV*, 22 December 2008.

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—Tim Fish, "Iranian navy exercises in Sea of Oman," *Jane's Navy International*, 8 December 2008; "Iran naval

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exercise to continue till 6 Dec," *IRNA*, 3 December 2008; "Iran launches massive naval maneuver," *Jerusalem Post*, 2 December 2008.

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2007

2 January 2007

Iran's Defense Industries Organization announces it has begun production of a new generation of medium- and long-range air-defense and surveillance radar systems, including the phased array system capable of tracking aircraft and ballistic missiles at medium and high altitudes.

— "Iran puts phased array radar into production," *Jane's Defence Weekly*, 2 January 2007.

3 January 2007

Sergey Rybakov, Head of the Russian Defense Ministry's Directorate of Information and Public Relations, tells State News Agency RIA-Novosti, "The Russian Ministry of Defense does not sign or complete contracts for exports of Russian arms." This official statement is/was given to refute ITAR-TASS news agency's report claiming an unnamed Defense Ministry source's confirmation of the delivery of half of the Tor-M1 missile systems promised to Iran by contract.

— "Russian Defense Ministry denies involvement in supply of Tor missiles to Iran," *BBC*, 3 January 2007.

16 January 2007

Russian Defense Minister Sergei Ivanov confirms, "We have delivered short-range Tor-M1 missiles to Iran in accordance with the contract." This marks the first official Russian confirmation of the sale to Iran. While no specific number of missiles transported was provided, the Defense Ministry has indicated that it would not turn down further defense weapon contracts with Iran as they are in accordance with international law.

— "Russia: Sale of Missiles to Iran Confirmed," *Los Angeles Times*, 17 January 2007; "Ivanov: Russian missiles delivered to Iran," *Voice of America*, 16 January 2007.

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21 January 2007

Iran announces its first military exercises since the United Nations Security Council enforced sanctions in response to its nuclear defiance. The Iranian Revolutionary Guard broadcasts on state-run television that they, "plan to begin a three-day missile maneuver [involving Zalzal and Fajr-5 models] on Sunday near Garmsar city."

— "Iran Plans 3 Days of Missile War Games," Associated Press, 21 January 2007.

23 January 2007

Iranian Revolutionary Guards' Artillery Commander, Majid Ayeneh, reports that "the exercise of launching Zelzal and Fajr-5 missiles" took place during a day of planned military exercises. An official statement provided by the Revolutionary Guards asserts that the weaponry tested during these war games has been launched in previous maneuvers.

— "Iran launches short-range missiles," Agence France Presse, 23 January 2007.

23 January 2007

Sergei Chernetsov, chief of Rosoboronexport, confirms that the state-run Russian weapons exporter has, "completed in full the delivery of Tor-M1 missiles to Iran." In December 2005, Russia signed a \$700 million contract with Iran to deliver 29 of its sophisticated anti-aircraft missiles. Moscow avows that its fulfillment of this defense weaponry deal is in alignment with the jurisdiction of international law.

— "Tor-M1 anti-aircraft missile delivery to Iran completed - exporter," RIA Novosti, 23 January 2007.

26 January 2007

Russian Foreign Ministry spokesman Mikhail Kamynin was quoted by Interfax and ITAR-Tass as stressing that Russia's sale of Tor-M1 missile systems to Iran constituted cooperation in line with international law norms and bilateral agreements.

— "Reports: Russian Foreign Ministry defends Iran missile delivery," *International Herald Tribune*, 26 January 2007.

30 January 2007

U.S. Army Brig. Gen. Patrick O'Reilly indicates in a speech to the George C. Marshall Institute that the Pentagon predicts that by 2015 Iran will develop an intercontinental ballistic missile with the ability to reach the United States shore. O'Reilly cites Iran's recent plans to build a space launcher stressing that this capability would aid in the development of an ICBM.

He is quoted as saying that the Pentagon is in the stages of creating a "multiple kill vehicle" that could defend against 10 or more enemy warheads from a single booster.

— "Iran may develop ICBM before 2015: U.S. paper," Japan Economic Newswire, 30 January 2007.

7 February 2007

Iran's Revolutionary Guards announce the successful test-firing of its newly-received Tor-M1 defense system on the first day of war games. Revolutionary Guards Air Force Commander Hussein Salameh claims that his forces, "have added the new missile system to...consolidate its defen[s]e capabilities."

— "Iran test fires Russian missiles near Strait of Hormuz," *International Herald Tribune*, 7 February 2007.

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8 February 2007

On the second day of war games, Iran's Revolutionary Guards report, "we have successfully test fired a cruise missile called SSN4, or Raad, hitting targets 300km away in the Sea of Oman and northern Indian Ocean." Revolutionary Guards Deputy Air Force Commander Ali Fadavi says this missile, "can carry a 500 kilo (1,100 pound) warhead and can fly at low altitude, evading radar jammings and immune to electronic measures."
— "Iran successfully test fires land-to-sea missile," Agence France Presse, 8 February 2007.

25 February 2007

Iran claims that it has successfully tested a space rocket. The details of this launching are not clear, yet this firing appears in conjunction with Iranian efforts to launch commercial satellites into orbit. Iran has previously indicated that it intends to send 4 satellites into space by 2010.
— "Iran announces rocket launch," *International Herald Tribune*, 25 February 2007.

26 February 2007

Deputy of Iran's Space Research Center, Ali Akbar Golrou, states that the space rocket launched over the weekend was intended for research purposes to aid the eventual launching of satellites, not missiles. Golrou claims that this "sounding rocket" was built to reach a maximum altitude of 93 miles, sub-orbit level, and carry a research package. He adds, that this launch "was aimed at improving science and research for university students."
— "Iran says 'space rocket' was for study," Associated Press, 26 February 2007.

27 February 2007

Director of the United States Missile Defense Agency, Lieutenant General Henry Obering, calls for greater European cooperation against the threat of missiles from Iran and North Korea, less than a week after the U.S. rebuked an offer from the UK to host a defense system.
— "Defence call despite UK 'host' rejection," Associated Press, 27 February 2007.

9 March 2007

The International Herald Tribune reports that at a Munich security conference held last month President Vladimir Putin justified his country's supplying of surface-to-air missiles to Iran stressing that by doing so Moscow avoided giving Tehran the impression that it is isolated.
— "Russia's interests are not with Tehran," *International Herald Tribune*, 9 March 2007.

16 March 2007

In comments made to reporters in Berlin, U.S. Missile Program Head Lieutenant General Henry Obering stresses that the planned 10 interceptor missiles in Poland are meant to protect Europe and the U.S. from a possible missile attack from Iran. Russian officials indicate their disdain and the head of Russia's Missile Fleet warns that such a base in Poland could be targeted if it any way threatened Russian security. The anticipated completion date of this Europe-based defense system is sometime in 2011 or 2012. According to Obering, "We are very much concerned about the capability of the Iranians to reach almost all of Europe by that point and certainly they may also be able to reach the United States."
— "General says missile defense system 'no threat to Russia'," Turkish Daily News, 16 March 2007.

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16 March 2007

Lieutenant General Henry Obering, the U.S. general in charge of deploying an anti-ballistic missile shield in Europe says that it will be operational by 2011 to provide protection to most of the Continent against any possible threats from Iran. The planned operation date relies on Obering's prediction that negotiations to deploy parts of the shield in Poland and the Czech Republic will reach a conclusion by the end of the year. A delay would make the United States and Europe vulnerable to possible attack from Iran as, according to Obering, Tehran is likely to reach "long-range, intermediate or intercontinental ballistic missile capability" within 8 years.

— "Europe missile shield planned for 2011; U.S. officer, in Berlin, warns against delay," *The International Herald Tribune*, 16 March 2007.

16 March 2007

Iran's Navy commander Rear-Admiral Sajjad Kuchaki confirms that Iran possesses C802 missiles with a range of over 100 kilometers and will display them in future naval war games. Kuchaki adds that the C802 missiles "can be launched both from Paykan-class rock-launcher and Alvand-class destroyers. [They are] very good missile[s], with a range of over 100km, [and were] built domestically." The Rear-Admiral states that the Islamic Republic hopes to upgrade the range capability of its C802 missiles to 150 kilometers.

— "Iran commanders comment on anti-ship missiles, unmanned planes," Vision of the Islamic Republic of Iran Network 2 (via BBC), 19 April 2007.

25 April 2007

Concerned about Iran's ambitions regarding its missile program, Turkey makes requests for information about the acquisition of various types of air-defense systems. It looks to procure 45 low-altitude air-defense missile systems for Turkish Land Forces Command and 12 low-altitude air-defense missile systems for Naval Forces command.

— "Turkey turns to missile defence," *Jane's Defence Weekly*, 25 April 2007.

7 May 2007

Correspondent Nir Dvori claims that the Syrian Navy will be provided with a large number of advanced missile boats within the near future. The Islamic Republic will also provide Syria with C-802 missiles, sea-to-land missiles used in the past year's war with Lebanon against Iranian navy vessels.

— "Iran to provide Syria with new missile boats, hundreds of missiles," Israeli TV Channel 2, 7 May 2007.

10 May 2007

Russian Army Chief of General Staff, Yuriy Baluyevskiy, asserts that Iran currently possesses only the liquid fuel missile Shahab-3, the range of which does not exceed 1,500 kilometers if it carries a warhead up to 500 kilograms. Baluyevskiy stresses that this missile can only reach as far as Israel, thus claims of a threat posed to America and Europe are "extremely overstated." Baluyevskiy concludes that in order to create a ballistic missile with the range of at least 3,000 kilometers, Iran needs a principally different level of technology and much bigger industrial capacities. "[There is only] a chance in a thousand that Iran will soon be able to build missile capabilities to reach Europe and all the more the USA."

— "Russia general says Iran missile threat overestimated," ITAR-TASS, 10 May 2007.

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16 May 2007

The United States Department of State estimates Iran could acquire long-range ballistic missiles capable of striking Europe and the United States in less than eight years. The State Department report stresses that foreign assistance could be a key determinant to how quickly Iran progresses, citing the 2006 purchase of 18 intermediate-range ballistic missiles from North Korea modeled after the reverse-engineered Russian SS-N-6 'Serb' (R-27) submarine-launched ballistic missile.

— "US Estimates Iran Will Be Able to Strike US by 2015," *Jane's Defence Weekly*, 16 May 2007.

17 May 2007

North Korea is suspected to have used a launch-pad in Iran to test a new missile capable of hitting American bases in the Pacific island of Guam. The missile, named after the Musudan testing range in North Korea, was recently shown off to the public at a vast military parade in the capital of Pyongyang. If the test did take place, it could have been a quid pro quo for North Korea's alleged agreement to share with Tehran the results of the nuclear test it carried out last October.

— "N Korea 'uses Iranian site to test new missile,'" *The Daily Telegraph*, 17 May 2007.

22 May 2007

A senior British army officer asserts that British troops in Afghanistan are being targeted by surface-to-air missiles supplied by Iran. Officers are most concerned that SA7 Strella anti-aircraft missiles have been supplied to the Taliban as they pose a serious threat to helicopters supplying more than 6,000 troops.

— "Taliban 'using missiles from Iran to target British troops,'" *The Daily Telegraph* (London), 22 May 2007.

23 May 2007

Iran plans to acquire at least 10 96K6 Pantsyr-S1E self-propelled short-range gun and missile air-defense systems as derivative of a major deal between Syria and Russia estimated at \$730 million for about 50 systems equipped with latest Roman I-Band fire control radar.

— "Iran Set to Obtain Pantsyr via Syria," *Jane's Defence Weekly*, 23 May 2007.

10 June 2007

Admiral Ali Shamkhani, senior defense adviser to Supreme Leader Ayatollah Ali Khamenei, warns that Gulf States providing the United States with military cooperation will be key targets of a barrage of retaliatory ballistic missiles. Shamkhani stresses that missiles will be launched at both U.S. military bases and strategic targets such as oil refineries and power stations in the event of such an attack against Iran. The attacks on Arab states will be in addition to airstrikes on Israel, which have been threatened in the past.

— "Iran threatens Gulf blitz if US hits nuclear plants," *Sunday Times* (London), 10 June 2007.

11 June 2007

Deputy Interior Minister of Iran Mohammad Baqer Zolghadr warns, "All American bases in the region are within the reach of our weapons. If the United States attacked Iran, U.S. interests would be in danger everywhere in the world." Iran has an array of medium-range missiles and claims that its longer-range Shahab-3 missile has a reach of

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2,000 kilometers, which would put U.S. bases on the Arabian peninsula within reach.

— "We can bomb US bases: Iran," Hobart Mercury (Australia), 11 June 2007.

24 June 2007

U.S. officials conclude that a Royal Navy helicopter attacked in Basra last year was shot down by a sophisticated surface-to-air missile supplied to Iraqi militants by Iran. Three days before the attack, State Department officials interviewed an Iraqi linked to the Mahdi Army who told them Iran had supplied the militia with the Russian surface-to-air missile.

— "Iran supplied missile that hit UK helicopter," London Sunday Times, 24 June 2007.

18 July 2007

Russia offers the use of its Voronezh-DM radar, which is being built near Armavir, to interested countries for monitoring Iran's missile program according to head of the international treaty directorate of the Russian Defense Ministry, Lieutenant-General Yevgeniy Buzhinskiy. He clarifies, "We told the United States: Let's use the Qabala [Azerbaijan] and Armavir radars jointly to monitor Iran's and other countries' missile program[s]. As soon as we detect the first test launch in Iran, we will have at least five years to prepare countermeasures to this threat, prepare jointly." He also notes that according to his date, over the next 15-20 years Iran will not pose any military threat to Europe or the United States.

— "Iran 'unable' to pose missile threat for next 15-20 years," RIA Novosti, 18 July 2007.

22 August 2007

Iran develops a remote-controlled launch system that can be used to operate dozens of unmanned Shahab-3 ballistic missile launchers in underground bunkers. After recent upgrades the Shahab-3 ballistic missiles in Iran's possession may have a target range of 2,000.

— "Iran develops remote-controlled launch system for Shihab-3 missiles," Jerusalem Post, 22 August 2007.

28 August 2007

Iran receives a Russian-made anti-ship missile that Israeli officials warn could be transferred to Hezbollah for future use against its navy. Called the SSN-X-26 Yakhont, this supersonic cruise missile can be launched from the coast and hit sea-borne targets up to 300 kilometers away. The missile carries a 200 kilogram warhead and flies a meter-and-a-half above sea level making it extremely difficult to intercept. The missile homes in on its target using an advanced radar guidance system and can be used against both a medium-sized destroyer and an aircraft carrier.

— "Israel concerned Iran may give sophisticated Russian anti-ship missile to Syria Hizbullah," Jerusalem Post, 28 August 2007.

18 September 2007

Iran threatens to fire long-range missiles at American targets in the Middle East should the United States launch an attack against it. A senior commander of the Revolutionary Guard, General Mohammed Hassan Koussechi, warns, "If the United States is saying that they have identified 2,000 targets in Iran, then what is certain is that it is the Americans who are all around Iran and are equally our targets. We have reached capacities that allow us to hit the

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enemy at a range of 2,000 kilometers."

— "Iran threatens missile attacks on US targets," *The Daily Telegraph* (London), 18 September 2007.

20 September 2007

The Deputy Commander of Iran's Air Force says that plans have been drawn up to bomb Israel if it attacks Iran. General Muhammad Alavi confirms, "We have drawn up a plan to strike back at Israel with our bombers if this regime Israel makes a silly mistake...The whole territory of this regime is within the range of our missiles. Moreover we can attack their territory with our fighter bombers as a response to any attack."

— "Iran: We have plans to retaliate if Israel attacks," *Jerusalem Post*, 20 September 2007.

22 September 2007

Deputy head of the Armed Forces Joint Chiefs of Staff for Logistics and Industrial Research Brig-Gen Mohammad Reza Naqdi says that several training and military aircraft, transportation planes, different kinds of helicopters, Shahab-3 missiles with horizontal charge and Fateh-3 missiles have been produced in Iran. He asserts that the horizontal charge model of Shahab-3's functioning time has been drastically reduced compared to the former type. Naqdi adds that the Fateh-3 missile is also known for the high degree of precision with which it can hit targets.

— "Iranian armed forces official outlines weapons production achievements," Iranian News Agency (IRNA), 22 September 2007.

22 September 2007

In today's military exercise, a missile with the range of 500 kilometers more than Shahab-3 is displayed. The missile known as "Qadr-1" and its launcher are displayed in today's parade of the armed forces. Qadr-1 is a ballistic missile with a warhead and an explosive, impact and surface fuse system which is launched vertically.

— "Iran displays Qadr-1 missile at military exercise," Fars News Agency, 22 September 2007; "Iran Presents Ghadr - A 'New' Ballistic Missile," *Jane's Defence Weekly*, 3 October 2007.

21 October 2007

Iran is capable of firing 11,000 rockets into enemy bases in the first minute after any attack, Iranian state-run television quoted General Mahmoud Chaharbaghi, missile commander of the Revolutionary Guards, as saying. "Enemy bases and positions have been identified...the Guards ground force will fire 11,000 rockets into identified enemy positions within the first minute of any aggression against the Iranian territory."

— "Tehran Threatens to Launch 11,000 Rockets if Attacked," *Jerusalem Post*, 21 October 2007.

10 November 2007

Commander Gholamreza Karimi of the Revolutionary Guards asserts, "In the near future, the artillery and missiles of the [Islamic Revolution] Guards Corps will undergo a great transformation as far as technique, tactics and technology are concerned."

— "Latest transformations concerning the Guards Corps acquiring artillery, new military missiles," *Hemayat*, 10 November 2007; "Iran able to build missiles with more than 2,000-km range, says MP," Fars News Agency, 11 November 2007.

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27 November 2007

Iranian Defense Minister Mostafa Mohammad-Najjar reports the building of the Ashura missile, with a range of 2,000 km, anti-armor missiles, a range of rockets, anti-air defense missiles, building tanks, a range of vehicles and personnel carriers, and building surface vessels and submarines as among the steps taken by his agency.

— "Iran builds 2,000 km-range Ashura Missile - defence minister," Fars News Agency, 27 November 2007; "Iran adds Ashura to Missile Lineup," Jane's Defence Weekly, 28 November 2007.

26 December 2007

Defense Minister Mostafa Mohammad Najjar confirms the delivery of the S-300 advanced missile defense system by Russia to Iran. Najjar continues that the system will be delivered based on the previous contract signed between Russia and Iran and that it is among the most advanced anti-missile systems in the world.

— "Russia to deliver advanced anti-missile systems to Iran," Iranian radio (via BBC), 26 December 2007. "Iran reports air defense purchase; Tehran says it will buy an advanced missile system from Russia, U.S. voices concern over such a deal," Los Angeles Times, 27 December 2007.

29 December 2007

In a statement posted on its website, Russia's Federal Military and Technical Cooperation Service flatly denied the Iranian claim. The statement asserts, "The issue of supplying Iran with S-300 anti-aircraft missile systems, raised by mass media, is not on the agenda, is not being considered and is not being discussed with the Iranian side at the moment."

— "Russia denies a deal to sell missiles to Iran," The International Herald Tribune, 29 December 2007.

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2006

4 January 2006

The British *Guardian* claims that a report from 1 July 2005 has surfaced alleging that Iran has made attempts to acquire parts and expertise for their missile program. The document is a compilation of French, German, British, and Belgian intelligence. It details Iran's network of front companies, academic institutions, official bodies, and middlemen that seek parts, knowledge, and equipment from Western Europe and the former Soviet Union for their missile program. In addition, the report describes Iranian attempts to develop a ballistic missile that would be able to carry a warhead long distances from its borders. The report also alleges that Iran would like to pursue a space program, but is instead focusing on improving the Shahab-3 missile [Note: This is an Iranian medium-range ballistic missile designed to be launched from a fixed or mobile launcher at a fixed target]. Iran is supposedly constructing wind tunnels, working on navigation technology, and purchasing metering and calibration technology, motion simulators, and X-rays to aid in the development of the next missile in the Shahab series, which is intended to have an extended range that could cover Europe.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



— Ian Cobain and Ian Traynor, "Secret Services Say Iran Is Trying to Assemble a Nuclear Missile," *Guardian*, 4 January 2006.

16 February 2006

Western intelligence sources reveal Iran has been very active with missile tests this year. Iran is believed to have successfully completed four successful missile test launches this year, including one of Shahab-3 and Shahab-4 missiles with ranges of 1,300 kilometers and 2,200 kilometers respectively.

— "Iran escalates missile testing, sources say," Global Security Newswire, 16 February 2006; "Iran reportedly tests Shahab 4 missile," Global Security Newswire, 7 February 2006. "Western intelligence services reportedly confirm Iran test of new Shahab-4 Missile," FBIS feature, 6 February 2006, FBIS document FEA20060206019143.

7 March 2006

Intelligence reports allege a covert Iranian program known as "Project 111" that includes plans to arm Shahab-3 missiles with nuclear warheads. Project 111 is believed to be a nuclear research effort that includes work on missile development. According to U.S. intelligence sources, Project 111 is believed to be the successor of Project 110, the military arm of Iran's nuclear program.

— Dafna Linzer, "Strong leads and dead ends in Nuclear case against Iran," *Washington Post*, 8 February 2006; "Iran reportedly developing nuclear-capable missile," Global Security Newswire, 7 March 2006.

2 April 2006

Iran tests an underwater missile named the Hoot (whale in Farsi) in the Persian Gulf. The Iranians claim that the missile is capable of speeds of 225-233 mph, which is three to four times faster than a typical torpedo, and is intended to attack submarines and warships. This is the same speed as the VA-111 Shkval [Note: This is a Russian anti-ship missile that carries a conventional warhead], which is currently the fastest underwater missile. Ruslan Pukhov of the Center for Analysis of Strategies and Technologies in Moscow states that this kind of technological achievement is beyond Iranian capabilities. Some United States officials claim that Russia has exported missile technology to Iran in the past and could have sold them information on the Shkval. However, experts in Russia state that the Iranians did not get the missile technology from Russia. Pukhov states that it is more likely that the Iranians received the technology from Kyrgyzstan. Also, China allegedly imported 40 Shkval-E missiles. [Note: The Shkval-E carries a conventional weapon and was created by Russia specifically for export.]

— Robert Tait, "Iran Fires Naval Missile Into Nuclear Debate," *Guardian*, 3 April 2006; "Iran Tests 'Super Fast' Torpedo," BBC, 3 April 2006; Associated Press, "Pro-Kremlin Russian Lawmaker: Iran Arms Tests 'Counterproductive'," *Haaretz*, 4 April 2006; Bill Gertz, "Pentagon Calls Iran Missile Claim an Exaggeration," *The Washington Times*, 4 April 2006; "Do Iran's Weapons Come From Russia?" Associated Press, 4 April 2006; "VA-111 Shkval," *Military Periscope*, 1 December 2001; "Iranskaya Supertorpeda: Eksperty v Rossii Somnevayutsya," BBC Russian Service, 4 April 2006.

7 April 2006

The *London Telegraph* alleges that Iran has succeeded in adapting the nosecone of the Shahab-3 missile to deliver a nuclear weapon. The 800 mile range of the Shahab-3 allows it to target many countries in the Middle East, including Israel. The Iranians are also attempting to modify the missile to extend the range. It is alleged that this

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modified Shahab-3 could carry the Pakistani version of a nuclear weapon and it is rumored that Iran possesses this design.

— Con Coughlin, "Iran Has Missiles to Carry Nuclear Warheads," *Telegraph*, 7 April 2006.

19 April 2006

Russia intends to continue supplying Iran with 29 Tor M1 missiles [Note: These are short-range, mobile and ship-launched, anti-aircraft missiles manufactured by Russia] according to the contract the two countries had previously concluded in late 2005. The contract is estimated to be worth \$700 million. Russia has been censured by the United States, which, according to U.S. Undersecretary of State R. Nicholas Burns, feels that "this is not the time for business as usual with the Iranian government." The Russian Chief of General Staff Yuri Baluyevsky states that these systems can only defend Iranian airspace and that Russia will not participate in an armed conflict in Iran.

— "Russia Will Deliver Air Defense Systems to Iran- Top General," *Ria-Novosti*, 19 April 2006; "Missile Exports to Iran Alarm U.S.," *BBC*, 21 April 2006.

27 April 2006

Iran purchases surface-to-surface missiles from North Korea with a range of 2,500 kilometers. The missiles are known in the West as BM-25s and are single stage liquid fueled. Able to carry a nuclear payload, the missiles were originally developed in the former Soviet Union and were later sold to North Korea. The new purchase allegedly gives Iran a longer reach than the Iranian made Shahab-4, which has a range of 2,000 kilometers.

— Ze'ev Schiff, "Iran buys surface-to-surface missiles capable of hitting Europe," *Haaretz*, 27 April 2006; Aron Heller, "Iran gets first North Korean-made missiles," *Associated Press*, 27 April 2006; "Iran has missiles that put Europe in range: report," *Reuters*, 27 April 2006.

23 May 2006

Iran conducts a test launch of its Shahab-3 intermediate-range ballistic missile. However, the missile testing did not extend the 2,000 kilometer (1,200 mile) maximum range of the Shahab-3.

— "Iran carries out missile test-Israeli source," *Reuters*, 23 May 2006; Josh Brannon, "Iran tests Shahab-3 Missile Capable of Striking Israel," *The Jerusalem Post*, 24 May 2006.

13 June 2006

The U.S. Department of Treasury sanctions four Chinese companies and one U.S. company pursuant to Executive order 13382, for having supplied Iran's military and Iranian proliferators with missile-related and dual-use components. Sanctions under Executive Order 13382, which are administered by the Treasury's Office of Foreign Assets Control (OFAC), prohibit all transactions between the designees and any U.S. person and freeze any assets the designees may have under U.S. jurisdiction. The Chinese companies sanctioned include Beijing Alite Technologies Company, Ltd. (ALCO), LIMMT Economic and Trade Company, Ltd., China Great Wall Industry Corporation (CGWIC), and China National Precision Machinery Import/Export Corporation (CPMIEC). The U.S. company sanctioned is the representative office of CGWIC, G.W. Aerospace, Inc., which is located in Torrance, California. The aforementioned companies are said to have provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of Iran's Aerospace Industries Organization (AIO), the Shahid Bakeri Industrial Group (SBIG) and/or the Shahid Hemmat Industrial Group (SHIG). The AIO, a

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subsidiary of the Iranian Ministry of Defense and Logistics, is the overall manager and coordinator of Iran's missile program, overseeing all of Iran's missile industries. The SBIG and SHIG are affiliates of the AIO.

— "Treasury Designates U.S. and Chinese Companies Supporting Iranian Missile Proliferation," U.S. Department of Treasury-Press Release, 13 June 2006.

1 July 2006

Reports emerge that indicate Iran may be pursuing the purchase of Russian S-300P air defense systems via Belarus while using Austria as a smuggling hub for procuring dual use missile technology. On a separate but connected note, Step, A.S., an Istanbul trading firm, is alleged to have served as the hub of a smuggling network that procured internationally controlled dual-use equipment for Iran's nuclear and missile programs. The dual-use equipment is alleged to include massive heat-resistant aluminum containers for nuclear materials and components for missile guidance systems, all manufactured in Western Europe and in some cases by subsidiaries of U.S. companies.

— "Belarus: Lukashenka Courts Tehran," Jane's Intelligence Digest, 14 April 2006; Christoph Budin and Christoph Matzi, "Missile Deal with Iran Discovered," Vienna Neue Kronen-Zeitung, 4 June 2006, OSC document EUP20060605085018; Nedim Sener, "Iran'a nukleer parca a.b.d'li firmadan," [U.S. Firm Sells Nuke Parts to Iran], Milliyet, 26 May 2006, OSC Document GMP20060526016005.

2 July 2006

Responding to Russian government allegations, Ukraine and Iran deny having participated in the transfer of long range cruise missiles. Earlier, Russia's Defense Minister, Sergei Ivanov alleged that Ukraine's Progress firm had supplied six Soviet Kh-55 Granat missiles (a.k.a. X-55; NATO reporting name AS-15 Kent) to China and another six missiles to Iran. [Note: The Kh-55 is a nuclear capable long range air launched cruise missile.] Touting it as the "grossest violation of the control regime over missile technologies," Defense Minister Ivanov added that the deal had been conducted via a Cyprus based front company. Ukraine denies having allegedly delivered or 'illegally exported' the Kh-55 Granat missiles to other countries. Meanwhile, Iran's Foreign Ministry spokesman, Hamid-Reza Asefi expresses his amazement at the allegations of Russian Defense Minister Sergei Ivanov about Iran's purchase of the X-55 cruise missiles from Ukraine. Denying the allegations, Asefi underlines "Iran has not illegally purchased any weapons."

— "Russia says Ukraine sold banned missiles to Iran, China," RIA-Novosti, 30 June 2006; "Kiev denies accusations of illegal cruise missile sales," RIA-Novosti, 30 June 2006; "Iran denies cruise missile purchase from Ukraine," Islamic Republic News Agency, 2 July 2006.

3 August 2006

In a new report, the Institute for Foreign Affairs and National Security based in Seoul says North Korea has been working closely with Iran to develop its long-range ballistic missiles. Furthermore, the report points out that Pyongyang probably benefits from Iran's weapon's research, because of Tehran's arms trade with China. The report goes on to substantiate Washington's suspicion that Iran may play a role in helping North Korea sell missiles and missile technology to terrorist groups.

— Kurt Achin, "South Korean Report says North Building Missile Bases, Cooperating with Iran," *VOA News*, 3 August 2006; Jack Kim, "Iran working with N.Korea on missiles: Institute," Reuters, 3 August 2006.

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20 August 2006

Iran tests surface-to-surface short range missile "Saegheh" during army war games. The "Saegheh" meaning "Thunderbolt" in Persian, is believed to have a range of 80-250 km (50-150 miles).

— "Iran army tests missiles in wargames," Reuters, 20 August 2006; "Iran tests short-range missile in military maneuvers," Xinhua, 20 August 2006.

27 August 2006

Iran tests new anti-ship missile "Sagheb" during wargames. The "Sagheb" meaning "piercing" is a long range, radar evading missile that can be installed and launched from a submarine.

— "Iran Test-fires 'Long-range Radar-evading' Missile: Military," Agence France-Presse, 27 July 2006; "Iran test fires long-range missile," CNN, 27 August 2007; "Iran Test Fires Saqeb Missile from Submarine," Tehran Vision, 27 August 2006, FBIS document IAP20060827950045.

3 August 2006

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— Kurt Achin, "South Korean Report says North Building Missile Bases, Cooperating with Iran," VOA News, 3 August 2006; Jack Kim, "Iran working with N.Korea on missiles: Institute," Reuters, 3 August 2006.

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25 November 2006

Conflicting reports surrounding the delivery of Tor-M1 anti-aircraft missiles to Iran have emerged in Russia. Nikolai Dimidyuk, a representative of state-run Rosoboronexport, says "I can affirm with 100% certainty that nothing of the kind has happened." Whereas some western media outlets allege that a Russian Defense Ministry official speaking anonymously confirmed the opposite, that the delivery of the 29 sophisticated ground-to-air missiles contractually obligated to Iran had indeed commenced.

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— "Russia's arms exporter denies reported missile supplies to Iran," RIA Novosti, 25 November 2006; "Russia exports missiles to Iran," *London Times*, November 25, 2006.

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2005

11 January 2005

Iranian-born Mohammed Farahbakhsh of Los Angeles has been arraigned on Federal charges of illegally sending pressure sensors and other equipment to the United Arab Emirates, allegedly for transshipment to Iran in support of its missile program. Computer files revealed prior deliveries to Iran's Shahid Hemmat Industrial Group, a company already sanctioned twice by the United States for its involvement in missile technology development.

—"Man Accused of Smuggling Goods for Iran," Associated Press, 12 January 2005.

18 January 2005

The United States has imposed penalties against eight Chinese companies for assisting Iran's ballistic missile program. Although the nature of the technology exported has been kept classified, U.S. officials have referred to several of the penalized companies in the past as "serial proliferators." The companies affected include China Great Wall Industry Corporation and China North Industry Corporation (Norinco), both of which are closely related to the Chinese military. Another, the China Aero-Technology Import and Export Corporation (CATIC), ranks as one of China's largest military aircraft producers.

—David E. Sanger, "U.S. Punishes 8 Chinese Firms for Aiding Iran," *New York Times*, 18 January 2005.

28 January 2005

Two anti-ship missiles identified as the JJ/TL-6B, JJ/TL-10A and KJ/TL-10B, and designed by China for Iran, were displayed at the China Air Show in November 2004. Knowledgeable sources affirm that the missiles are identical to Iran's Nasr and Kosar, also known as the TL-6 and TL-10. Jane's Defense Weekly states that the FL-8 and FL-9 also represent previous designations for these missiles.

—"China Reported to Start Marketing of Missiles Designed for Iran," Middle East Newsline, 28 January 2005.

2 February 2005

Ukrainian Parliament Member Hrihory Omelchenko has called for an investigation into the sale of purported nuclear capable cruise missile to Iran and China.

—"Cruise Missiles Sold to Iran and China," *The Independent*, 3 February 2005.

5 February 2005

Iranian Defense Minister Shamkhani attributes allegations of Iranian production of 3,000 km range missiles to Zionist propaganda, asserting it is "fabricated and is false."

—"Defense Minister Denies Reports on Iran Producing 3,000 km Range Missiles," Vision of the Islamic Republic of Iran Network 2, 5 February 2005.

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2 February 2005

Ukrainian Parliament member Hrihory Omelchenko claims that 12 Kh-55 [U.S. nomenclature is AS-15] air-to-ground missiles were exported between 1999 and 2001, half to Iran and half to China. These cruise missiles boast a highly accurate guidance system and a range of up to 3,000 km, putting Israel within striking distance of Iran. A former Ukrainian secret police (SBU) officer, Omelchenko says the SBU prevented an attempt to export 14 KH-55s last year and accused former Ukrainian President Leonid Kuchma of covering up the illicit arms sale.

—Tom Warner, "Ukraine 'Sold Cruise Missiles to Iran, China'," *Financial Times*, 3 February 2005.

8 March 2005

Peter Pry, a senior Congressional Commission member, has testified that Shahab-3 test flights deemed successful by Iran, despite the occurrence of in-flight explosions, may indicate that Tehran is developing an electromagnetic pulse (EMP) warhead.

—"Shahab Break-Ups Suggest Possible EMP Trial," *Jane's*, 1 May 2005.

10 March 2005

Assistant Secretary of State for Arms Control Stephen Rademaker has testified that China continues "unacceptable proliferant activity" - of particular concern are "transfers of CBW and missile-related technology" to Iran, despite sanctions. Q.C. Chen and Norinco have been identified as key suppliers, to include dual-use components, raw materials and expertise for Iran's solid-fuel missile program, and dual-use technology.

—"U.S. Catches China Transferring WMD Tech to Iran," *World Tribune.com*, 15 March 2005.

17 March 2005

The Ukrainian Prosecutor General's Office states that 18 Kh-55 missiles were smuggled to Iran and China during the Kuchma administration. The probe into the illegal sales has resulted in the indictment or arrest of at least six arms dealers. Member of Parliament Omelchenko asserts that a Russian, Oleg Orlov, and a Ukrainian known as E.V. Shilenko arranged the deal in 2000 by using a "fake contract and end-user certificate" and exported the missiles through Russia's national arms dealer and an arm of Ukraine's weapons exporting agency, UkrSpetsEksport. President Yushchenko has called for an investigation into the matter.

—"U.S. Catches China Transferring WMD Tech to Iran," *World Tribune.com*, 18 March 2005.

31 March 2005

Ukrainian President Viktor Yushchenko confirms that Iran acquired nuclear-capable missiles from Ukraine under the previous administration. He adds that the missiles were delivered unarmed using a forged contract listing Russia as the final destination. Oleksandr Turchinov, Ukraine's top security official, says that the investigation into the affair is complete and that the court is to announce its ruling "in a few days."

—"Report: Iran Has Bought Nuclear-Capable Missiles From Ukraine," *Haaretz*, 1 April 2005; "Security Chief Says Missile Smuggling Case Solved," *Kyiv Post*, 1 April 2005.

6 April 2005

A *Washington Times* report reveals that Iran paid \$49.5 million for the six Kh-55 missiles it received in an air shipment from Ukraine between May and June 2001. The shipments had been misleadingly identified as oil-

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pipeline material.

—Bill Gertz, "Missiles Sold to China and Iran," *Washington Times*, 6 April 2005.

10 April 2005

Iranian government spokesman Hamid Reza Asefi denies that Iran concluded any missile deal such as that recently alleged by Ukrainian officials.

—"Iran Denies Ukraine Delivered Cruise Missiles," Agence France-Presse, 11 April 2005.

25 April 2005

German customs investigations into the export of a highly specialized crane to Iran indicate that the crane was "probably intended for a highly controversial Iranian missile program." The mobile crane was ordered last year by Mizan, an Iranian firm, at a cost of 600,000 euros. The order was ship-loaded on 7 April and is on its way to Tehran. The crane is produced in Germany by the Liebherr company; it has a load-bearing capacity of 100 metric tons and lifts as high as 72 meters.

—Holger Stark, "German Crane Bound for Iran Intended for Missile Program," *Der Spiegel*, 25 April 2005, p. 47.

28 April 2005

Export chief of the German company Tira is arrested for reportedly providing Iran with vibration test machines to test missile turbines.

—"More on German Company Reportedly Delivering High-Tech Products to Iran," *Munich Focus*, 2 May 2005, pg 13, in FBIS Document EUP20050503085013.

30 April 2005

Der Spiegel and *Focus* magazines report that German company Tira is suspected of delivering rocket building technology to Iran as far back as 2002. A manager of Tira, only identified as Peter K., was detained and released as part of the federal investigation. The magazines also say, "deliveries were intercepted by the intelligence agents of an ally in late 2004 in Dubai."

—"German Company Sold Missile Technology to Iran," Associated Press, 1 May 2005.

5 May 2005

Defense Minister Ali Shamkhani has stated that Iran's Shahab-3 missiles are comprised entirely of local parts and are of Iranian design, and that production is ongoing.

—"Iran Says Shahab-3 Missile Entirely Iranian," Agence France-Presse, 5 May 2005.

5 May 2005

Defense Minister Ali Shamkhani announces, "The Shahab-3 missile is entirely Iranian and has been designed by the domestic specialist."

—"Iran Says Shahab-3 Missile Entirely Iranian," Agence France Presse, 5 May 2005.

15 May 2005

Former head of the Ukrainian Security Service (SBU), Ihor Smeshko, says Ukrainian head of State Viktor Yushchenko and former President Leonid Kuchma have nothing to do with the X-55 missile smuggling to Iran.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—"Former Ukrainian Security Chief Says President Not Involved in Missile Scandal," Kiev Interfax, 15 May 2005, in FBIS Document CEP20050515027086.

20 May 2005

Iranian exile Allreza Jafarzadeth says Iran's Defense Ministry is smuggling graphite and graphite compounds, such as ceramic matrix composite (CMC). CMC can be used to encase a nuclear warhead and manufacture missile warheads. Mr. Jafarzadeth added that a purported steel manufacturing plant near Ardekan is actually a graphite technology plant. Although CMC is a dual-use item, international trading of CMC is prohibited for use in nuclear weapons under the Missile Technology Control Regime.

—Tyler Marshall and Sonni Efron, "Iran Said to Smuggle Material for Warheads," *Los Angeles Times*, 21 May 2005; "Iran Reportedly Smuggling Nuclear-Related Materials," *Global Security Newswire*, 23 May 05.

21 May 2005

Ambassador to Russia, Gholamreza Shafe'i says Iran may buy S-300 surface to air missile systems from Russia.

—"Program Summary: Moscow NTV News Russian 1500 21 May 05," Moscow NTV, 23 May 2005, in FBIS Document IAP2005052301002.

31 May 2005

Iran announces a new solid fuel missile motor was successfully tested. The technological breakthrough will increase accuracy and be built into Shahab-3 missiles, says Iranian Defense Minister Ali Shamkhani. Mr. Shamkhani denies Iran also tested a two stage rocket motor.

—Stefan Smith, "Iran Makes Ballistic Missile Breakthrough," *Middle East Online*, 31 May 2005.

31 May 2005

U.S. State Department spokesman Richard Boucher says the United States and its allies have successfully intercepted 11 shipments of nuclear materials destined for Iran and North Korea in the past nine months. "I've cited several cases involving countries of proliferation concern, including Iran," Mr. Boucher adds. "PSI [Proliferation Security Initiative] partners, working at times with others, have prevented Iran from procuring goods to support its missile and WMD [weapons of mass destruction] programs, including its nuclear program," U.S. Secretary of State Condoleezza Rice says in a speech marking the second anniversary of the PSI.

—"U.S. Says it Intercepted Nuclear Material for North Korea, Iran," Bloomberg, 1 June 2005; "ROK's Yonhap: U.S. Intercepts Nuclear, Chemical Materials to N. Korea," Yonhap News Agency, 1 June 2005, in FBIS Document KPP20050601000029.

31 May 2005

Iran's Minister of Defense, Ali Shamkhani, announces that the new two-stage solid propellant engine will be installed on the Shahab-3. A spokesperson for the Ministry of Defense says Minister Shamkhani misspoke when he said the new missile consisted of two stages, referring instead to the booster and main propulsion source.

—"Russian Report on Iranian Two-Stage Missile Development, Official Denial," *Nezavisimoye voyennoye obozreniye*, 10 June 2005, in FBIS Document CEP20050610949011.

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8 June 2005

Iranian Defense Minister Ali Shamkhani insists the solid fuel variant of the Shahab-3 missiles are for defensive purposes only. "The missile is of purely defensive nature. Our strategy rests upon the principles of maintaining our defensive capabilities," Shamkhani adds.

— "Iranian Defense Minister: Shehab 3 Missile - Defense Weapon," *RIA novosti*, 8 June 2005.

27 June 2005

The United States claims China has provided Iran with weapons of mass destruction components and technical expertise. Items include dual-use missile components, raw materials, and chemical weapons related equipment.

—"China Supplies Arms to Iran, Sudan," *Middle East Newslines*, 27 June 2005.

28 June 2005

Japan urges Ukraine to investigate the alleged smuggling of missiles, from Ukraine to Iran, capable of carrying nuclear warheads. Tokyo claims the missiles may have been sold to North Korea.

—"Call on Probe Alleged Cruise Missile Sales to Iran," *Iran Mania*, 5 July 2005.

29 June 2005

U.S. President George Bush issues an executive order "freezing all US assets of eight organizations in Iran, North Korea and Syria deemed to be involved in weapons proliferation, including the Iranian government's Atomic Energy Organization of Iran (AEOI)." The order will also be used to prevent other countries from engaging in business with those identified as proliferators.

—"Sanctions Threat Over Iran Nuclear Programme," *Financial Times*, 1 July 2005.

4 July 2005

Russian daily *Kommersant* reports that Rosoboronexport, a Russian state-owned arms selling agency, is negotiating a contract to upgrade three Iranian submarines with Club-S missile systems.

—"Paper: Iran in Talks to Refurbish Subs," *Moscow Times*, 5 July 2005.

28 July 2005

Iran's Defense Minister Ali Shamkhani announces that Iran is self sufficient in producing solid fuel.

—"DM Shamkhani Announces Iran Self-Sufficient in Producing Solid Fuel," Islamic Republic of Iran News Network, 28 July 2005, in FBIS Document IAP2005072011001.

1 August 2005

According to *Kanwa Defense Review*, the China Shipping and Trading Company (CSTC) plans to sell Iran 10 "China-Cat" missile boats, which could be modified with the Iranian indigenous TL-10 or NOOR (C802) serial anti-ship missile system. *Kanwa* also reports that China has transferred the army version HQ7 air defense missile and that Iran has started production of the C802 land-to-sip missile, also known as Nur (NOOR). [Note: The first reference to the Nur SSM was during the Vahadat-79 (Unity-79) naval exercises in the Persian Gulf beginning on 29 October 2000. In December 2000, Iranian Minister of Defense and Armed Forces Logistics Vice Admiral Ali Shamkhani said that local defense industry would soon be ready to begin production of the "Nur" surface-to-surface missile. It is not clear what the specifications are for the Nur missile.]

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—Kanwa: China Exports OPVs to Thailand, Iran; Iran's Plan Described," *Kanwa Defense Review*, 1 August 2005, in FBIS Document CPP20050803000124.

9 August 2005

Iran's Defense Minister, Ali Shamkhani, says Iran's Shahab-3 missiles "are now accurate to within one meter of their target." Iranian General Ahmad Vahid adds that the missiles' range has also been boosted from 1,300 kilometers to 2,000 kilometers.

—Military Attacks Cannot Destroy Iran's Nuclear Expertise: Defense Minister," *Tehran Times*, 10 August 2005; "Iran Would Rather be Hit by Sanctions than Back Down Over Nuclear Program," Associated Press, 9 August 2005.

27 August 2005

Alireza Jafarzadeh, a member of the Iranian dissident group Mujahedeen-e-Khalq, alleges that Iran is close to mastering long-range cruise missile technology capable of 3,000 kilometers by copying Ukrainian missiles.

—"Iranian Website Dismisses MKO Missile Claim as 'Baseless' Allegation," *Tehran Baztab*, 27 August 2005, in FBIS Document IAP20050830011035.

29 August 2005

Former representative of Iranian dissident group Mujahedeen-e-Khalq, Alireza Jafarzadeh, alleges that Iran's revolutionary guard commander secretly met with A.Q. Khan to "acquire nuclear-capable missiles with a range of 1,800 miles." Mr. Jafarzadeh also claims Mohammad Reza Ayatollahi, then deputy director of Iran's Atomic Energy Organization (AEO), and Seyyed Mohammad Haj Saeed, chief of the Directorate of Research of the AEO, met with A.Q. Khan.

—"Iran's Nuke Missiles" UPI, 29 August 2005.

30 August 2005

Iranian Defense Minister Mostafa Mohammad Najjar says Iran's main military objectives are the development of its air defenses and ballistic missiles, therefore Iran will continue expanding its missile industry to meet the needs of the military. "One of the major projects pursued by this ministry concerns the manufacturing of deterrent weapons, and the manufacturing of Shahab-3 Missile is in this connection, and this will not be halted." Najjar adds.

—"Iran Defense Minister: Non-Peaceful use of Nuke Technology Religiously Forbidden," Mehr, 30 August 2005, in FBIS Document IAP20050830011035; "Iran's new Defense Minister Reiterates Right to Nuclear, Missile Technology," Iranian Student News Agency, 30 August 2005, in FBIS Document IAP20050830011034.

16 October 2005

The British newspaper, *The Sunday Telegraph*, reports that former members of the Russian military are secretly assisting Iran with its missile technology. The newspaper alleges top secret missile technology developed in North Korea has been smuggled to Iran with Russian help.

—Con Coughlin, "Russians Help Iran with Missile Threat to Europe," *Sunday Telegraph*, 16 October 2005.

17 October 2005

Russian Foreign Minister Sergey Lavrov denies his country is secretly providing Iran with missile technology. Minister Lavrov states, "Similar reports appeared about 10 years ago...the Russian government dealt with each

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case. I have not heard of any similar problems since then." Russian Defense Minister Sergey Ivanov adds that the rumors are "nonsense".

—"Russian Foreign Minister Surprised by Reports of Missile Technology Sharing with Iran," RIA-Novosti, 17 October 2005; "Moscow Denies Russian Role in Alleged Iran Missile Deal," Agence France Presse, 17 October 2005.

5 November 2005

The German news magazine *Focus* alleges that Iran is acquiring German missile technology via Moscow-based front companies. German missile technology is been sold in a completely legitimate fashion to Russian enterprises and research institutes acting as middlemen for Iran and Syria. Allegedly, the list of indirect transfers to Iran includes measuring devices, propulsion systems and guidance systems that could be used to enhance the Iranian Shahab-3 medium-range missile.

—"Russians Steal German Technology for Iranian, Syrian Missiles: Report," *Agence France-Presse*, 7 November 2005; "Syria and Iran Obtain German Missile Technology, Magazine Says," *Deutsche Presse-Agentur*, 5 November 2005.

16 November 2005

Head of Iran's Space Agency, Ahmad Talebzadeh talking to reporters on the threshold of World Space Week to be held from 28 Aban to 4 Azar, [19-25 November] says Iran plans to launch into orbit five satellites, including Mesbah, Zohreh, and Sina during the fourth five year economic development plan. He indicates that these satellites will be launched and designed with Chinese and Russian assistance.

—"Iran to Launch Five Satellites by the End of Fourth Plan-Agency," *BBC*, 16 November 2005.

28 November 2005

The German magazine *Der Spiegel* alleges that a high-ranking Iranian emissary traveled to North Korea and offered economic to Pyongyang aid in exchange for helping Tehran build nuclear missiles.

—"Tehran Lends Pyongyang a Helping Hand," *SPIEGEL*, 28 November 2005.

30 November 2005

Iranian space official Mohammad Reza Movaseghinia says Tehran must move forward with its space and satellite program before restrictions, preventing them from acquiring the necessary technology, are imposed. "The moment they feel Iran has made a breakthrough, they will impose restrictions more than those they have imposed on Iran's nuclear program...We have to move quickly and achieve our goals in space. Otherwise, we will face political, economic and security threats," adds Mr. Movaseghinia.

—Ali Akbar Dareini, "Iran Trying to Bolster Space Program," *Associated Press*, 30 November 2005.

30 November 2005

British Foreign Secretary Jack Straw accuses Iran of developing long-range missiles. "The fact that the government of Iran is developing longer range missiles is incontrovertible. Whether they are using their nuclear power program to develop nuclear weapons is not yet incontrovertible," adds Secretary Straw.

—"Iran Developing Long-Range Missiles, Claims Straw," *Financial Times*, 30 November 2005; "Iran-Nuclear: Britain Certain Iran Developing Long-Range Weapons," *National Council of Resistance of Iran*, 30 November 2005.

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5 December 2005

Russian deputy Prime Minister, Sergei Ivanov officially confirms the sale of approximately 29 to 30 mobile Tor-M1 anti-aircraft missile complexes to Iran as part of multi-million dollar arms deal. He adds that the Tor surface-to-air are, "a means of medium range air defence and are an exclusively 100 per cent defense armament, that cannot in principle strike on land targets."

—"Russian Defence Minister Admits Deliveries of Anti-Aircraft Complexes to Iran," *BBC*, 5 December 2005;
"Ivanov: Sale of surface-to-air missile systems to Iran perfectly legal," *Islamic Republic News Agency*, 6 December 2005.

12 December 2005

Iran successfully tests the silkworm surface-to-sea missile with a range of 110 kilometers (68 miles) as part of their biggest military maneuvers in national waters, in the Sea of Oman and the Indian Ocean.

—"Iran tests surface-to-sea missiles," *Associated Press*, 12 December 2005.

16 December 2005

The European Union formally protests Russia's sale of the Tor-M1 surface-to-air missiles to Iran. The EU protest follows Washington's concerns over the decision taken by Russia to sell Iran these anti-aircraft missile systems, highlighting the U.S.-Russian tensions over Iran. The formal protest by the EU is significant for it comes at a time when the normally cautious bloc is trying to woo Russia as a strategic and economic partner.

—George Jahn, "EU assails Russian missile sale to Iran," *Boston Globe*, 16 December 2005; "U.S. concerned over sale of Russian missiles to Iran," *RIA-Novosti*, 15 December 2005.

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2004

11 September 2004

Iranian Islamic Revolution Guards Corps official, Major Yahya Rahim-Safavi states to the Fars news agency that "today, the Guards Corps has the largest deterrent capability at the regional level." He further states that large-scale Ashura-5 military exercises will be held in Western Iran to demonstrate national strength and deterrent capability.

—"Guards C-in-C Says Iran's 'Deterrent Capability' Extends to Entire Region," *BBC*, 11 September 2004.

12-18 September 2004

Iranian Defense Minister Ali Shamkhani confirms the testing of a new "strategic missile" during military exercises by the Revolutionary Guards.

—Ali Akbar Dareini, "Iran Says it Tested 'Strategic Missile,'" *Associated Press*, 25 September 2004.

25 September 2004

Iranian officials announce the addition of a new missile to Iran's arsenal following successful tests during previous military exercises. The missile was handed over to the armed forces.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—Ali Akbar Dareini, "Iran Delivers Missile to its Armed Forces After Successful Test," *Associated Press*, 25 September 2004.

29 September 2004

U.S. places sanctions on seven Chinese firms, two Indian men, and various companies from Belarus, North Korea, Russia, Spain and Ukraine, for selling weapons or cruise and ballistic missile technology and equipment to Iran.
—"US Slaps Sanctions on 14 Firms, People for Arms and Missile Sales to Iran," *Khaleej Times*, 29 September 2004.

1 October 2004

Iranian Commander Yahya Rahim-Safavi states in response to a growing U.S. military presence and rising tensions in the region that if the United States were to make a move against Iran, Iran would be ready to "threaten its bases."

— "Iran's Guards Commander Threatens to Hit US Bases in Retaliation," *BBC*, 1 October 2004.

5 October 2004

Former Iranian President and current head of the Iranian Expediency Council, Akbar Hashemi Rafsanjani declares to the Islamic Republic News Agency (IRNA) that Iran has access to ballistic missiles with a range of 2,000 kilometers. Rafsanjani further states, "once a country has reached this stage, it is capable of attaining further stages."

—"Iran Has Missile With 2,000 km Range: Rafsanjani," *Xinhua*, 5 October 2004.

6 October 2004

U.S. State Department spokesman Adam Ereli states that the United States has "serious concerns" over Iran's declarations on its missile program. The United States views the program as a threat to the region and to the United States.

—"US Views Iran's Missile as Threat to American Interest," *Xinhua*, 6 October 2004.

6 October 2004

According to the BBC, a report by Iranian TV announces that Iran has added to its nascent missile productions the anti-artillery missile Tufan (storm), which can be installed on vehicles, tanks and helicopters, as well as surface-to-air and surface-to-surface missiles, with 92% accuracy.

—"Iran Says Has Broken US Monopoly with Anti-Artillery Missiles," *BBC*, 6 October 2004.

7 October 2004

Iranian Deputy Director of Aerospace Industry, Naser Maleki states Iran is "very certainly going to improve [the] Shehab-3 missile," as well as all other missiles. He further clarifies that Iran's defense strategy is "based on deterrence" and states that "the best means of deterrence is growth and national strength."

—"Iran to Further Improve Shahab-3 Missile," *AFP*, 7 October 2004.

15 October 2004

Two Japanese men are convicted of illegally exporting two grinders to Iran in 1999 and 2000 that could be used to

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produce solid fuel for rockets and missiles.

—"Two Japanese Convicted in Iran Scheme," *Associated Press*, 15 October 2004.

20 October 2004

Iranian Defense Minister Ali Shamkhani states that Iran has test-fired an "improved version" of the Shehab-3 missile with a range of 2,000 kilometers.

—"Iran Test Launches Fresh Missile Test," *BBC*, 20 October 2004.

9 November 2004

Iranian Defense Minister Ali Shamkhani states that Iran has acquired the capability to mass produce its medium-range Shehab-3 ballistic missiles. Officials believe the Shehab-3 is based on the North Korean Nodong missile, which has a 1,300-1,700 km range; this poses therefore a potential threat to Israel and various U.S. bases in the region.

—"Iran Can Mass Produce Missiles," *BBC*, 9 November 2004; "Iran Boasts It Can Mass Produce Shehab-3 Missile," *AFP*, 9 November 2004.

10 November 2004

According to UPI, Iran is developing and producing liquid-fuel engines for the Shehab-3 missiles. Iran previously relied on North Korea to supply engines for such missiles.

—"Iran Ready with Engines for Its Missiles," *United Press International (UPI)*, 10 November 2004.

1 December 2004

The United States has imposed two-year sanctions on four Chinese and one North Korean company for selling weapons, cruise or ballistic missile technology and equipment to Iran. The companies affected include QC Chen, Wha Cheong Tai Company Ltd., Liaoning Jiayi Metals and Minerals Company Ltd., Shanghai Triple International Ltd., and one North Korean company, the Changgwang Sinyong Corporation.

—"US Imposes Sanctions on 4 Chinese, 1 N. Korea Cos for Selling Technology to Iran," *AFX-Asia*, 1 December 2004.

2 December 2004

An Iranian dissident group, the National Council of Resistance of Iran (NCRI) claims that Iran is secretly developing medium and long-range ballistic missiles capable of reaching Western Europe and U.S. forces in Iraq. The new long-range missiles, the Ghadr and the Shehab-4, are said to have a range of 3,000 km. NCRI also claims that the upgraded version of the Zelzal missile, the Zelzal-2, may hit targets as distant as 300 km and is designed specially for offensive use, specifically the U.S.-led multinational forces in Iraq. NCRI further suggests that North Korean and Chinese scientists are assisting Iran.

— Douglas Jehl, "Iran is Said to Work on New Missile; Dissident Group Says Longer-Range Weapon Could Reach Europe," *International Herald Tribune*, 2 December 2004; "Iran Working on Secret Missile Programs: Opposition Group," *AFP*, 2 December 2004.

3 December 2004

A U.S. Congressional intelligence report is released, stating Iran is developing two longer-range ballistic missiles with the help of North Korea, China, and states of the former Soviet Union. The missiles are said to have potential

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target ranges of Europe or the U.S. Iranian officials deny the allegations.

— Barry Schweid, "Bush Administration Suspects Iran is Developing Two Longer-Range Ballistic Missiles," Associated Press, 3 December 2004.

6 December 2004

U.S. officials confirm that the U.S. military is seeking to build a strategic base facilitating any possible future dealings with Iran in the Holang desert area of Herat province, Afghanistan, 20 miles from the Iranian border. Other U.S. military bases in the vicinity of Iran include Iraq and Uzbekistan.

— Eli Lake, "Pentagon Eyes New Military Base as Iran Edges Toward an A-Bomb," *The New York Sun*, 6 December 2004.

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2003

February 2003

Jane's Defence Weekly reports that the Fateh A-110, with an approximate range of 200 km, has recently been displayed on Iranian TV.

—*Jane's Defence Weekly*, in "US could target Iran after Iraq, NKorea," *Australian Financial Review*, 6 February 2003.

10 February

Defense Minister Ali Shamkhani states that Iran has for the first time the capacity to produce composite solid fuels for missiles. Some Iran's scientists admitted that Iran's missile inventory is outdated by U.S. standards.

—Soraya Sarhaddi Nelson, "Iran seeks to calm fears that it is trying to develop nuclear weapons," *Knight Ridder*, 11 February 2003, in Lexis-Nexis, www.lexis-nexis.com.

March 2003

African Amines, a subsidiary of the South African oil from Coal Company (SASOL) exports 120 metric tons of dimethylamine to Iran. Dimethylamine can be used as a precursor for the nerve agent tabun (GA) or missile fuel. Dimethylamine also possesses a wide range of legitimate commercial uses including the production of detergents and pharmaceuticals. The shipment is of particular concern as the receiving company is Sasadja Moavenate Bazargani, which has been placed on WMD end-user watch lists by the German and Japanese governments and is suspected of involvement in Iranian missile programs.

--"How SASOL Firm Sold WMD Chemicals to Iran," Mail and Guardian Online, 18 February 2005, www.mg.co.za;
"RAS: Oil From Coal Company Affiliate Reportedly Exported WMD Chemicals to Iran," FBIS document AFP 200502180000095, 18 February 2005.

Early March

Prominent Iranian reformist Sa'id Hajjarian states that Iran might be better off in securing a role in the future of Iraq by showing restraint and not interfering in the affair. He states that America would be willing, albeit

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reluctantly, to turn a blind eye to Iran's missile and nuclear program "infringements" if Iran has the capacity to build nuclear weapons, sighting the case of Pakistan and India.

—"Iranian media reactions to the Iraqi crisis," BBC, 5 March 2003, in Lexis-Nexis, www.lexis-nexis.com.

7 April 2003

In a commentary about the market losses for Russian air defense systems, it is mentioned that Iran, Syria, and various other countries had shown interest in purchasing the Russian Tors rocket system, which has a range of 12km.

—Aleksy Khazbiyev, "Open Sky, The situation in the 'hottest' segment of the military equipment market has deteriorated since the moment of the creation of the PVO," *Ekspert*, 7 April 2003, in FBIS Document CEP20030407000340.

22 May 2003

The U.S. State Department announces that on 9 May 2003, sanctions were placed on two major arms companies from Iran and China for working to modernize and expand Tehran's missile arsenal. The North China Industries Corporation, or NORINCO, and the Shahid Hemmat Industrial Group will be barred from selling goods and services to the United States, as well as a complete ban on all U.S. support and aid to those countries until the measures expire two years from now. The Bush administration is warning it will take action in response to the alleged tolerance by Beijing of missile proliferation by a Chinese company.

—George Gedda, "US penalizes Chinese, Iranian business for proliferation activities," Associated Press, 22 May 2003; "US slaps sanctions on Chinese, Iranian companies," Agence France Presse, 23 May 2003, in Lexis-Nexis, www.lexis-nexis.com; George Gedda, "US condemns China on arms proliferation," Associated Press, 23 May 2003; "US imposes sanctions on China's NORINCO for aiding Iran's missile program," AFX European Focus, 23 May 2003; "US punishes firms in Iran and China," BBC, 23 May 2003; "US hits major Chinese, Iranian companies with sanctions," World Tribune.com, 24 May 2003, www.worldtribune.com.

Late May 2003

China rejects and condemns U.S. accusations that NORINCO sent Iran unspecified technologies and materials to help Iran develop its long-range missile program. Beijing is not party to any global treaties on sales of missile and related technologies but agreed to abide by its restrictions.

—Joe McDonald, "China rejects US accusation about company," Associated Press, 23 May 2003; Guy Dinmore, John Dizard, James Kynge, "China hits out at 'unreasonable' US sanctions over Iran missile claims," *Financial Times*, 24 May 2003; "China slams US sanctions on conglomerate accused of helping Iran's missile program," Associated Press, 27 May 2003; "China denies company assisted Iranian missile program," Al-Bawaba, 28 May 2003, provided by Comtex News.

27 May 2003

Israeli Defense Minister Mufaz warns that Iran is developing the Shahab-4 and -5, which could threaten the United States with ranges of thousands of kilometers. Mufaz also adds that in a few years Iran will have acquired non-conventional long-range missiles as well.

—Itay Asher, *Ma'ariv*, 27 May 2003, in FBIS Document GMP20030527000139.

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30 May 2003

Moldova's government denies the involvement of the Moldavian Cuanta joint stock company in any Iranian ballistic missile programs and claims U.S. sanctions against the group are a misunderstanding. As for Computer & Communications, another Moldavian company the U.S. sanctioned, the government had no reply, as it is a private company that the government had not been monitoring.

—"Moldova denies company involved in Iran missile program," Agentstvo Voyennykh Novostey, 30 May 2003, in FBIS Document CEP20030530000188.

5 June 2003

Various new agencies report that the Chinese arms manufacturer NORINCO has demanded that U.S. sanctions imposed last month for reported missile technology transfers to Iran be removed and have threatened legal actions for losses suffered as a result of the curbs. [Note: See Late May 2003 entry.]

—"Chinese arms maker wants US to scrap sanctions, threatens legal action," Agence France Presse, 5 June 2003; Joe McDonald, "Chinese company denies missile aid to Iran; seeks end to US penalties," Associated Press, 5 June 2003, in Lexis-Nexis, www.lexis-nexis.com.

12 June 2003

Japanese police arrest five employees of the Tokyo-based manufacturer, Seishin Enterprise Co., including the president, on various charges of illegally exporting equipment to Iran that could be used in the production of missiles. The company allegedly sold two industrial grinders to Iran in 1999 and 2000 without an export license. The grinders, restricted under the Missile Technology Control Regime, can be used in making solid fuel for rockets. The same company came under investigation in 1994 for illegally exporting grinders to North Korea, but escaped prosecution because the five-year statute of limitations on the case had lapsed.

—"Japan arrests 5 for Iran equipment sell," Associated Press, 12 June 2003; Doug Struck, "Japan arrests five in Iran missile case," *Washington Post*, 12 June 2003; Shane Green, "Five arrested over Iran 'missile' sales," *The Age*, 14 June 2003.

16 June 2003

Jane's reports that U.S. surveillance has spotted an Iranian Il-76 cargo aircraft leaving Susan airport in North Korea six times since April, carrying containers that are believed to have held disabled Nodong missiles.

—Ed Blanche, "Shehab-3 ready for service, says Iran," *Jane's Missiles and Rockets*, 1 August 2003; "N. Korea exports missiles to Iran by air," *JoonAng Ilbo*, 16 June 2003, www.drudgereport.com.

17 June 2003

The *Financial Times* reports that according to Russian experts, Iran could mount a nuclear warhead to one of its Shahab-3 missiles and threaten up to 20 million Russians, not to mention parts of Kazakhstan and the Ukraine.

—Andrew Jack, "Iranian missiles 'could threaten 20m Russians'," *Financial Times*, 17 June 2003, nuclearno.com.

July 2003

The U.S. Department of State imposes sanctions against the North Korean Ch'anggwang Shinyoung Corporation for violating the Iran Nonproliferation Act. The Ch'anggwang Shinyoung Corporation was sanctioned in 2001 on

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charges of transferring missile technologies to Iran.

—Kwak Sung-chi, "ROK report introduces DPRK company the exported missiles to Yemen," *Yonhap*, 27 July 2003, in FBIS Document KPP20030727000050.

7 July 2003

U.S. officials conclude that China and North Korea have coordinated their efforts to advance Iran's missile and weapons of mass destruction programs. Sources claim that China is producing components and selling them to North Korea, which then transfers the materials to Iran so that Chinese corporations can avoid detection from the West. In other cases, North Korea markets missile systems through China and Pakistan to also avoid detection from the United States.

—"US Intel links China-N Korea to Iranian missiles," *Rense.com*, 7 July 2003.

Late June/Early July 2003

Iran successfully tests the Shahab-3 missile with a range of 1,300km sometime during the first week in July according to the *Haaretz Daily* and other news sources. This final test was the most successful of the seven to eight previous launches and makes Iran not only a threat to the stability of Israel, but also provides a danger to "the stability of the world," states Israeli Foreign Minister Silvan Shalom. Based on the North Korean Nodong, it is uncertain how effective the Shahab-3 would be at delivering a chemical, biological, or nuclear payload, but the development of the missile while pursuing what many experts believe is a nuclear weapons program raises serious concerns.

—"Iran's missile can reach Israel, newspaper says," *Haaretz Daily*, 5 July 2003; Siavosh Ghazi, "Iran brings Israel within missile range, digs in on tougher UN nuclear probe," *Agence France Presse*, 7 July 2003; Ali Akbar Dareini, "Iran tests missile capable of Israeli hit," *Associated Press*, 7 July 2003; Ed Blanche, "Shahab 3 ready for service, Iran says," *Jane's Missiles and Rockets*, 1 August 2003.

7 July 2003

The Iranian Ministry of Foreign confirms to various news agencies that Iran has successfully tested the Shahab-3 ballistic missile. [Note: See Late June/Early July 2003 entry.]

—Jacques Pinto, "Israel 'very concerned' about Iranian ballistic missile test," *Agence France Presse*, 7 July 2003; Nazila Fathi, "Iran confirms test of missile that is able to hit Israel," *New York Times*, 8 July 2003; "Iran puts on muscle," *Straits Times*, 11 July 2003.

8 July 2003

Aryeh Herzog, the head of Israel's missile defense program, states that Israel's Arrow-II missile defense system can protect Israel from Iran's recently tested Shahab-3 missile, *Israel Radio* reports. Experts suggest that the 16-meter single-stage missile is not very accurate and has a circular-error-probability of 3km.

—"Israel can deal with Iran's missile threat: defense official," *Xinhua News*, 8 July 2003.

9 July 2003

Foreign Ministry spokesman Hatsuhisa Takashima expresses Japan's great concerns about Iran's test-firing of a

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long-range surface-to-surface missile, which Japan feels will negatively affect regional security.

—"Japan concerned about Iran's missile test-firing: Takashima," Japan Economic Newswire, 8 July 2003.

9 July 2003

The United States criticizes Iran's final long-range missile test as a threat to U.S. interests in the region. The missile tests and Iran's suspected nuclear weapon's program are considered by many experts to be precursors to an upcoming showdown between the United States and Iran.

—Peter Hartcher, "Iran's missile test fires up Washington," *Australian Financial Review*, 9 July 2003.

9 July 2003

Defense Minister Ali Shamkhani defends the testing of the Shahab-3 amongst concerns from the United States and its allies, stating that that the army needed to be assured that the device was functional. He was further quoted as saying, "If the Americans are angry after the Shahab-3, they can die angry."

—"Iran's defense minister defends test of missile capable of hitting Israel," Agence France Presse, 9 July 2003.

9 July 2003

An Iranian newspaper defends Tehran's stance with the testing of the new Shahab-3, stating that the missile does not violate any international laws or conventions unless it is armed with a nuclear warhead, at which point in time it would become a strategic weapon that would fall under particular laws. The article further states that Washington is showing an increasing lack of tolerance towards Iran's ordinary activities and increasing the scope of its aggression and injustices towards the Islamic Republic.

—Sobhan Mohaqqueq, "Countering Bush's War Cabinet," Keyhan website, 9 July 2003, in BBC document, "Iran: Paper says Tehran should stand firm against US Criticism on missile tests," 10 July 2003.

11 July 2003

In a television interview, Israeli Ambassador Daniel Ayalon states that the entire Middle East military balance will be upset should Iran arm its recently tested Shahab-3 medium-range ballistic missiles with nuclear or chemical warheads. Ayalon also states that while Iran has yet to perfect their system, they continue to work on the Shahab-4 and -5 missiles, which will ultimately reach all of Europe and eventually the United States. Israeli officials are also working with Russian and Chinese officials to curb companies from assisting Iran both with their missile and nuclear programs.

—Interview with John McLaughlin and Daniel Ayalon, "Iran's missile program and the Middle East," 'One on One,' Federal News Services, 11 July 2003.

Mid-July 2003

Iran claims to be preparing the recently tested Shahab-3 for deployment. The announcement comes as IAEA head Mohamed ElBaradei prepares to leave for Tehran to persuade to accept more intrusive inspections of its nuclear facilities in order to convince the UN and the rest of the world that Iran is not pursuing a nuclear weapons program.

—Julian Borger, "Iran missiles could reach Israel," *Manchester Guardian Weekly*, 16 July 2003.

20 July 2003

Iran's supreme leader, the Ayatollah Khamenei inaugurates the Shahab-3 ballistic missile, hailing the even as a key

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moment in the defense of the Palestinian cause, as the missile brings Israel into Iran's missile range. Television images showed Khamenei and officers with what appeared to be three Shahab-3 missiles on mobile launchers. Yahya Rahim-Safavi, head of the Revolutionary Guard, states during the ceremony that his force was now "ready to defend Iran against any threat." The Ayatollah also states that the new missile will enable other countries such as Lebanon and Palestine to respond to "challenges," which many experts suspect means that Iran is willing to export the missile to nations in the region.

—Stefan Smith, "Iran's supreme leader inaugurate new missile capable of hitting Israel," Agence France Presse, 20 July 2002; "Iran inaugurates missile capable of reaching Israel," Associated Press, 20 July 2003, "Iran puts new ballistic missile into service," Xinhua News Agency, 20 July 2003, Nikolay Ulyanov, "Shahab-3 Product of 'Flow of Technologies' and regional arms race," Strana.ru, 21 July 2003, in FBIS Document CEP20030723000157.

21 July 2003

Iranian Foreign Ministry spokesman Hamid-Reza Asefi denies that Iran's new ballistic missile, the Shahab-3, is a threat to the region. Israeli Foreign Ministry spokesman David Saranga and Russian Major-General Viktor Ryabchuk not only counter the accusation, stating the Shahab-3 not only destabilizes the region, but can reach Israel and parts of southern Russia, as well as Turkey and Saudi Arabia, where U.S. troops are stationed. Israeli officials also state that Israel's Arrow missile defense system, using Arrow-2 interceptors in conjuncture with the Green Pine radar targeting system, is adequate to counter any threat by Iran. Israeli officials are extremely concerned about Iran's integration of the new missile with the nuclear capability that Israel chares it is developing.

—"Iran denies new missile is regional threat," Agence France Presse, 21 July 2003; Anatoly Yurkin, "Iranian missile-potential threat to Mid-East countries-expert," ITAR-TASS, 21 July 2003; "Israel well defended from Iranian missile threat: defense minister," Xinhua General News, 21 July 2003; "Iran missile 'can reach US bases'," *The Sun*, 21 July 2003; "Revolutionary Guards get new missiles," *Los Angeles Times*, 21 July 2003, "Iran's missiles," *The Gulf Today*, 21 July 2003, in FBIS Document GMP20030721000236.

21 July 2003

Israeli officials urge the United States and Europe to pressure Iran to stop its alleged nuclear weapons programs shortly after Tehran inaugurated a new missile capable of hitting Israel, Turkey, and Saudi Arabia. Senior Israeli officials state that the missile itself is not a threat, but it is the trend of developments between the missile program and Iran's purported nuclear weapons program.

—Joseph Coleman, "Israeli officials call for Europe, US to pressure Iran on weapons programs," Associated Press, 21 July 2003.

21 July 2003

Russian Major-General Viktor Ryabchuk states that the newly inaugurated Iranian Shahab-3 can reach parts of southern Russia as well as Israel and much of the rest of the Middle East. Ryabchuk feels that the acceleration of the completion and the inauguration was due to the U.S. invasion of Iraq. The Russian Space Troops detected the final test of the Shahab-3 missile in July. Russian experts also note that Iran is continuing developments on the liquid-fueled Shahab-4 with a range of 2,000km.

—"Russian General assesses threat of Iranian Shehab-3 missile," ITAR-TASS, CEP20030721000111.

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21 July 2003

Russian reporters report that U.S.-Russian relations might face increased tensions over Iran's recent inauguration of the Shahab-3 ballistic missile, capable of hitting Israel as well as U.S. bases in the region. While much of the missile came from North Korea, U.S. officials believe Russia assisted Iran in the development of the missile throughout the Clinton administration.

—Nikolay Ulyanov, "Shahab-3 Product of 'Flow of Technologies' and regional arms race," Strana.ru, 21 July 2003, in FBIS Document CEP20030723000157.

25 July 2003

Anton Khlopkov, deputy director of the Russian Center for Political Research, states the Iran might be able to produce up to 20 Shahab-3 ballistic missiles for military service by 2005. Khlopkov also adds that Iran is attempting to increase the Shahab-3's range.

—"Russian Expert: Iran may field up to 20 Shehab-3 missiles by 2005," ITAR-TASS, 21 July 2003, in FBIS Document CEP20030721000117.

25 July 2003

A Lebanese commentary states that Iran's new missile has served as a warning to the United States and Israel that the new Shahab-3 missile and its capabilities are in the hands of an Islamic-based religious army, and that Israel must consider Iran before crossing over and borders or making any concerns or claims to the recently liberated Iraq.

—Husayn Rahhal, "Al-Aqsa is a symbol of the struggle," Beriut Al-Intiqad, 25 July 2003, in FBIS Document GMP20030726000113.

Early August 2003

Brigadier-General Pardis, commander of the Iranian Air Force, states the defense and missile capability of Iran is a deterrent lever that will bestow peace and security to the nations of the region. Pardis referred to Israel's statements about the recent Shahab-3 test as Zionist propaganda in light of Israel's treatment to the Palestinians the Iran hopes to soon protect.

—"Iranian Air Force Commander says missile capability acts as deterrent," Tehran Mehr News Agency, 2 August 2003, in FBIS Document IAP20030802000003.

2 August 2003

Dr. Fatimah Sayyid Ahmad gives his perspective as to what Egypt feels is motivating Iran to pursue its most recent missile accusations. According to Ahmad, Egypt sees Iran's announcement of the success of the missile as a signal that Iran should be consulted and kept abreast to developments in the region. As well, Iran should have a serious role to play in issues due to the size of its conventional forces and the fact the it is capable of posing a threat to its neighbors and Israel. One strategic studies center associated with the Pentagon feels that Iran will probably continue with its Shahab program till it completes the Shahab-6. U.S. reports indicate the recent launch was a new version of the Scud-C and the North Korean Nodong.

—Fatimah Sayyid Ahmad, "Iran's development, testing of Shahab-3 missile viewed," *Cairo Rose al-Yusuf*, 2 August 2003, in FBIS Document GMP20030804000248.

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5 August 2003

The Sankei Shimbun reports that North Korea is contemplating a plan to export the Taepodong-2 long-range ballistic missile and to jointly develop nuclear warheads. Both countries have been supposedly discussing the plan for about a year and are expected to reach an agreement in mid-October. Under the plan, North Korea will export knock-down components and parts of the missile that will then be assembled in Iran. North Korea will also send experts to Iran to give technological and "promote joint development of nuclear warheads."

—"N. Korea plans to export Taepodong-2 missiles to Iran: report," Kyodo News Service, 5 August 2003; "NKorea plans missile exports to Iran, joint nuclear development: report" Agence France Presse, 6 August 2003; "The Tehran-Pyongyang axis," *Washington Times*, 8 August 2003; Vasily Bubnov, "Iran and North Korea to Unite," Pravda, 7 August 2003, www.pravda.ru.

8 August 2003

A press release from the Iranian embassy states that media reports alleging that Iran and North Korea have worked out a plan to supply Iran with North Korean Taepodong-2 missile parts are untrue. [Note: See 5 August 2003 entry.]

—"Iranian Embassy in Moscow denies reports of missile deal with North Korea," Moscow Agentstvo Voyennykh Novostey, 8 August 2003, in FBIS Document CEP20030808000033.

13 August 2003

The head of the Press Department in Iran's UN mission, Morteza Ramandi, brands the *Washington Times* article, "The Tehran-Pyongyang axis' as "phony and baseless," stating that Iran was neither willing to produce nuclear warheads, nor planning to import spare parts for any missiles from North Korea.

—"Iran's UN mission says Washington Times accusations 'phony'," BBC, 13 August 2003.

29 August 2003

The *Jerusalem Post* reports that policymakers in both Israel and the United States are not as concerned with the thought of Iran launching its newly inaugurated Shahab-3 missiles with nuclear warheads at Tel Aviv, but more concerned with the Islamic Regime becoming intoxicated with a new sense of power, a careless accidental launch, or theft of the weapons by terrorists. Arieh Stav, director of the Ariel Center for Policy Research, states that a greater concern is the inaccuracy of the missile, stating its circular error probable is approximately 5km, proving to be much less accurate than the Egyptian or Syrian Scud-B and -C missiles currently pointed at Israel.

—Erik Schechter, "Up in arms," *Jerusalem Post*, 29 August 2003.

31 August 2003

Israeli officials, sighting classified Western intelligence sources as well as collaboration with European intelligence agents and Iranian officials, indicate that Iran is attempting to increase the range of the Shahab-3 missile to 2,500km, which would bring all of Eastern Europe into its range. Sources say intelligence officials have been confused by Iranian reports of an improved Shahab-3 missile, making it unclear if the missile was experimental or if it is what is known as the Shahab-4. This upgraded missile appears to have been built with Russian aid, and according to western claims, is very similar to the Russian SS-4 missile.

—"Iran extending range of Shahab-3 missile to include Europe, Asia," *Tel Aviv Yedi'ot Aharonot*, 31 August 2003, in FBIS Document GMP20030831000140.

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September 2003

Various Russian and Japanese news sources report that Russia may soon supply Iran with more modern anti-aircraft missile defense systems as Iran's needs for higher security in the wake of new developments regarding Iran's nuclear program. Radjab Safarov, director general of the Russian Center for Modern Iran Studies, recalls propositions from the late Duma Defense Committee Chairman, Lev Rokhlin, that once Iran launches military satellites, it will need better air defense systems, and Russia will be there to supply them.

—"Russia may supply air defense systems to Iran: What does Washington think about it?" Paravda, 4 September 2003, in www.payvand.com; "Russia ready to sell air defense systems to Iran" *The Russia Daily Journal*, 3 September 2003.

4 September 2003

Brigadier-General Parviz announces that Iran has been manufacturing "intelligent" armaments such as laser-guided bombs and missiles, navigation and identification systems, and advanced photographic equipment for various high altitudes among the 187 various projects using domestic technologies.

—"Iran's air force builds 'intelligent,' laser-guided missiles, bombs," *Tehran Vision of the Islamic Republic Network* 1, 4 September 2003, in FBIS Document IAP20030904000005.

4 September 2003

Former Undersecretary of State Robert Kimmitt states that it is time for Europe to confront Iran in the regards to the acceleration of its paralleled nuclear and missile programs.

—Robert Kimmitt, "Iran, Time for Europe to lead," *Washington Post*, 4 September 2003.

22 September 2003

Iran marks the anniversary of the Iran-Iraq war by parading six of its sand-colored recently deployed Shahab-3 missile on a parade ground, as well as Nazeat-6, Nazeat-10, Zezal, Maverick, Hawk, Tondar-69, Fateh-110, Sam-6, and Scud-Bs missiles among others.

—Greg LaMotte, "Iran/missile," *Voice of America News*, 22 September 2003; in Lexis-Nexis, www.lexis-nexis.com; Dan De Luce, "Iran reportedly displays 'longer range' missiles in Tehran parade," *The Guardian*, 23 September 2003, in FBIS Document EUP20030923000084; "Iran demonstrates military capabilities, Shahab-3 missile," *Tehran Vision of the Islamic Republic Network* 1, 22 September 2003, in FBIS Document IAP20030922000056.

29 September 2003

Iran launches the Paykan missile boat into the Caspian Sea waters to "protect Iran's interests," according Admiral Abbas Mohtaj.

—"Iran launches missile boat into Caspian Sea," *Jomhuri Islami*, 29 September 2003, in Deutsche Presse Agentur; "Iran: newspaper announces launch of Paykan missile boat in Caspian waters," *IRNA*, 29 September 2003, in FBIS Document IAP20030929000016.

12 October 2003

Iranian Brigadier-General Parviz announces that Iranian Air Force technicians have started designing and building the acceleration control device to be used in missile guidance systems, which will soon go into mass production.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—"Iran: Air force commander announces missile guidance system," Tehran Voice of the Islamic Republic of Iran Radio 1, 12 October 2003, in FBIS Document IAP20031012000001.

Mid-October 2003

An Iranian professor states to Washington think tank that Iran is pursuing a multi-point program to produce nuclear warheads and improve the range and accuracy of their weapons.

—Dave Ahearn, "Iran seeks nuclear arms, longer-range missiles: scholar," *Navy News Week*, 20 October 2003, in Lexis-Nexis, www.lexis-nexis.com.

17 October 2003

Retired General Iliya Stankov states that U.S./NATO Patriot-3 missile defense systems could be stationed in Bulgaria by 2006 to counter Iran's Shahab-3 and future long-range ballistic missiles that threaten NATO and Europe.

—Daniela Teofanova, "US to deploy two Patriot Batteries in Bulgaris," 168 Chasa, 17 October 2003, in FBIS Document EUP20031019000147.

18 October 2003

The *Keyhan* reports that the Tabriz University is developing an element crucial to guided missiles. The element, being produced by Dr. Hamedani, is a composite known as piro-electric germanium lead, which can also be used in the production of night-vision binoculars and infrared equipment.

—"Tabriz University develops element crucial for guided missiles," *Keyhan*, 18 October 2003, in FBIS document IAP20031020000148.

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2002

2002

Iran's missile threat stems from its possession of some 300 Scud-Bs (Shahab-1), 100 Scud-Cs (Shahab-2), some 200 Chinese supplied CSS-8 cruise missiles, and a handful of Shahab-3 missiles that could be launched in an emergency. The United States has cited Russia with supplying Iran with SS-4 MRBM technologies which have been used in the derivatives of the North Korean Nodong missiles for the Shahab-3 and -4 missiles. Iran has both publicly acknowledged and denied testing for the Shahab-4 and -5, which they claim is a satellite launch vehicle.

—"Russian assistance to Iran," Carnegie Analysis, 17 July 2002, from *Deadly Arsenals: Tracking Weapons of Mass Destruction*, Joseph Cirincione, Jon B. Wolfsthal, and Miriam Rajkumar, June 2002.

January 2002

According to U.S. intelligence officials, China sells HQ-7 surface-to-air missiles to Iran. This does not violate Beijing's 1998 pledge to not sell Iran C-801 and C-802 anti-ship cruise missiles. The HQ-7 has a range of eight nautical miles, and is a reverse-engineered version of the French Crotale missile. Its advanced guidance system uses infrared and television tracking.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—Bill Gertz and Rowan Scarborough, "Inside the Ring," 22 February 2002, *Washington Times*, www.washtimes.com.

January 2002

Jane's Intelligence Review says that Iran is producing Karus and Tondar cruise missiles, which are local versions of China's YJ-1/-2 (C-801/-802) missiles. China supplied Iran with those missiles in the 1990s.

—Duncan Lennox, "Co-operation boosts missile proliferation," *Jane's Intelligence Review*, January 2002, p. 41.

3 January 2002

The Israeli military intercepts a ship carrying 50 tons of Iranian weapons, including Strela anti-aircraft missiles, Sagger anti-tank missiles, and Katyusha short-range rockets. According to the Israeli military, the ship, the *Karine A*, departed from Yemen and arrived at the Iranian island of Qeys on 11 December 2001, where the weapons were loaded under the supervision of Iranian intelligence officers and a representative of Hizbollah. Israeli officials say that the weapons were to be smuggled into the Gaza Strip then to the West Bank.

—Alan Philips, "Israeli commandos capture arms ship bound for Palestinians," *Daily Telegram* (London), 5 January 2002, in Lexis-Nexis, www.lexis-nexis.com; Eric Silver, "Arafat Was Behind Arms Shipment, Says Sharon," *Independent* (London), 7 January 2002, in Lexis-Nexis, www.lexis-nexis.com.

9 January 2002

According to an unclassified U.S. National Intelligence Estimate (NIE) prepared by U.S. intelligence agencies for Congress, Iran's missile arsenal "includes some 1300km-range Shahab-3 MRBMs [medium-range ballistic missiles], a few hundred SRBMs [short-range ballistic missiles], and a variety of unguided rockets." The Shahab-3 is Iran's version of North Korea's Nodong missile, and is said to be "in the late stages of development." Most of the intelligence community believes that Iran "is likely to develop space launch vehicles," which could be employed as intercontinental ballistic missiles (ICBMs) or IRBMs toward the end of the decade. One of the agencies believes "Iran is unlikely to achieve a successful test of an ICBM before 2015." The NIE cautions that this time frame could be shortened to within one year if Iran acquires "complete systems or major subsystems, such as North Korean TD-2 or Russian engines." Russian, Chinese, and North Korean assistance "will remain crucial to the success of the Iranian missile program," although Russia most likely will not provide Iran with a finished ICBM or space launch vehicle. Regarding possible warheads, the NIE says that Iran has chemical and biological weapons, but "does not yet have a nuclear weapon."

—"Foreign Missile Developments and the Ballistic Missile Threat Through 2015," Unclassified Summary of a National Intelligence Estimate, Director of Central Intelligence, December 2001.

12 January 2002

The *New York Times* reports that Iran purchased U.S.-built Stinger anti-aircraft missiles and supplied them to the Lebanese-based terrorist organization, Islamic Jihad, but the missiles prove defective.

—James Risen, "Report Says Iran Gave Terrorists U.S. Arms," *The New York Times*, 12 January 2002, in Lexis-Nexis, www.lexis-nexis.com.

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13 January 2002

According to U.S., Israeli, and Russian officials, Iran has been unable to perfect an indigenous version of the engine for its Shahab-3 missile. Iran has successfully manufactured some components for the Shahab-3, which is based on North Korea's Nodong missile. Based on official statements and missile tests, Iran is believed to be increasingly focusing on short-range solid-fueled missiles rather than long-range liquid-fueled missiles such as the Shahab. Since signing a 1985 agreement with Tehran, North Korea has provided Iran with complete missile systems, individual missile components, and engines and transporter-launchers for its short-range Shahab-1 and Shahab-2 missiles in return for shipments of crude oil.

—Michael Dobbs, "A Story of Iran's Quest for Power: A Scientist Details The Role of Russia," *Washington Post*, 13 January 2002, in Lexis-Nexis, www.lexis-nexis.com; Janine Zacharia, "US-Israel Talks to focus on Iran's missile program," *The Jerusalem Post*, 16 January 2002.

Mid-January 2002

An Iranian Shahab-3 missile explodes while being fueled for a flight-test, killing several people. Israeli and U.S. intelligence sources say that the missile had a liquid-fueled engine from North Korea. The Shahab-3 is said to have a range of 1,300km. Two of the previous three flight-tests failed. The biggest problems with the missile are said to be its engine and navigation systems. [Note: See the following *Ha'aretz* report on the story; to the best of our knowledge, the event was not mentioned in the Iranian press. See also entries on the previous Shahab-3 tests in July 1998, February 2000, and September 2000.]

—"Iran's Shihab-3 Explodes Before Launch," *Middle East Newslines*, Vol. 4, No. 70, 19 February 2002.

Mid-January 2002

An engine test for Iran's Shahab-3 ballistic missile fails when the North Korean supplied liquid-fueled engine explodes, according to U.S. intelligence sources. Iran does not issue a statement on the accident, which resulted in an unknown number of casualties. It is unclear whether Iran was planning a test-flight of the missile, but Israeli sources say the engine exploded while fuel was being added. The test may have been part of Iran's efforts to indigenously develop a Shahab-3 engine. The Iranian Shahab-3 engine has failed in two previous tests, but a mid-2000 test utilizing a North Korean engine in the Shahab-3 was successful. [Note: See entries on the previous Shahab-3 tests in July 1998, February 2000, and September 2000.] The current failure indicates that Iran's efforts to acquire Russian assistance with the missile engines have not yet been successful. A U.S. analyst said, however, "we can't say for sure whether this harms the Shahab-3 program." Iran also is said to be continuing development of a 2,000km-range Shahab-4 missile, despite assurances to Europe that Shahab-4 would be cancelled.

—"Iran Fails to Develop Shihab-3 Missile Engine," *Middle East Newslines*, Vol. 4, No. 58, 11 February 2002; Ze'ev Schiff, "Iran missile trial fails, casualties reported," *Ha'aretz*, 10 February 2002, in www.haaretzdaily.com; Steve Rodan and Duncan Lennox, "Shehab 3 suffers test launch setback," *Jane's Defense Weekly*, 20 February 2002, p. 16.

15 January 2002

Iran and Nigeria express interest in establishing weapons deals, which could include the sale of missiles. An Iranian official said that Iran has "developed an array of missile systems that have been tested and acknowledged for their strength....We would like to cooperate in this regard with our brother Nigeria." On 6 January, however, former

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president and head of Iran's Expediency Council Hashemi Rafsanjani said, "Iran does not sell weapons and is not interested in arms sales." Nigeria's Defense Minister Theophilous Danjuma had previously indicated that Nigeria would buy weapons from Iran if the prices were appropriate.

—"Nigeria Possible of Buying Missiles From Iran: Officials," Xinhua News Agency, 15 January 2002, in Lexis-Nexis, www.lexis-nexis.com; "Despite Pledge, Iran Continues to Peddle Missiles," *Middle East Newsline*, 7 February 2002, Vol. 4, No. 54.

16 January 2002

Israeli officials say that Iran is prepared to provide a variety of missiles and rockets to the Palestinian Authority (PA), as indicated by the recent seizure of a shipment of Iranian weapons destined for the Gaza Strip. [Note: See entry for 3 January 2002.] Israeli Transportation Minister Ephraim Sneh says, "Iran wants to do with the population in the central sector of Israel what it did with northern residents: to build a network of rockets that will cover most of the country's population." A report by the Israeli Foreign Ministry says that this seizure is "the tip of the iceberg" in Iran's efforts to supply weapons to the Palestinians.

—"Israel Orders Intelligence Focus on Iran," *Middle East Newsline* (Jerusalem), 16 January 2002.

17 January 2002

U.S. and Israeli officials meet in Tel Aviv and hold high-level discussions on Iran's attempts to acquire nuclear technology and advanced conventional weaponry. [Note: See 13 January 2002 entry.]

—Janine Zacharia, "U.S.-Israel talks to focus on Iran's missile program," *The Jerusalem Post*, 16 January 2002.

21 January 2002

According to the U.S. Department of Defense, China has not stopped selling missile subsystems and technology to countries in the Middle East, including Iran and Libya. Furthermore, China continues to export missile components and technology to North Korea, which transfers related versions to Iran, Syria, Libya, and Egypt. Deputy Defense Undersecretary Lisa Bronson says, "China continues to be one of [the] world's key sources for missile and WMD-related technology, including to some terrorist sponsoring states." Burns also says that Chinese companies have provided assistance to non-conventional weapons programs in Iran, Iraq, Syria, and North Korea. The U.S. Department of Commerce has listed 19 Chinese organizations believed to be involved in such transfers, including Huawei Technologies, which allegedly has helped Iraq improve its air-defense system.

—"China Continues to Export Missile Tech to Mid-East," *Middle East Newsline* (Jerusalem), 21 January 2002.

23 January 2002

Iran launches Katyusha rockets at the Mujahadeen Khalq's Romoz camp in Iraq, 360km south of Baghdad. This is believed to be the ninth Iranian rocket attack against the Iraq-based Khalq, the largest rebel group opposed to the Iranian government.

—"Iran Launches Missile Attack on Iraqi Camp," *Middle East Newsline* (Jerusalem), 25 January 2002.

29 January 2002

In his State of the Union speech, President George W. Bush says that Iran, Iraq, North Korea "and their terrorist allies, constitute an axis of evil, arming to threaten the peace of the world. By seeking weapons of mass

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destruction, these regimes pose a grave and growing danger."

—George W. Bush, State of the Union Address, Washington, DC, 29 January 2002.

29 January 2002

The *World Tribune* reports that the U.S. State Department has broken away from the U.S. intelligence community on the assessment of Iran's long-range missile threat in the unclassified version of the National Intelligence Estimate. Most of the disagreement revolves around the definition for ICBM and the deadline by which Iran could accomplish the testing of such vehicle, which the State Department feels could take until 2015.

—"State Department breaks with U.S. intelligence on Iran missile threat," *World Tribune*, 29 January 2002, www.worldtribune.com.

30 January 2002

Moscow's National Information Service reports that Iran will probably have a test model of its Shahab-4 missile and a Shahab-5 toward the end of the decade. These two-stage missiles are expected to have a range between 2,000 and 3,500km. Iran currently has in service the Shahab-3, a single-stage, liquid-fueled missile with a maximum range of 1,300km, a maximum 1000kg warhead, and 20-ton launch weight. The Shahab-3 circular error probability (CEP) is approximately 2000 meters. Iran also has Scud and solid-fueled Muvaak-series missiles.

—"North Korean, Iranian, Iraqi Missile Programs Said to Pose No Threat to U.S.," *Strana.ru National Information Service* (Moscow), 30 January 2002, via FBIS, Document CEP20020131000213.

30 January 2002

In a bi-annual report to Congress, the U.S. Central Intelligence Agency (CIA) assesses that "entities in Russia, North Korea, and China continued to supply crucial ballistic missile-related equipment, technology, and expertise to Iran" in the first half of 2001. Iran's aims of independently producing ballistic missiles are currently supported by foreign assistance. Iran currently produces Scud short-range ballistic missiles, and has nearly developed the Shahab-3 medium-range ballistic missile, which has been tested three times. Iran had acknowledged development of the Shahab-4 as a more advanced ballistic missile, but later labeled it exclusively as a non-military space launch vehicle. Iran's Defense Minister has also spoken of plans for a Shahab-5, which the CIA concludes, "strongly suggest that Tehran intends to develop a longer-range ballistic missile capability."

—"Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January Through 30 June 2001," Released 30 January 2002, in www.cia.gov.

31 January 2002

Israeli Foreign Minister Shimon Peres says that Iran has provided 10,000 missiles, with ranges between 20 and 70km, to Hizbullah in Lebanon. He also says that Iran possesses or is seeking the Shahab-3 missile, with a range of 1,300km, and a missile with a 5,000km range. Peres claims that Iran is developing a missile with a range of 10,000km, which would be capable of striking North America.

—Nina Gilbert, "Peres: Iran widening its missile threat," *Jerusalem Post* [Internet Edition], 31 January 2002, in <http://www.jpost.com>.

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February 2002

The *Al Sharq Al-Awsat* paper reports that Iran has decided to scrap its Shahab-4 ballistic missile for the time being. Sighting reports from close to the military circles, the regime decided to put the project on hold after President George W. Bush labeled Iran part of the "axis of evil" in January. Sources from the Shahid Hemmat Complex, where various missiles are produced, as well as other military experts such as Defense Minister Admiral Ali Shamkhani, observed that the production of the Shahab-4 and -5 with ranges of over 4,000km "would not only not enhance the nation's defense, but would endanger national security instead, as the U.S. and European countries would never allow Iran to produce weapons that could reach their countries." Iran is also working on new versions of advanced anti-tank TOW rockets capable of being fired from helicopters and land-based vehicles.

—"Iran to scrap production of Shehab-4 ballistic missiles," *Al Sharq Al-Awsat*, 24 February 2002, via Iran Press Service, www.iran-press-service.com.

February 2002

A recent trial of the Iranian Shihab-3 missile failed when the engines exploded, reportedly causing a number of casualties. Experts say the repeated failures in the engines will undoubtedly delay its production—while the Iranians declared the second test launch a success. It later emerged that the Iranians had installed a North Korean engine in the missile, not an Iranian one. North Korean know-how has been instrumental in the development of the Shihab-3. However, recent efforts to harness Russian expertise have failed to yield positive results. Experts suggest it is only a matter of funds and time before a missile can be made ready for production. As a result of these tests, Israel succeeds in convincing the United States of the need for a third deployed battery of Arrow anti-ballistic missiles to counter the Shihab-3, whose range is estimated to be 1,300 kilometers.

Iran is also developing Shihab-4, with an estimated range of 2,000 kilometers.

—Ze'ev Schiff, "Iran missile trial fails, casualties reported," *Ha'aretz*, 14 February 2002, in www.haaretzdaily.com.

4 February 2002

Israeli Foreign Minister Shimon Peres says that Iran has provided around 10,000 rockets with ranges between 20 and 70km to Hezbollah in southern Lebanon "so that they can hit the heart of Israel." Peres also says that Iran has sent troops from the Islamic Revolution Guard Corps military units. Israel's Transportation Minister Ephraim Sneh said that Iran believes that "from a religious point of view, Israel has no right to exist. Its Army, the rockets in south Lebanon are all meant for this purpose. This is the regime's ideology and strategy." Iranian Foreign Minister Kamal Kharrazi denied the allegations.

—Peter Hirschberg, "Peres Raises Iranian Threat," *Ha'aretz*, 5 February 2002, in www.haaretzdaily.com; "Iran denies Israeli claims it has supplied rockets to Hezbollah," 6 February 2002, in www.haaretzdaily.com.

5 February 2002

Iranian Defense Minister Admiral Ali Shamkhani says that although Iran does not intend to produce nuclear weapons, it "will focus efforts on developing its missile capabilities, particularly the rocket Shahab-3...We are inclined to raise its accuracy and double its exploding power." The Shahab-3 currently has a 1,300km range. Shamkhani dismissed allegations of Iranian nuclear weapons ambitions, saying that this "would make us a potential threat to others which could be exploited in a dangerous manner in undermining our ties with other states in the region." Shamkhani also refutes President George W. Bush's labeling Iran part of an "axis of evil," and

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says "we are neither Afghanistan nor Iraq, and Iran will not hesitate to defend its values and principles. Iran will not retreat an inch." In response to suggestions that Israel may attack Iran's nuclear power facilities at Bushehr, Shamkhani says, "Iran would give a response that has crossed the minds of no Israeli official."

—"Iran has no plans to acquire nuclear arms, says defence minister," *Deutsche Presse-Agentur*, 5 February 2002, in Lexis-Nexis, www.lexis-nexis.com; "Shamkhani: Iran Will Respond With Unimaginable Force," *Tehran Times*, 6 February 2002, in www.tehrantimes.com.

5 February 2002

Recently named "an axis of evil" by U.S. President George W. Bush, Iran, Iraq, and North Korea all possess Soviet-designed Scud missiles. North Korea has provided assistance to Iran's ballistic missile programs, but an Asian ambassador based in South Korea dismisses "a serious alliance between them [as] laughable."

—Tim Witcher, "Scud 'Axis' an Alliance with Missiles but no Direction," *Agence France Presse*, 5 February 2002, in Lexis-Nexis, www.lexis-nexis.com.

6 February 2002

Sheikh Nabil Qaouk, Hezbollah's commander in southern Lebanon, says that his organization "has missiles on the [Israeli] border that limit [Israeli Prime Minister] Sharon's aggression." Iran had previously denied reports that it supplied Hezbollah with Katyusha rockets, but Qaouk acknowledges that Iran "[is] supporting us and helping us in our resistance against Israeli occupation." [Note: See entry for 4 February 2002.] Qaouk makes the remarks while leading Iranian Ambassador Mohammed Sobhani on a rare visit to the region, thereby demonstrating Tehran's support for Hezbollah. [Note: As the Israeli-Palestinian conflict intensifies, Hezbollah has played an increasingly active role, including firing at Israeli warplanes violating Lebanese airspace. The UN has called these Israeli flights "provocative."]

—David Sheehan, "Hizbullah admits to missiles on border; Hariri tells of growing impatience with Washington," *Daily Star* (Beirut), 7 February 2002; via FBIS, Document GMP20020207000162; Nicholas Blanford, "Emboldened by US Jibes, Hizbullah Prepares for War," *Christian Science Monitor*, 8 February 2002.

6 February 2002

Israeli Transportation Minister Ephraim Sneh says that Iran has "at least 20 long-range Shahab-3 [ballistic missiles] that can strike Israel." Speaking to delegates at an international conference in Paris on ballistic missile proliferation, Sneh said that Iran had on numerous occasions threatened to use its missiles against Israel.

—"Iran has produced 20 Shihab missiles, Israeli official says," *World Tribune*, 8 February 2002, in www.worldtribune.com.

7 February 2002

Hamid Eslami-Zad, the top Iranian official at the current conference in Paris discussing ballistic missile proliferation, says "Iran has always supported reviewing the issue of ballistic missiles at international gatherings." Iran holds the view that the United Nations should oversee the discussion of policies "to limit missile proliferation." France commends Iran for its proposal to the UN, and notes the importance of Iran participating in the conference. [Note: Iran co-sponsored UN Resolution 55/33, titled "Missiles," at the 2000 General Assembly. The Resolution calls for countries to report to the UN their views "on the issue of missiles in all its aspects."]

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—"Iran calls for stepping up int'l cooperation to halt proliferation," *Islamic Republic News Agency* (Tehran), 7 February 2002, in www.irna.com; "EU states relations with Iran will continue," *Jam-e Jam* (Tehran), 7 February 2002, via FBIS, Document IAP20020213000002.

7 February 2002

Based on a recently released National Intelligence Estimate (NIE), Iran has "more than 1,300 medium-range Shahab-3s." [Note: See entry for 9 January 2002. The *Washington Times* reporter misread the NIE, which says that Iran has "some 1,300km-range Shahab-3" missiles. Iran continues to experience difficulties with the Shahab-3 engine and has not been able to consistently produce the missile. Iran most likely has fewer than 20 Shahab-3s.]

—James Hackett, "Missile Defense Constraints," *Washington Times*, 7 February 2002, p. 18.

8 February 2002

Representatives of 73 countries, including Iran, "discuss a draft code of conduct" that would require states to report annually on their ballistic missile programs, as well as announce missile tests. The document is expected to be finalized and opened for signature by a conference in The Hague, scheduled for later this year. [Note: See entry for 7 February 2002.]

—"Experts from 73 States Discuss Missile Code of Conduct," *Tehran Times*, 12 February 2002, in www.tehrantimes.com.

11 February 2002

Based on information from the Central Intelligence Agency, China has recently provided Iran with "equipment, technology, and expertise related to ballistic missiles." Defense analysts believe that Washington should focus on China's sales of nuclear and missile technology to the Iran-Iraq-North Korea "axis of evil." [Note: See entry for 29 January 2002. The main suppliers of Iran's ballistic missile programs are entities in Russia, China, and North Korea.]

—Glenn Schloss, "China arms entwined in 'axis of evil'," *South China Morning Post*, 11 February 2002, in <http://www.scmp.com>.

13 February 2002

Iran is reportedly "playing a major role" in Libya's ballistic missile programs, particularly in helping Libya create an industrial base to manufacture liquid-fuel propellants and other technology. Israeli sources say that Libya plans to acquire Scud and medium-range ballistic missile engines from Iran or North Korea. Libya has also sent individuals working in their missile programs to Iran for training. Senior officials of the two countries decided earlier this year that Iran would supply Libya with necessary technology for developing the Al-Fatih surface-to-surface missile. Iran had agreed to help Libya indigenously produce missiles with a 1,500km range. Libya agreed to pay Iran \$48 million by the middle of 2003, assuming Iran provides the required materials and develops the missile production lines. The two countries seem to have overcome differences that had placed the deal in jeopardy, and Libya has given Iran an initial payment of \$4 million.

—Steve Rodan, "Libya steps up pursuit of MRBM capability," *Jane's Defense Weekly*, 12 February 2002, p. 16; "Report Notes Reason for 'Freezing' Iranian-Libyan Military Cooperation," *Al-Sharq al-Awsat* (London), 25 February 2002; via FBIS Document GMP20020225000169.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



13 February 2002

According to Western intelligence sources, Syria and Iran collaborate on developing ballistic missiles and weapons of mass destruction, including building a factory to produce Scud missiles.

—"Syria turns to Iran for strategic assistance," *World Tribune*, 13 February 2002, in www.worldtribune.com.

13 February 2002

The official Iranian press reports that Iran's aerospace industry has started producing missile and torpedoes for two new advanced ships named Zolfaqar and Zoljanah. The Islamic Revolution Guards Corps test-fired missiles and torpedoes as part of an inauguration ceremony for the new ships.

—"IRGC receives missile-launching vessels," *Vision of the Islamic Republic of Iran* (Tehran), 13 February 2002; via FBIS, Document IAP200320213000053.

Mid-February 2002

In anticipation of a possible American attack, Iran starts increasing its anti-ship and anti-air defenses on the three islands of Abu Musa and the Greater and Lesser Tunbs. Iran reportedly is amassing its Chinese and locally made surface-to-sea missiles, anti-aircraft missiles, and other heavy artillery on the islands. Iran also puts its anti-ship and anti-aircraft missile systems on alert at the Bandar Abbas naval base, as well as missiles guarding Kish Island. The islands are strategically located in the Strait of Hormuz, and could be instrumental if the United States attacks Iraq. Iran's control of Abu Musa and the Tunbs is disputed by the Emirates across the Gulf from Iran.

—"Iran Looks to Its Gulf Islands," *DEBKA-Net-Weekly-Email* (Jerusalem), 15 February 2002; via FBIS, Document GMP20020216000115.

15 February 2002

Alexei Krasnov, a prominent official in the Russian Aerospace Agency, says that Russian entities do not provide Iran with sensitive ballistic missile technology. Krasnov says that Russia has investigated 13 cases presented by the United States and found no violations. Krasnov acknowledges that some of the organizations previously placed under sanctions by the United States were set up as illicit covers for transferring technology out of Russia. No sensitive technology had been leaked, however. [Note: The United States placed sanctions on 10 Russian entities in July 1998; see entry for 18 July 1998.]

—Vladimir Isachenkov, "Russian officials deny U.S. claims that missile know-how leaked to Iran," Associated Press, in Lexis-Nexis, www.lexis-nexis.com.

19 February

John Bolton, U.S. Undersecretary of State for Arms Control and International Security, tells Russia's Deputy Minister of Foreign Affairs Georgy Mamedov that Washington is very concerned with Russia providing nuclear and ballistic missile technology to Iran. Stopping the technical assistance to Iran is "a very high priority" for the United States.

—Alex Wagner, "U.S. Presses Russia on Nuclear, Missile Cooperation with Iran," *Arms Control Today*, March 2002, www.armscontrol.org.

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20 February 2002

According to Israel's Jaffe Center for Strategic Studies, "North Korea is the most important provider of missiles in the Middle East," as Russia and China have drastically cut back their missile exports to Iran, Syria and Libya. North Korea sells missiles and related technology to the region.

—Hwang Jang-jin, "North Korea's continuing missile exports threaten Middle East peace," *Korea Herald*, 20 February 2002, in Lexis-Nexis, www.lexis-nexis.com.

20 February 2002

Russian officials say their country "is not supplying any missile technologies" to Iran. U.S. representatives are in Moscow preparing for President Bush's meeting with President Putin this May. Russian officials say the United States has not presented any evidence that would confirm the allegations. [Note: See entry for 19 February 2002.]

—"Russia Rejects US Linkage of Iran Cooperation and Missile Talks," *BBC*, 20 February 2002, in Lexis-Nexis, www.lexis-nexis.com.

20 February 2002

The *Washington Post* reports that Russian and U.S. officials ended talks today sharply at odds over Moscow's cooperation with Iran's nuclear and missile programs. Both sides had been working together to prepare for the Presidents' May summit. The United States has made curbing Russian brain-drain to Iran a priority, while Russians are demanding the U.S. limit its plans for missile defense.

—Sharon LaFraniere, "U.S., Russia divided over Iran after talks," *The Washington Post*, 20 February 2002.

21 February 2002

Iran's Army helicopters successfully tested indigenously produced TOW air-to-ground missiles for the first time ever. The missiles are made by the Ministry of Defense Armed Forces Logistics. According to army commander Brigadier General Amir Mohammadifar, "these missiles are better than their foreign counterparts, and they have longer range."

—"Army Aviation Tests New Air-to-Ground 'TOW' Missiles," *Voice of the Islamic Republic of Iran* (Tehran), 21 February, 2002; via FBIS, Document IAP20020221000017; "Iran Test-Fires New Air-to-Surface Missile," Xinhua News Agency, 22 February 2002, in Lexis-Nexis, www.lexis-nexis.com.

21 February 2002

U.S. President George W. Bush is unsuccessful in getting a pledge from China to not sell nuclear weapons and missile technology to Iran and North Korea. Bush "hopes that China will strongly oppose the proliferation of missiles and other deadly technologies." The CIA previously said that Chinese organizations supplied Iran, North Korea, and Libya with "dual-use missile related items, raw materials, and/or assistance" in 2001. [Note: In January 2002, Washington imposed sanctions on two Chinese companies for providing chemical and biological weapons technology to Iran and North Korea. Another Chinese firm was sanctioned in September 2001 for selling missile technology to Pakistan.]

—"China Makes No Promises on Arms Sales," *Global News Wire*, 25 February 2002, in Lexis-Nexis, www.lexis-nexis.com; Alex Wagner, "No Deal Reached on Chinese Missile Proliferation," *Arms Control Today*, March 2002, www.armscontrol.org.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



21 February 2002

A Western diplomat dismisses as "questionable" U.S. and Israeli assessments that Iran is developing intercontinental ballistic missiles. Iran has had a difficult time producing fully operational missiles; two of three tests of its 600-mile-range Shahab-3 have failed. Russian specialists ostensibly in Iran to help develop their missile programs are said to be hired largely "for show."

—Scott Peterson, "Iran's nuclear challenge: deter, not antagonize," *Christian Science Monitor*, 21 February 2002, in www.csmonitor.com.

28 February 2002

Azerbaijani TV reports say that Iran's armed forces have 38 ships carrying Scud missiles in the Caspian Sea. Iran's Foreign Minister says the report is false, and is intended to damage relations between the two countries.

Azerbaijan's Defense Minister also dismissed the report as "propaganda."

—"Azerbaijani TV reports Iran stationing 38 naval ships in Caspian Sea," *ANS Television* (Baku), 28 February 2002; via FBIS Document CEP200203010000204.

March 2002

As of March 2002, there are 10 entities operating in Iran, North Korea, Pakistan, and China that are currently under U.S. sanctions for missile proliferation activities. The Defense Industries Organization, the Ministry of Defense and Armed Forces Logistics, the SANAM Industrial Group, and the Shahid Hemmzt Industrial Group have all been found guilty of Category II violations.

—"U.S. Missile Sanctions: Fact Sheet, March 2002," *Arms Control Association*, March 2002, www.armscontrol.org.

March/April 2002

Iran's missile program has recently been accelerated by the U.S. intent to do battle with neighboring Iraq. Experts feel that Tehran will be able to hit anywhere in Asia or Europe, perhaps the United States within a decade, as the Islamic Republic is currently developing the Shahab-4 and -5 with ranges of 2,000km and 10,000km, respectively, as well as the satellite-launched Shahab-6. Much of Iran's help has come from Russia, China, and North Korea, with sales of complete missiles, such as HQ-7 short-range missiles, as well as technologies and engines reverse engineered from other programs.

—Michael Rubin, "Iran's Burgeoning WMD Programs," *Middle East Intelligence Bulletin*, March/ April 2002, www.meib.org.

5 March 2002

China's ambassador to Israel told the Knesset Foreign Affairs and Defense Committee that Beijing makes "a concerted effort" to restrict private Chinese entities from selling missile and other weapons technology to Iran. China "takes action" against those who transfer sensitive technology. [Note: See entry for 21 February 2002. President Jiang Zemin failed to provide President George W. Bush with concrete assurances that China would not sell missile technology to Iran. The ambassador's comments in Israel indicate that China is aware that unauthorized transfers may be taking place.]

—"China Envoy Notes 'Concerted Effort' Against Technology Leakage to Iran," *Voice of Israel Network* (Jerusalem), 5 March 2002; via FBIS Document GMP20020305000233.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



8 March 2002

According to U.S. intelligence sources, Iran is collaborating with Libya, North Korea, Pakistan, and Syria to develop intermediate- and long-range ballistic missiles. Iran and Pakistan have not been previously known to share weapons technology. "If Iran needs something, it is willing to trade with just about anybody," said an intelligence source. North Korea and Pakistan have provided Iran with technology that can increase the range of Scud missiles by "clustering engines and adding extra stages to the rocket." The Central Intelligence Agency says that this technology could convert a 300km-range Scud into an intercontinental missile. The collaboration is in response to Russia reducing its missile technology sales to Iran over the past year. Russia is still helping Iran with its Shahab-3 missile program, but is no longer providing assistance for its longer-range Shahab-4.

—"Iran Pools Resources for Missile Development," *Middle East Newslines*, Vol. 4 No. 94, 8 March 2002.

11 March 2002

Robert Walpole, national intelligence officer for strategic and nuclear programs, says that Iran is interested in North Korean space-launch technology as a foundation for manufacturing intercontinental ballistic missiles (ICBMs) or intermediate-range ballistic missiles. Iran is most interested in North Korea's Taepodong-1 and Taepodong-2, which the United States says are ICBMs, but North Korea claims as space launch vehicles. "If Iran were to acquire complete Taepodong-2 systems from North Korea, it could conduct a flight-test within a year of delivery, allowing time for them to build a launch facility," says Walpole, based on information in a recently released National Intelligence Estimate. [Note: See entry for 9 January 2002 report on the National Intelligence Estimate.] Walpole says that the U.S. intelligence agencies who compiled the report believe that "Iran could attempt to launch an ICBM about mid-decade, but ...*is likely* to take until the last half of the decade to do so," Russia is assisting Iran's missile programs "more than the Russians are willing to admit," says Walpole, but "Iran is unlikely to acquire a complete ICBM or space-launch vehicle from Russia." China also is a major supplier of missile technology to Iran and other countries.

—Robert Walpole, "Hearing on CIA National Intelligence Estimate of Foreign Missile Development and the Ballistic Missile Threat through 2015," U.S. Senate Committee on Governmental Affairs, 11 February 2002, in www.senate.gov. [Note: The Senate Committee on Governmental Affairs lists Walpole's hearing as taking place on 11 March 2002, but on the title page for Walpole's testimony, the date is listed as 11 February. The correct date is 11 March, as 11 February was a national holiday.]; "Iran Seeks Space-Launch Capability for Missile Plans," *Middle East Newslines*, Vol. 4, No. 119, 27 March 2002; "Greater Concern About Iranian Missile Capability," *Reuters*, 11 March 2002, www.reuters.com.

20 March 2002

U.S. intelligence sources are tracking an Iranian ship believed to be transporting North Korean gunboats that Iran will use for guided-missile warships. The ship, the *Meead*, was first monitored in late February, on its way from Bandar Abbas, Iran to Tianjin, China, and then to Nampo, North Korea. Iran now has 10 guided-missile fast-attack boats. [Note: Iran previously received anti-ship missiles from China. See entry for January 2002.]

—Bill Gertz, "N. Korea Gunboat Shipment Helps Iran Expand Military," *Washington Times*, 20 March 2002, p. 3.

27 March 2002

Israeli and U.S. intelligence officials say that in return for information on Israeli military positions, Iran provides

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Yasser Arafat's Palestinian Authority with "heavy weapons and millions of dollars." In January, Israel intercepted a shipment of heavy weapons, including 62 Katyusha rockets, intended for the Palestinians. [Note: See entry for 3 January 2002.] This new "alliance" demonstrates the strong support that Iran is providing the Palestinians in its on-going clash with Israel.

—"A Secret Iran-Arafat Connection is Seen Fueling the Mideast Fire," *New York Times*, 24 March 2002, in www.iranexpert.com.

May 2002

U.S. officials indicate they will soon announce sanctions against entities that are contributing to Iran's ballistic missile and WMD programs. Currently, Iran is believed to have a handful of liquid-fueled Shahab-3 missiles, with serial production reportedly having begun in the spring of 2001, however the reliability of these missiles is questionable. *Jane's Defence Weekly* reports that Iran lacks the indigenous production capability to produce Shahab-3 rocket motors, and instead relies on a supply of 20 Nodong engines received from North Korea in 1999. Jane's further sites that Iran's struggle with such complex tasks makes the production of the 2000-km range Shahab-4 unlikely.

—Andrew Krepps, "Iran's Ballistic Missiles: Rhetoric Outpacing Reality?" Carnegie Analysis, 9 May 2002, www.ceip.org.

Early May

The successful test of Iran's Shahab-3 ballistic missile brings Iran one step closer to having a long-range missile capable of being equipped with conventional or "other" warheads, as early as 2004, according to the latest Israeli intelligence assessments. Previous tests in September 2000 using Iranian-built engines had failed seconds after launch. The Iranian Shahab-3 resembles the SS-1 Scud, but is around 40 percent bigger than the North Korean Nodong, from which it was co-derived with the help of North Korea.

—"Iran missile test boosts long-range missile capacity bid," *Flight International*, 4-10 June 2002.

7 May 2002

Defense Minister Vice Adm. Ali Shamkhani states Iran is working to improve the power and radius of its Shahab-3 long-range missile: "...currently, the supply and strengthening of the Shahab-3 missile is one of the defense policies of Iran, and using smart systems can reasonably boost the Shahab-3 destructive power, accuracy and range." Iran is also developing the Shahab-4 with the assistance of Russia and other countries. The missile will have an initial range of 1,250 miles, but anticipated upgrades would allow it to reach most of western Europe.

—"Iran strengthening capabilities of its long-range missile, defense minister says," Associated Press Worldstream, 7 May 2002, in Lexis-Nexis, www.lexis-nexis.com; George Gedda, "Iran developing missile capable of reaching U.S. allies in Europe, official says," *Associated Press*, 7 May 2002, in Lexis-Nexis, www.lexis-nexis.com.

16 May 2002

The *Jerusalem Post* reports that Turkish Intelligence has determined that Iran will proceed with the production of the Shahab-3 missile after last month's supposedly successful test. The report cites that Iran now plans to produce 150 of the missile, each capable of dropping a one-ton warhead on Israel. The report also notes that Iran is preparing to test its 1,200 mile Shahab-4 missile soon. Israeli officials estimate Iran has been able to amass at least

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20 Shahab-3s, which are based on North Korean design. Experts at the Jaffee Center for Strategic Studies questioned the validity of the report.

—"Iranian missile can hit Israel, report says," *Jerusalem Post*, 16 May 2002.

17 May 2002

The *Washington Times* reports that China's military has sold Iran high-speed C-14 missile patrol boats, according to defense intelligence officials. These high-speed gunboats can carry up to eight C-701 anti-ship cruise missiles each. The Bush administration is investigating the boat transfers to see whether they violate U.S. proliferation laws. The administration announced last week that it would impose economic sanctions on eight Chinese companies and exporters as well as several companies from other countries for selling chemical weapons technology and cruise missile components to Iran.

—Bill Gertz and Rowan Scarborough, "Iran's missile boats," *The Washington Times*, 17 May 2002, in Lexis-Nexis, www.lexis-nexis.com.

23 May 2002

The Associated Press cites U.S. officials on Iran's recent Shahab-3 tests, indicating that the test might have been the fifth for the missile. U.S. intelligence officers have stated that Iran can probably fire a few of the missiles in an emergency, as well as their Scud missiles, which have a range of 300 miles. The Shahab-3 is based on North Korean Nodong missile engines, though Iran receives assistance from China and Russia as well. Iranian officials are also cited as stating they intend to develop the Shahab-4 and -5, based on the North Korean Taepodong-1, both capable of reaching targets in Europe.

—John Lumpkin, "Iran conducts successful flight test of ballistic missile," Associated Press, 23 May 2002, in Lexis-Nexis, www.lexis-nexis.com.

24 May 2002

The *Jerusalem Post* cites Turkish intelligence on the recent successful testing of Iran's Shahab-3 in the Semman region last month. [Note: see 16 May entry.] Turkey is particularly concerned and warned that it would need to take countermeasures since Turkish cities would be in range of the Shahab-3 and that Turkey and Israel are Iran's prime targets. According to the Turkish intelligence report, Iran has already procured sophisticated Russian S-300 missile air defense systems, for which Iran has sent a number of technicians to Moscow for training. Iran's missile industry currently has some 500 missiles in its arsenal, including 195 300-km Scud-Bs, 150 500-km Scud-Cs, 25 150-km CSS-8s, and 25 200-km Musshaks.

—"The Iranian Way" *The Jerusalem Post*, 24 May 2002, in Lexis-Nexis, www.lexis-nexis.com.

25 May 2002

Defense Minister Ali Shamkhani says on state-run Tehran television that U.S. pressure on China and Russia to halt cooperation with Iran has no impact on its self-sufficient missile program.

—"Iran Says U.S. pressure has no effect on Iran's missile program," Associated Press, 25 May 2002, in Lexis-Nexis, www.lexis-nexis.com.

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25 May 2002

The official IRNA news agency quotes Defense Minister Ali Shamkhani as vowing to stick to the country's missile program in defiance of U.S. pressure following Iran's recent projectile tests. He is quoted as saying Iran will continue upgrading its Shahab-3 missile in order to promote the power and precision of the Shahab-3, although the country has no plan to add a new type to its Shahabs. "All the recent tests which were carried out quite successfully were intended to upgrade the missile and are not regarded as a new production or step toward increasing its range," he said.

—"Iran DM vows to stick to missile program against U.S. pressure," Xinhua News Agency, 26 May 2002, in Lexis-Nexis, www.lexis-nexis.com.

27 May 2002

News agencies cite Israeli Chief of General Staff Lt. -Gen. Shaul Mofaz as expressing concern over Iran's recent successful tests of their Shahab-3 missile, warning that the day was approaching "when Tehran could pose a threat to the Jewish state."

—Arieh O'Sullivan, Herb Keinon, "Iranian Shehab-3 missile a threat," *The Jerusalem Post*, 27 May 2002; "Israel expresses concern over Iran's test of medium range missile" Xinhua News Agency, 27 May 2002, in Lexis-Nexis, www.lexis-nexis.com.

5 June 2002

The BBC reports that when questioned at his weekly news conference, Turkish Foreign Ministry Spokesman Huseyin Dirioz stated Iran's recent Shahab-3 missile tests were aimed to increase the range and the destructive force of the missiles. He was quoted as saying, "...these missiles and the increase in their range do not contribute to regional or global security and stability." He further stated that "preventing the propagation of weapons of mass destruction and launch pads is an important priority for Turkey."

—"Turkish Foreign Ministry says Iran missile tests do not contribute to stability," BBC, 5 June 2002; "Turkey expresses concern over Iranian ballisitc missile test," *Associated Press*, 5 June 2002, in Lexis-Nexis, www.lexis-nexis.com.

5 June 2002

In his press conference with the National Press Club, Representative Curt Weldon addresses previous faults in United States and Russian policy for arms control violations and missile proliferation between Russia, China, Iran, and other countries in the late 1990s.

—Representative Curt Weldon, Press Conference in the National Press Club Morning Newsmaker, 5 June 2002, via Federal News Service.

6 June 2002

Gary Milhollin, Director of the Wisconsin Project on Nuclear Arms Control, testifies before the Senate Subcommittee on International Security, Proliferation, and Federal Services. Milhollin states that much of Iran's missile help has come from China and Russia, and that most of the cases of proliferation have come from repeat offenders—companies that have been previously sanctioned by the United States for past export offences—and that the United States needs to do more to halt proliferation abroad.

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—"Nonproliferation disputes involving Russia and China," Capitol Hill Hearing Testimony, 6 June 2002, from the Federal Document Clearing House, in Lexis-Nexis, www.lexis-nexis.com.

26 June 2002

The *Jerusalem Post* reports that Iran and Syria are among the many elements threatening to destabilize the Middle East region, according to Israeli Minister Binyamin Ben-Eliezer. "The whole world is sleeping while Iran builds a core nuclear infrastructure that is going to do something bad to interests of the world," he stated while also mentioning that all of Israel's densely populated areas are within reach of Iran's missiles, and that U.S. attacks in Iraq will only lead Iraq and Iran to retaliate against the United State's closest ally, Israel.

—Tovah Lazaroff, "Ben-Eliezer: World ignoring Iranian nuclear threat," *The Jerusalem Post*, 26 June 2002.

Late June 2002

The *Times London* reports Israeli Mossad Director Epreaim Halevy warned NATO this week that Iran is not only pressing ahead with a nuclear weapons program, but is developing missiles capable of hitting Europe and North America. Halevy told NATO representatives that Iran is investing heavily in the construction of a missile with a range beyond that of its Shahab-3. He also accused the regime of developing a nuclear weapon capability as well as secret chemical and biological weapons programs. Mr. Halevy also wanted to serve notice to NATO that Israel regards Iran as a direct threat to its security and unless the nuclear and missile issues are resolved peacefully it may take action on its own.

—Richard Beeston, "Mossad chief warns of Iran missile threat," *The Times* (London), 28 June 2002.

10 July 2002

The Global Security Newswire reports that U.S. defense officials believe Iran has completed development of the Shahab-3 and that it will now have to be a weapon that needs to be factored into U.S. planning, reflecting increased concern over Iran's weapons of mass destruction programs. Some experts suspect that Iran is moving on to longer-range missiles such as the Shahab-4, though other experts are skeptical of Iran's success with the speed and evolution of their missile program.

—"Iran: Shehab-3 development complete, Pentagon says," NTI, 10 July 2002, in www.nti.org.

28 August 2002

FBIS reports on recent interviews from Iranian officials. Minister of Defense Rear Admiral Ali Shamkhani states that peace and stability will prevail in the region only through Iran's build-up of power, and with Iran's current military force, Iran is capable of decreasing the "temptation" of their enemies from attacking them, he further states. Presidential Advisor Mohammad Reza Tajik states that Iran is in need of technical innovations, such as the U.S. Stealth Bombers, Tomahawk, and Cruise missiles, in order to ensure military superiority like the United States. Iran has the Shahab-3 to deter Israel as well as the air forces of other regimes, such as that of the United Arab Emirates.

—"Iran: FBIS report on officials interviewed on Khatami's defense strategy," via FBIS Report, 28 August 2002, Document IAP20020910000073.

6 September 2002

The official *IRNA* news agency reports that Iran has successfully test-fired a solid-fueled surface-to-surface missile,

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dubbed the Fateh A-110. Iranian Defense Ministry stated the missiles "ultramodern control system" was also tested, and that they would begin to mass produce the missile shortly. The Fateh A-110 may be based on the Chinese DF-11 A missile, which has a range of 186-248 miles, and is capable of carrying nuclear warheads.

—"Iran successfully test-fires surface-to-surface missile," Xinhua New Agency, 6 September 2002 in Lexis-Nexis, www.lexis-nexis.com; Modher Amin, "Iran test fires new missile," United Press International, 6 September 2002; Ali Akbar Dareini, "Iran successfully tests fires surface-to-surface missile," Associated Press, 6 September 2002.

24 September 2002

Agence France Presse reports that Iran began production today of their new Fateh A-110 surface-to-surface missile according to the IRNA state news agency. Iran's Defense Minister Ali Shamkhani also asserted that they have no intentions on increasing the range of its missiles, but that they Fateh A-110 is "one of the most precise in the world." U.S. officials believe the Fateh-110 was developed with the Chinese help, as many Iranian engineers traveled to China in 1997 to view a ground test of the missile. China has also helped Iran with missile testing equipment, such as special x-ray machines. Iran is also reportedly working on a new sea-launched cruise missile called the Nur, as well as armor piercing missiles. Shamkhani insists the domestically manufactured missiles are in line with international criteria.

—"Iran begins production of new surface-to-surface missile," Agence France Presse, 24 September 2002; "Iran missile program in line with international criteria," IRNA, 24 September 2002, via FBIS Document IAP20020924000098; "U.S. credits China for improved Iran missiles," Geostrategy, 24 September 2002, www.geostrategy-direct.com.

3 October 2002

Ahmad Vahid, the head of the Iranian missile development project, in an interview with the *Al-Hayat* newspaper, reveals that Iran's long-range missiles were developed specifically for the purpose of being able to retaliate against Israel, should Israel strike Iran. Vahid states that the Shahab-3 was designed specifically to counter Israel's Jericho missiles. Vahid also announced that Iran intends to launch an experimental satellite using the Shahab rocket, though it was not clear if he was referring to the Shahab-3 or -4. He also counters claims that Iran is seeking both nuclear weapons and missile with a range of 12,000km, stating that both claims were false.

—David Rudge, "Iran: Shehab missile designed to target Israel," *Jerusalem Post*, 4 October 2002; "Iranian missiles aimed at Israel," *Iranian Press Service*, 4 October 2002. www.iran-press-service.com.

10 October 2002

Mohammad Khatami announces to the Japanese foreign ministry that Iran had sought weapons from other countries during the Iran-Iraq War. His statement followed comments on the similarities between sanctions imposed on both Iran and North Korea, and could in fact be a confirmation that Iran bought missiles from North Korea during the war. Khatami added, however, that all such dealings with countries, including North Korea, ended once the war was over.

—"Iranian hints at past missile purchase from N. Korea," *Jiji Press*, 10 October 2002, via FBIS Document JPP20021010000188.

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11 October 2002

State Department spokesman Richard Boucher, when confirming U.S. concerns over Syria and Russian involvement in Syria's weapons of mass destruction program, asserted that Iran was of greater concern, as Iran's weapons programs were much larger and much more developed, and that the United States was devoting much more attention to Iran than Syria.

—"U.S.says it is concerned about Syrian nuclear and missile programs," Agence France Presse, 11 October 2002.

11 October 2002

The *Daily Telegraph* reports that Russia has supplied Iran with parts and powerful new technologies for its long-range missiles. The National Council of Resistance of Iran and American intelligence have reported successful test-firings of the missile in a desert range in Iran with contributions from Russian, North Korean and Chinese scientists and companies. The NCRI has been told twice the Tehran twice test-fired the new Shahab-4, though the Pentagon believes recent tests involved upgraded versions of the Shahab-3. U.S. intelligence believes that Russia has provided Iran with a powerful new motor to replace at least one of the North Korean Nodong engines, creating a Russian-North Korean hybrid after two failed attempts with North Korean engines. The new Shahab-4 is believed to be based on the Soviet SS-4 missile, and uses entirely Russian technology. According to documents seen by the NCRI, Tehran has secured a \$7 million contract with a Russian company for high-grade steel and special alloys for the Shahab-4 missile casing and for foil shielding around the guidance system. This deal demolishes Iranian claims that they were not working on the Shahab-4, as boasted by Mr. Shamkhani. Russian officials, when presented with evidence of the deal, insisted that the individual companies were acting without authorization.

—Philip Sherwell, "Russia adds range to Iran's latest missile," *Daily Telegraph*, 10 October 2002, www.dailytelegraph.co.uk.

10 October 2002

U.S. Under Secretary of State John Bolton asserts to members of the Senate International Affairs Committee that the United States is "...still very concerned that the nuclear missile programs of Iran and Syria are continuing with the technological and expert assistance from Russia."

—Aleksandr Shumilin, "Moscow Daily eyes US Under Secretary Bolton's Criticism of Syria, Iran," *Moscow Izvestiya*, 11 October 2002, via FBIS Document CEP20021010000328.

16 October 2002

Soona Samsami of the National Council of Resistance of Iran announces in a press conference that Iran was testing missiles with a 2,000km range, capable of delivering chemical and biological warheads to targets as far as Europe and North Africa. Samsami said the Iranians had tested the Shahab-4 missiles last May and June in the Semnan region and that the missiles were "masqueraded" as Shahab-3s. She also adds that Iran is developing the Shahab-5 with a 5,000km range, and the Shahab-6, which qualifies as an intercontinental ballistic missile.

—"Iranian opposition group accuses Iran of missile testing," Agence France Presse, 16 October 2002.

22 October 2002

The Associated Press reports that the failed Iranian missile test last July was a modified Shahab-3. A normal Shahab-3 has a range of 800 miles, it is unclear how much the Iranians attempted to extend this range, according

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to U.S. defense officials. The missile has been tested four times with mixed success and is based on the North Korean Nodong. Iranian opposition groups had claimed that recent flight-tests were of Shahab-4s disguised as Shahab-3s, though U.S. officials do not believe the Shahab-4 program has moved beyond the developmental stages.

—John Lumpkin, "Iran fails in attempt to extend missile range, U.S. defense official says," Associated Press, 22 October 2002, in Lexis-Nexis, www.lexis-nexis.com.

Late October

The Iranian Student New Agency reports that Cabinet Spokesman Abdollah Ramezanzadeh, in response to questions about Iran's Shahab-4, states, "We shall do whatever is necessary to defend the country."

—"Iran: Cabinet spokesman speaks on Iraq, missiles, Kurdistan, poll centre," BBC, 23 October 2002.

31 October 2002

Yossef Bodansky of *Defense & Foreign Affairs*, releases his study on the connections between Iran's ballistic missile and WMD programs and those of the DPRK. Bodansky stresses that the April 1997 Iranian missile tests actually used Soviet SS-20 technologies, and would therefore give the missile a range of 5,000 to 7,500km, far greater than the 2,500km range from the test data. The Russians believe that the only way the Iranian missile programs could have evolved this way would be through the help of specific Russian design bureaus, the same bureaus responsible for the development of the SS-25 Topol and the Topol M, both missiles with a range of 10,500km. While Russian military intelligence is certain Iran had the SS-20 technology, it lacks the evidence that the A.D. Nadiradze OKB design bureau was involved, leaving the Russians to conclude that the technology was recycled through China, using its DF-31 and DF-41 technologies that it had acquired through Russia between 1991 and 1992. The DF-41 is a follow-up ICBM with a range of 12,000km. Iran has shown a prolonged interest in purchasing long-range ballistic missiles capable of reaching the United States, and since the United States has been monitoring all major transfers out of China, Beijing must have elected to avoid outright sales and instead focused on technological and industrial assistance to Iran. With this, Iran embarked on a three-phase plan to develop ballistic missiles, the first phase involving 2,500km range missiles, the second using 5,500km range MRBMs, and the third phase, 10,000km range missiles, should be completed by the time Iran has refined its nuclear warhead models and brought them to a fully operational status.

Iran contacted various German and Japanese companies to acquire sophisticated technologies for its joint MRBM program with the DPRK, while in the mid-1990s, Iran sought and acquired RD-214 engines from Russia to compensate for its troubles with its pre-production North Korean Nodong-2 engines. Bodansky explains the various correlations to the Russian, North Korean, and Chinese missile engines and parts before explaining why Iran chose the combinations it did to develop its derivative of the North Korean Taepodong-2 missile with a range of 5,500km. The German BND confirmed specific information on the missile, including the range and payload, with the 770kg warhead being designed for chemical weapons delivery.

—Yossef Bodansky, "Iran's ballistic missile and WMD programs: the links to the DPRK," *Defense & Foreign Affairs Daily*, 31 October 2002.

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12 December 2002

Various news agencies report that Tokyo police and customs officials raided offices of a machinery company suspected of illegally exporting technology capable of producing solid fuel for missiles to Iran. Eleven offices of the Seishin Enterprise Co. Ltd., as well as the home of the president, were raided on suspicion that the firm exported two Jet Mill machines to an Iranian military goods company and to a rocket science laboratory at a university in Iran. Seishin is suspected of shipping the dual-use equipment between May 1999 and November 2000.

—"Japan firm raided over suspected missile tech sale to Iran," Jiji Press and Kyodo News Agencies, 12 December 2002, via Agence France Presse, in Lexis-Nexis, www.lexis-nexis.com.

16 December 2002

The Associated Press reports that Vladimir Orlov, director of the PIR Center for Policy Studies in Russia, and his colleagues believe that Iran's missile program and acquisition of nuclear technologies must be carefully taken into consideration by both Russia and the UN. The uncertain political future, as well as the controversial decisionmaking process in Iran could easily cover two different programs, one a cover for the other. Orlov also reiterates that Iran's nuclear program may not necessarily be for nuclear weapons, but there are concerns and thus Iran's reactors still merit close monitoring by the IAEA.

—Steve Gutterman, "Russian experts call for Kremlin pressure to allow broader monitoring of Iranian nuclear program," Associated Press, 16 December 2002, in Lexis-Nexis, www.lexis-nexis.com.

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2001

2001

Alexander Matveyenko, director of the Moscow Aviation Institute (MAI), says the last six, out of a total of 29, Iranian students completed their studies in engineering and rocket science. MAI stopped admitting Iranian students after the United States imposed sanctions against the institute.

—Michael Dobbs, "Collapse of Soviet Union Proved boon to Iranian Missile Program," *Washington Post*, 13 January 2002, in Lexis-Nexis, www.lexis-nexis.com.

January-September 2001

Iran begins serial production of the Shahab-3, which is based on the Nodong. Production reportedly includes "subsystems as well as assembly of the entire missile." According to Israeli and U.S. sources, Iran has the capacity to produce 20 Shahab-3 missiles per year, but continues to have problems in engine development despite "extensive Russian and North Korean assistance." According to *Jane's Defence Weekly*, Iran acquired 20 Nodong engines in 1999.

—Andrew Koch and Steve Rodan, "Iran Begins Serial Production of Shehab 3," *Jane's Defence Weekly*, Vol. 36, No. 15, 10 October 2001.

4 January 2001

Jacques Monsieur, the arms dealer responsible for selling U.S.-made Belgian missiles to Iran, is in custody in Iran

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for being a double agent between the Iranians and the Chechens. He is responsible for selling weapons made by the Iranian state-owned company Modelex to Congo-Brazzaville and Angola (UNITA).

—"Jacques Monsieur (France/Iran/Congo-B)" *La Lettre du Continent* (Paris), 4 January 2001, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

8 January 2001

Yevgeniy Zvedre, a senior official of the Russian Foreign Ministry's Security and Disarmament Department, says that the situation with the so-called missile cooperation between Russia and Iran is "being fanned up artificially."

—"Official: Russian-Iran Missile Cooperation Issue Artificially Created," *Itar-Tass* (Moscow), 8 January 2001; in FBIS Document CEP20010108000055, 8 January 2001.

15 January 2001

Philip Reeker, spokesman of the U.S. State Department, says, "We are particularly confused by the articles published in the Russian press about the discussions of Igor Sergueiev [Russian Defense Minister] with the Iranians. [These articles] suggest that Russia is ready to sell missiles to Iran."

—"Iranian President Visit to Russia," *Agence France Presse*, 15 January 2001, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

22 January 2001

Russia is ready to sell S-300 air defense missiles to Iran. This heightens regional concerns about Tehran's desire to improve its missile technology and programs, including the Shahab-3 and -4 missile programs. According to regional intelligence sources, the S-300 systems have already been brought to Iran so that they can assess the capability of the missiles. The sale consists of missiles, launchers, and mobile radars and cost about \$250 million. The system that Iran is buying is the same S-300 PMU-01 version that Russia has sold Cyprus. More than 100 Iranians will be trained on S-300s in Russia over the next six months. More than 300 Iranian military officers and technicians will receive training in Russia in several other fields. According to intelligence sources, half of them will receive long-range missile technology training, while about another 30 will take courses on nuclear programs. Iran has asked Russia to sell them the Kamov Ka-50 attack helicopters, submarines, and launchers for the Shahab-3 missiles.

—Metehan Demir, "Russia is Poised to Sell S-300 Air Defense Missiles," *Aviation Week & Space Technology*, 22 January 2001, p. 19.

29 January 2001

Moscow's *Segodnya* reports that Iran had shown an interest in the 2-ton armored reconnaissance vehicle (BRDM) that was designed by the Belarusian Minotor-Servis Closed Joint-Stock Company. Along with its stealth-technology material, the BRDM comes with Strela anti-aircraft missiles.

—"Kharazi Due in Minsk," *Info-Prod Research* (Middle East) Ltd., 29 January 2001, in Lexis-Nexis, www.lexis-nexis.com.

February 2001

North Korea and Iran "modernize Chinese C-802 cruise missiles with a range of 120km."

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—Baku MPA, 9 January 2002, in "Iranian Envoy in Azerbaijan Denies Tehran Has Nuclear Weapons," FBIS Document ID CEP20020109000141.

February 2001

The Central Intelligence Agency identifies Russia as a supplier of ballistic missile technology to Iran. Russia strongly denies the accusation, although officials at some Russian research institutes have acknowledged teaching Iranians in the areas the United States considers sensitive. Officially, Iran remains on a list of rogue nations that American experts believe could threaten the Middle East with nuclear or chemical weapons and ballistic missiles within a few years. Russian Deputy Prime Minister Ily Klebanov tells the Russian news service Interfax that Iran hopes to buy one of Russia's most advanced air defense systems, the S-300 anti-missile complex, which is said to track and destroy as many as six low-flying cruise missiles or aircraft at a time.

—Michael Wines, "Putin to Sell Arms and Nuclear Help to Iran," *New York Times*, 13 March 2001, in Lexis-Nexis, www.lexis-nexis.com.

4 February 2001

Brig. Gen Shamseddin Zafari says that the Department of the Army's ground forces has completed designing and manufacturing a model vehicle for military missions and carrying commandos. He adds that the self-sufficiency department of the ground forces is also working on designing two other vehicles for installing light-missile launchers as well as anti-aircraft guns.

—"Regular ground force manufactures model military vehicle," British Broadcasting Corporation, 6 February 2001, in Lexis-Nexis, www.lexis-nexis.com.

5 February 2001

The Qoqnos (Phoenix) anti-armor missile site is commissioned. The missile site was built by the defense ministry's electronic industries in order to launch a variety of Tufan missiles and has the capacity to store eight Tufan missiles. The missile site is equipped with a laser distance measurer, night sight, links with control towers, a siren system for announcing the location's status, a sonic system for psychological warfare, an internal communications system, and it can move by starlight without any artificial lighting.

—"Iran: New anti-armor missile system commissioned," Voice of the Islamic Republic of Iran Radio 1 (Tehran), 5 February 2001; in FBIS Document IAP20010205000049, 5 February 2001.

5 February 2001

Second Brigadier General Olfati, head of the self-sufficiency Jihad of the Armed Forces, says, "the Islamic Republic of Iran is implementing 100 armored, missile and naval vessel projects. Taking into account the 400 projects already implemented, it has taken a significant step towards self-sufficiency and foreign currency saving." He adds, "Gaining modern technology, electronic warfare equipment, the manufacture of laser, optical and radar guided missiles,...are among the achievements of the self-sufficiency Jihad of the Armed Forces of the Islamic republic of Iran."

—"Head of Iran's Armed Forces Self-sufficiency Jihad on manufacturing projects," Voice of the Islamic Republic of Iran Radio 1, 5 February 2001; in FBIS Document IAP20010205000086, 5 February 2001.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



6 February 2001

Admiral Ali Shamkhani, Iran's Minister of Defense and Armed Forces Logistics, says on Iranian television, "domestic production of the equipment required by the armed forces, based on the Imam's self-reliant spirit, became an institutional fact in the armed forces." As part of self-sufficiency efforts, two "major projects" will be launched during the Ten Days of Dawn, marking the Islamic Revolution of 1979. The projects are the Iran-140 aircraft and the other is to mount missiles on naval vessels for operations in the Persian Gulf.

—"Defence minister on post-revolution achievements, defence policy," BBC Summary of World Broadcasts, 8 February 2001, in Lexis-Nexis, www.lexis-nexis.com.

6 February 2001

Iran commissions a locally built anti-tank missile launcher equipped with advanced electronics. This launcher, dubbed Qoqnos (Phoenix), is equipped with laser- and night-vision devices and can launch eight Iranian-made Tufan missiles.

—"Iran Commissions anti-tank missile Launcher," Reuters via *Gulf-News* (Dubai), 6 February 2001, www.gulf-news.com.

8 February 2001

George Tenet, the director of the CIA, tells the Senate Select Committee on Intelligence that Iran had imported "substantial" amounts of Russian missile technology and will most likely continue do so and would be able to "become self-sufficient in production."

—"Military Achievements On 'Ten-Day Dawn'," IPR Strategic Business Information Database, 12 February 2001, in Lexis-Nexis, www.lexis-nexis.com.

15 February 2001

Mehdi Safari, Iranian Ambassador to Russia, comments on the U.S. position regarding Russia's suspension of military technical contacts with Iran, and says that Iran will continue its efforts to strengthen its cooperation with Russia regardless of the influence of other countries.

—Nikolai Terekhov, "Diplomat Says Iran To continue Cooperation with Russia," Itar-Tass (Moscow), 15 February 2001; in FBIS Document CEP20010215000456, 15 February 2001.

17 February 2001

The Shahid Sattari Air Force University, established in 1988, has six departments and takes 500 students every year in 13 different courses. Courses are carried out under the supervision of foreign advisors in engineering and technical fields. The country's military experts and scientists say that instruction on aerospace, missiles, lasers, wind tunnels, F-14 prototypes, and advanced workshops have made this university unique in the Middle East. Brigadier General Shuqi, head of the university, says that "the senior experts of the university have had an important role in the design and construction of Saeqeh (Lightening) aircraft."

—"Iran: Radio carries report from Air Force University," Vision of the Islamic Republic of Iran Network 1 (Tehran), 17 February 2001; in FBIS Document IAP20010217000034, 17 February 2001.

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20 February 2001

The minister of defense and armed forces logistics states that the Islamic Republic of Iran does not seek to obtain any surface-to-surface missiles more powerful than the Shahab-3. Admiral Shamkhani also stresses the necessity for strengthening Iran's defensive capabilities in the face of foreign threats. He also says, "We should solve the issue because we believe that the balance of power in the region should not be tilted."

—"Defense Minister says Iran not seeking to obtain more powerful missile than Shahab 3," Voice of the Islamic Republic of Iran Radio 1 (Tehran), 20 February 2001; in FBIS Document IAP20010220000078, 20 February 2001; "Shamkhani stresses need to strengthen Iran's defense capabilities," IRNA (Tehran), 20 February 2001; in FBIS Document IAP20010220000066, 20 February 2001.

22 February 2001

Mehdi Safari, the Iranian Ambassador to Moscow, says that Russia could make \$7 billion over the next years through its military cooperation with Iran.

—"IRANIAN WMD AND ACM DEVELOPMENTS CONTINUE," IPR Strategic Business Information Database, 7 March 2001, in Lexis-Nexis, www.lexis-nexis.com.

23 February 2001

Mikhail Fradkov, the first deputy secretary of the Russian Security Council, says that Russia plans to continue military and technical cooperation with Iran. Russia takes into consideration its own interests within the framework of international agreements. He says "Russia is interested in continuing the military and technical cooperation with Iran in the area of conventional weapons. We do not violate any international obligations related to proliferation of mass destruction weapons, missiles, and missile technologies, including those falling under the export control."

—"Russia to continue military-and-technical cooperation with Iran – official," RIA (Moscow), 23 February 2001; in "Official: Russia to continue military, technical cooperation with Iran," FBIS Document CEP20010223000184, 23 February 2001.

2 March 2001

An Iranian delegation visiting Russia was supposed to visit Izhevsk, Udmurtian Autonomous Republic, in order to discuss "the purchase of Tor-M1 air-defense missile system supplies....The Tor-M1 can process data on 48 targets, automatically define the shooting order, and fire at two targets simultaneously. It can eliminate ballistic missile warheads at the final stage of their trajectory."

—"IRANIAN WMD AND ACM DEVELOPMENTS CONTINUE," IPR Strategic Business Information Database, 7 March 2001, in Lexis-Nexis, www.lexis-nexis.com.

5 March 2001

There are four fallacies in a news dispatch printed on the Internet site of the "Iran Press Service." The story reads, "Ayatollah Ali Akbar Rafsanjani has been removed from his responsibility as the highest authority in charge of Iran's highly secret missile research and production programs, according to well-informed sources." First, Akbar Rafsanjani has never been in charge of a missile program in Iran. Second, his son Mohsen Hashemi was formerly in charge of Iran's missile program when he returned from Belgium about 15 years ago. Furthermore, the leader of

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the Islamic Revolution does not appoint the official in charge of the missile program. And lastly, Iran's missile program is not a secret project, as the results of this project are displayed in every military parade held on special occasions.

—"Crooks, or Mentally Handicapped Individuals?," *Tehran Times*, 5 March 2001; in "Iran paper says 'four fallacies' in report about 'secret' missile research program," FBIS Document IAP20010304000133, 4 March 2001.

7 March 2001

The CIA releases an "Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction (WMD) and Advanced Conventional Munitions (ACM)." The report states that Iran is actively acquiring weapons mainly from Russia, but also China, North Korea, and Western Europe. Russian companies and organizations supply Iran with the most ballistic missile parts, technology, and know-how. Chinese and North Korean entities are also cited in the report as suppliers of missile technology to Russia. According to Mikhail Fradkov, the first deputy secretary of the Russian Security Council, Russia is not going against any of the nonproliferation regimes or export controls with regards to their military cooperation with Iran.

—"IRANIAN WMD AND ACM DEVELOPMENTS CONTINUE," IPR Strategic Business Information Database, 7 March 2001, in Lexis-Nexis, www.lexis-nexis.com.

11 March 2001

Russia is prepared to export T-90S tanks to Iran, experts of the Academy of Military Sciences say. The group tells reporters of Itar-Tass that mutually beneficial military-technical cooperation between Russia and Iran does not rule out Russia's initial delivery of several test tanks and later of a larger batch for renewal of Iran's tank stock. Such contracts are not unusual in the world and do not upset the balance of power in the region, the experts say. The T-90 tanks are manufactured at the Uralvagonzavod plant, and the plant's general director Nikolai Malykh says that the T-90S tanks are a "new generation of Russian tanks that comprise original design and best layout solutions of T-72 and T-80 tanks." The new tanks have missile artillery arms and are able to ford five-meter-wide waterways, three-meter trenches, and one-meter-high anti-tank obstacles. The tanks are capable of withstanding attack by two anti-tank missiles with different guiding systems without losing the capacity to continue combat.

—"Experts Say Russia Ready to Export Tanks to Iran," Itar-Tass (Moscow), 11 March 2001; in FBIS Document CEP20010311000116, 11 March 2001.

13 March 2001

Tehran's ambassador to Moscow says his country is willing to spend GBP 4 billion on Russian arms, making it Moscow's biggest weapons customer. At the top of the list is believed to be a custom-made air defense system, including radar and anti-aircraft missiles. Iran is supposedly also hoping to purchase tanks, patrol boats, helicopters, and upgrades to its Mig 29 fighters, plus equipment to allow its fleet of Russian-built Su26 strike planes to carry laser-guided bombs. U.S. pressure may cause Russia to resist Iranian requests for two kinds of anti-shiping missiles, the Yakhon or Moskit. Both missiles have a range farther than 100 miles and are capable of closing the Persian Gulf. Washington is anxious about cooperation in the deployment of an Iranian long-range missile that could hit Israel. Last month the U.S. Defense Secretary Donald Rumsfeld accused Russia of selling missile technology to Washington's enemies.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—Chris Stephen, "Us Anger As Putin Seals Arms Deal With 'Rogue' Iran," *Scotsman*, 13 March 2001, in Lexis-Nexis, www.lexis-nexis.com.

13 March 2001

Yuri Koptev, the head of the Russian Aerospace Agency, gives Iran's President Khatami a tour of the Mir Mission Control in Korolyov in order to see Russia's anti-missile missile program. The two countries hope to share the program, with Iran paying for Russia to provide the technology. The first stage will cost \$3 billion. While signing other agreements between Presidents Putin and Khatami, a "secret memo was slipped in" that calls for Russia to have an operational missile defense system in Iran within the next three years. This memo is cause for U.S. Secretary of State Colin Powell to warn Russia and Iran about their military cooperation.

—"Bush Prepares to Flex US Superpower Muscles," *DEBKA-Net-Weekly* (Jerusalem), 22 March 2001; in "Secret Missile Defense Memo Said to Prompt US Warning to Iran, Russia," FBIS Document GMP20010323000163, 23 March 2001.

14 March 2001

Russian Foreign Minister Igor Ivanov announces that military cooperation between Russia and Iran "will develop within the necessary boundaries for guaranteeing Iran's security and defense capabilities."

—Jalal al-Mashitah and Muhammad Nun, "US Pressures Postponed the Signing of Military Agreements; Russia Offers to Sell Iran Surveillance System That Covers Israel," *Al-Hayat* (London), 15 March 2001, p. 1; in "Russian Duma Aide Cited on Military Deals With Iran, US Pressures," FBIS Document GMP20010315000024, 15 March 2001.

15 March 2001

As Russian Security Council Secretary Sergey Ivanov arrives in the United States, Iran's President Khatami flies to Russia. Foreign Minister Igor Ivanov says that Russian and Iranian interests are basically the same. He also states that he is against the purposeful "deliberate and distorted playing up of certain questions of military-technical cooperation between Russia and Iran." He says that the relations between Russia and Iran "are developing dynamically and harmoniously." Sergey Ivanov will need to explain to the United States that these relations are not a threat to the United States.

—Aleksandr Shumilin, "Ivanov Versus Ivanov," *Izvestiya* (Moscow), 15 March 2001; in "Khatami's Moscow Trip Seen Making Security Council Secretary Ivanov's Job Harder," FBIS Document CEP20010315000107, 15 March 2001.

15 March 2001

Al-Hayat reports learning from sources close to the Russian presidency that Russian arms deals with Iran will include military and civilian satellites, MiG-29 and Sukhoi-30 aircraft, T-52 MR tanks, in addition to building new nuclear reactors in Iran for peaceful purposes. An agreement on military cooperation and the sale of weapons to Tehran is expected in May. An agreement would have been signed during President Mohammad Khatami's current visit to Russia, but U.S. pressures postponed the signing. The first shipment of weapons should be delivered next year. Nikorayev, chairman of the Duma's Defense Committee, will visit Iran to discuss an anti-missile electronic control system that Russia proposes to sell Iran. He says, "The electronic security surveillance system costs

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between \$1 billion and \$3 billion and is very important for strengthening security in the Gulf." He points out that this system "covers Iranian and Gulf airspace, part of the Israeli one, in addition to the Caspian Sea, southern Russia, and Turkey's airspace." Radshaf Safarov, adviser to the Duma's Security Committee and member of President Vladimir Putin's advisory board, confirms this to *Al-Hayat*. Russian military sources report that Tehran might try to acquire "Moskit" anti-ship missiles, which would affect the balance of power if deployed in Hormuz Straits. Safarov says that the United States is against this cooperation. He also says that Russia will sign an agreement by the end of this year or early next year to build new nuclear reactors in Iran to generate energy for peaceful purposes. Vladimir Putin, Russia's president, promises to complete the construction of the Bushehr nuclear reactor by 2003.

—Jalal al-Mashitah and Muhammad Nun, "US Pressures Postponed the Signing of Military Agreements. Russia Offers to Sell Iran Surveillance System That Covers Israel," *Al-Hayat* (London), 15 March 2001, p. 1; in "Russian Duma Aide Cited on Military Deals With Iran, US Pressures," FBIS Document GMP20010315000024, 15 March 2001.

15 March 2001

Moscow started supplying Tehran with weapons and equipment during the last stages of the Iraqi-Iranian war in the late 1980s. After the war, Iran started to implement a program to rebuild its forces. Russia, along with China and North Korea, was the main source for supplying the project that then-President Hashemi Rafsanjani supervised personally. Iran has since acquired Russian weapons and equipment worth several billion dollars, including T-72 tanks, BMP-2 armored personnel carriers, multipurpose MiG-29 fighter aircraft, Sukhoi-24 attack aircraft, anti-aircraft and anti-missile SAM-5 missiles, Kilo-class hunter submarines, various types of artillery and missile systems, and ammunitions. Russia also provides backing for Iran to develop its offensive missile capabilities. Despite Moscow's denial, U.S. and Israeli defense sources constantly stress what they call Russia's direct contribution to Iran's efforts to develop a ballistic strategic missile, the Shahab-4, with a range between 2,400 and 3,600km (depending on the weight of its warhead that should supposedly weigh between 1,000 and 2,000kg). These sources add that the Shahab-4 is an "Iranian version" of an old Soviet ballistic missile known as "SS-4 Sandal." Iran acquired the design and components through a secret deal between the two sides in the mid-1990s. Development of this version continues in order to start producing and entering it into service between 2003 and 2005. A considerable part of Iran's arsenal at present consists of Russian land, sea, and air combat equipment. The Iranian military industries are at present producing versions of the T-72 tanks and BMP-2 armored carriers as well as several types of artillery and missile systems and light, medium, and heavy ammunitions. Iran seeks to acquire a new generation of Russian weapons and then to produce local versions of them, especially the T-80 main battle tanks, Sukhoi-27 aircraft, long-range anti-aircraft and anti-missile missiles of the S-300 type (SAM-10), and anti-ship SSN-22 missiles.

—"Military Editor," "Khatami's Visit and Putin's Pledges Cement a Strategic Alliance that Both Sides Need," *Al-Hayat* (London), 15 March 2001, pp. 1, 6; in "Writer Views Iranian-Russian Military Cooperation, Strategic Alliance," FBIS Document GMP20010315000026, 15 March 2001.

16 March 2001

Construction of the Bushehr Power Plant is being carried out in accordance with a plan Russia signed in September

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1998, committing itself to finish the project over a 52-month span. In the meantime, Russia plans to sell more than 570 T72-C tanks and more than 1000 armored vehicles to Iran based on a contract signed before Moscow froze arms sales to Iran in a 1995 secret agreement with Washington. It also plans to provide parts and components for Soviet-made MiG-29 and Sukhoi-24MK fighters used by the Iranian military.

—"Iran: President Khatami returns home, comments on successful visit," IRNA (Tehran), 16 March 2001; in FBIS Document IAP20010316000002, 16 March 2001.

19 March 2001

S. H. Tabatabaei, Marketing Manager of the Iranian Defense Industries Organization (DIO), says, "we are not exporting missiles as we realize the sensitivity of such deals."

—"Iran Arms Marketing Emphasizes 'Friendly Islamic Countries'," *Gulf-News* (Dubai), 19 March 2001, www.gulf-news.com.

19 March 2001

Israeli Prime Minister Ariel Sharon, before the American-Israel Public Affairs Committee, says that Iran has acquired most of its technology from North Korea for its ballistic missiles that are capable of striking Israel.

—Choe Hong Söp, "[Israel] 'Pukhan-Chungdong Missile Connection Magara'," *Chugan Chosun (Weekly Chosun)*, No. 1648, 12 April 2001, weekly.chosun.com.

19 March 2001

A secret memo outlining a missile defense program between Russia and Iran is cause for U.S. Secretary of State Colin Powell to warn Russia and Iran about their military cooperation. [Note: For more information, refer to the entry for 13 March 2001.]

—"Bush Prepares to Flex US Superpower Muscles," *DEBKA-Net-Weekly* (Jerusalem), 22 March 2001; in "Secret Missile Defense Memo Said to Prompt US Warning to Iran, Russia," FBIS Document GMP20010323000163, 23 March 2001.

20 March 2001

The Ground Forces, Air Force, and Navy in Iran are involved in projects to attain self-sufficiency. Among these is the development and manufacture of missiles and other armor. These projects save Iran money in imports. Army Brigadier Zaafari speaks of the armored personnel carrier Sayyad that is capable of firing its own missiles. The Air Force Research center developed, alongside communications and radar systems, "smart air-based missiles with automatic control." Second Vice Admiral Engineer Mahmud Tahqiqi Bidel says that the Navy Research and Self-Sufficiency Jihad of the Navy would hopefully be able to produce a missile system by next year.

—"Top events in the Army," *Saff*, No. 250 (Tehran), 20 March 2001, pp. 29-34; in "Iran: Saff carries roundup of army 'top events'," FBIS Document IAP20010407000019, 7 April 2001.

21 March 2001

The Tolu' project—the development of a type of turbine engine that completed part of the needed technology to build cruise missiles—and the design and construction of different unmanned airplanes have been completed successfully in Iran. Iran's aircraft industrial activities began in 1986-1987 with the design and building of Ababil

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airplanes without passengers.

—Mohammad Vali Sohrabi, "Iran Airplane-140: From Designing in the Imagination to Flying in the Blue Skies," *Ettella'at-e Elmi* (Tehran), 21 March 2001, pp. 28-31; in "Iran: Article Details New Iran-140 Airplane," FBIS document IAP20010804000058, 21 March 2001.

22 March 2001

After Iran settled on the United Arab Emirate's (UAE) three islands of Abu Musa, Tunb al-Kubra, and Tunb al-Sughra, "UAE military commanders warned that Iran's deployment of missiles near the Hormuz Straits poses a serious threat to UAE positions and to navigation in the Gulf." UAE Air Force Commander Staff Brigadier General Khalid Abdallah al-Buaynayn notes that missile deployment close to the Gulf entrance would affect navigation in the Gulf and UAE's airspace.

—Shafiq al-Asadi and Ibrahim Humaydi, "Kharrazi Rejects the Qatari-Bahraini Example To Resolve the Dispute Over the Islands. The Emirates Warns of Repercussions of Iran's Deployment of Missiles Near Hormuz," *Al-Hayat* (London), 22 March 2001, p. 2; in "Report Cites UAE Air Force Commander's Warning of Iranian Missiles 'Threat'," FBIS Document GMP20010322000055, 22 March 2001.

22 March 2001

According to Hamid Sarrafian, the head of the Iranian pavilion, Iran is showing off its newest missile technology at Abu Dhabi's "Idex-2001" military exhibition. The following missiles are on exhibit: the "Tufan" (Tornado) and "Raad" (Thunder) missiles, which have infrared guidance systems; the "Nazeat" and "Zelzal" missiles, which have a 125km range; the "Fajr-3" medium-range rockets; "Sayyad-1" and "Shahid Thaqeb" missiles, which are good for air defense systems and a new product of Iran's Aerospace Industries Organization; and the "Falaq-2" surface-to-surface missiles.

—"Iran's Missiles on Display at Idex-2001 Military Fair," IRNA (Tehran), 22 March 2001; in FBIS Document IAP20010322000002, 22 March 2001.

23 March 2001

Israeli Prime Minister Ariel Sharon speaks to President Bush, National Security Adviser Condoleeza Rice, and Israeli Ambassador Ivri about Iran's weapons procurement during his visit to the United States. He presents a list of items that came from Iran to Lebanon via Damascus. Sharon lists light weapons, RPG and LAW anti-tank weapons, and Katyusha launchers with a range of 20-30km and 60-70km. Recently there have also been shipments of long-range launchers that could hit central Israel from south Lebanon. According to Sharon, Iran has direct control over the shipments and is keen on controlling the katyushas. He also states that the Hizballah receives training from Iran, and that Iran is actively involved in planning attacks against Israel. An Iranian newspaper claims that Sharon's allegations are merely propaganda without evidence, aimed at diverting attention from "the brutalities committed by the Zionist forces against the oppressed Palestinians."

—Nahum Barnea and Shimon Schiffer, "I Didn't Come To Beg," *Yediot Aharonot* (Tel Aviv), 23 March 2001, p. 2; in "Israel's Sharon Tells Bush Hizballah Has Long-Range Iranian Katyushas," FBIS Document GMP20010323000086, 23 March 2001; "Propaganda against Iran No Longer Effective," *Tehran Times*, 24 March 2001; in "Tehran Times says propaganda against Iran no longer effective," FBIS Document IAP20010324000026, 24 March 2001.

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25 March 2001

An Israeli paper reports that, contrary to Israeli Prime Minister Ariel Sharon's remarks during his U.S. visit claiming that Hizballah has received missiles capable of reaching central Israel, the rockets are "only" capable of reaching Haifa's southern periphery, threatening about one-third of Israel's population. The upgraded rockets have a longer range than any others Hizballah has ever had. They were recently shipped from Iran. Sharon referred to these rockets when he told the U.S. media that intelligence reports received in Israel indicate that Iran recently deployed long-range missiles in Lebanon, capable of reaching and hitting targets in central Israel. Hizballah's previous generation of rockets, including the long-range katyushas, threaten a territory stretching from the international border down to Akko's southern periphery. The new rockets' range covers the entire territory of Haifa and reaches all the way to the Karmel seashore and Zikhron Yaaqov.

—Yoav Limor and Gabi Kessler, "Rockets Shipped to Hizballah Can 'Only' Reach Haifa," *Maariv* (Tel Aviv), 25 March 2001, p. 8; in "Israeli Paper Says Hizballah's New Missiles Not as Long-Range as Believed," FBIS Document GMP20010325000066, 25 March 2001.

26 March 2001

Iran's Aerospace Industries Organization currently develops an improved version of its Sayad-1 surface-to-air missile (SAM), fitting the missile with an infrared homing seeker. The upgraded Sayad-1 is now being tested according to officials from the organization attending the IDEX show. The Sayad missile is based on the Russian SA-2 SAM.

—"Iran Upgrades SAM," *Defense News*, Vol. 16, No. 12, 26 March 2001.

26 March 2001

At the arms fair in Abu Dhabi, it became clear that the Russians are close to ending a deal with Iran on advanced missiles. Itar-Tass, a Russian news agency, says that Iran would soon close the deal on the Russian Tor-M1, Tor-M1T, and the S-300 surface-to-air missiles. There had been a previous agreement on the S-300PMU-01 missile in December 2000. "The Tor is a self-propelled or trailer-mounted version of the SA-15 Gauntlet, and the S-300PMU-01 is the hard-to-jam, long-range SA-20....The S-300 family includes the SA-10, SA-12, and SA-20 SAMs." They can hit aircraft with up to a 100km range and "some of the slower ballistic missile reentry vehicles." The SA-15 can target "low-flying aircraft, cruise missiles, unmanned aircraft and a range of guided weapons....The Russian radars [in conjunction with the S-300 missile and those associated with it] can spread a signal pulse over a broad bandwidth, vary the waveform and change polarization of the signal." Iranians will be sent to Russia to receive more training in long-range missile technology. Iran is also asking to purchase "Kamov Ka-50 attack helicopters, submarines, and launchers for its Shehab-3 ballistic missiles." Two research and development facilities around Isfahan and Tehran, where scientists work with Russian SS-4 missile technology, are mentioned.

—David A. Fulghum, "Iran Specifies New Weapons Mix," *Aviation & Space Technology*, 26 March 2001, p. 32.

28 March 2001

Russian Deputy Prime Minister Ilya Klebanov says that Russia plans to sell a missile defense system to Iran. He does not say whether it would be the S-300 or the Tor-M1 system.

—"Russia to sell missile system to Iran," United Press International, 28 March 2001, in Virtual New York, 29 March 2001, www.vny.com.

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29 March 2001

While President Khatami visits President Putin in Russia, the two agree on cooperation in the aircraft industry, terms of finding oil, and building nuclear power plants. Regarding weapons sales, Putin states that Russia will only give Iran "defensive weapons" and that Russia will comply with international agreements. According to media reports, Russia plans "to sell more than 570 T-72 tanks and more than 1,000 armoured vehicles to Iran as well as provide parts and components for Russian-made MiG-29 and Sukhoi-24MK fighters used by the Iranian military." —"Analysis: Iranian media in March 2001," BBC Monitoring (Caversham), 29 March 2001; in "Analysis: Iranian media in Mar 2001," FBIS Document IAP20010330000044, 30 March 2001.

Late March 2001

North Korea ships various components, including rocket motors and missile airframes, by air to Iran. A U.S. reconnaissance satellite spotted the shipment being loaded onto an Iranian Il-76 transport at Sunan Airport. One U.S. intelligence official is quoted as saying the shipment was intended for Iran's Shahab-3 program. —Bill Gertz, "North Korea Sends Missile Parts, Technology to Iran," *Washington Times*, 18 April 2001, www.washingtontimes.com; "N. Korea Sends New Missile Shipment to Iran," *Middle East Newslines*, 18 April 2001, www.menewslines.com.

1 April 2001

Russian President Vladimir Putin, speaking about the treaty on military cooperation signed by him and President Khatami, says that "Iran shall not place a claim on weapons outside the framework of international practice and corresponding obligations of Russia, while Russia shall not violate its obligations." —"Voyeninform Military News Bulletin for April 2001," *Voyeninform Military News Agency* (Moscow), 1 April 2001; in FBIS Document CEP20010518000278, 18 May 2001.

2 April 2001

The United States accuses Russia of selling "nuclear secrets" to Iran, but doesn't have any proof. U.S. Secretary of State Colin Powell criticizes Russia for wanting to increase its military and technical ties with Iran, including atomic energy. Attention is drawn to the construction of a nuclear power plant in Bushehr. The USSR and later Russia has been involved since 1989 in the project begun by Germany 25 years ago. The Scientific Research and Design Institute of Electrical Engineering (NIKIET) is one of about 10 Russian institutes and organizations that are being sanctioned by the Americans "for cooperation" with Iran on nuclear and missile technologies. The United States "punished" NIKIET for wanting to build a scientific research nuclear center that would ensure operational service of a nuclear power plant in Bushehr, Iran. —Yevgeniy Umerenkov, "Why Is the Persian Rug Being Pulled From Under Moscow," *Komsomolskaya Pravda* (Moscow), 2 April 2001; in "U.S. Allegations of Russian Technology Transfer to Iran Scored," FBIS Document CEP20010402000302, 2 April 2001.

6 April 2001

The Korea Institute of Defense Analysis (KIDA) releases a study in which head researcher Lee Jae-wook points out that "the North has exported missiles to Iran, Iraq, Libya, and Egypt. And the number of missiles sold [from the year 1985 to 2000] are around 540, 490 missiles being Scud-B/C with a range of 300-500km and 50 Nodong

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missiles." The study provides a price range, saying, "North Korea received US\$2-2.5 million for a Scud and \$7 million for a Nodong missile."

—"Recent Study by KIDA Shows North Exports 50 Nodong Missiles," *Choson Ilbo* (Seoul), 6 April 2001; in FBIS Document KPP20010406000110, 6 April 2001.

7 April 2001

Iran and India agree on a mutual strategic pact in which Iran will pay for Indian technology. The agreement is expected to be finalized when India's Prime Minister Atal Bihari Vajpayee arrives in Tehran on a 10-day official visit starting on 10 April. India's initiative will produce modern fighter aircraft and missiles using Iran's resources.

—"Iran-India's mutual strategic plans," *Nawa-i-Waqt* (Rawalpindi), 7 April 2001, p. 10; in "Pakistan's foreign policy failure seen in India-Iran pact: Urdu daily," FBIS Document SAP20010409000076, 9 April 2001.

10 April 2001

Iran and Russia's earlier military contracts totaling \$1.6 billion are "supplemented with helicopter technology, naval patrol vessels, communications gear, Iskander-E missile systems and TOR-M1 ZRK [surface-to-air missile systems]." Collaboration with Iran in the nuclear field promises great benefits to Russia. Six years ago Russia made an agreement to build the first power unit of the Bushehr AES. Izhorsk Plants OAO (open joint stock company) and Atomash in Volgodonsk are receiving work from this agreement and finishing this project will bring more than \$1 billion to the domestic budget.

—Yevgniy Bikalov, "Atomic Alliance," *Stringer News Agency* (Moscow), 10 April 2001; in "Bikalov analysis of growing military-technical cooperation of Russia and Iran, China, and India," FBIS Document CEP20010409000309, 9 April 2001.

12 April 2001

In regards to the military agreements made between Iran and Russia, participants at the 7th international conference on the nonproliferation of nuclear armaments suggest that Iran might be in the process of building intercontinental ballistic missiles (ICBMs).

—"Iran and Russia, common interests," *Abrar* (Tehran), 12 April 2001, p. 12; in "Iranian Paper Views Economic, Other Relations With Russia," FBIS Document IAP20010503000055, 3 May 2001.

12 April 2001

Israel believes that Iran is not capable of producing ballistic missiles, such as the Shahab-3 on its own. The official says he is certain there has been close cooperation in the area of missile development between Russia, Iran, and North Korea.

—Choi Hong Söp, "'[Israel] Pukhan-Chungdong Missile Connection Magara'," *Chugan Chosun*, 12 April 2001, www.weekly.chosun.com; *Chugan Chosun*, 12 April 2001, in "ROK Weekly Interviews Israeli Official on DPRK Missile Exports," FBIS Document KPP20010411000117, 10 April 2001.

13 April 2001

Washington regularly expresses concerns about the alleged "leaks" of sensitive Russian technologies to Iran. But the foundations of Iran's military potential were laid down in the period of friendship between the United States

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and the Shah's regime. Also, practically all previous cases of Russian "violations" of the Missile Technology Control Regime (MTCR) in relations with Iran were uncovered by the Russian side itself and stopped immediately. One example would be the attempt of an Iranian company to place a dubious order with the Trud NPO (Scientific-Production Association) under the guise of the manufacture of equipment for gas pumping stations. An expert evaluation of the contract by the Federal Currency and Export Control Service showed that specific parts of this equipment "can be used in missile engines (ZhRD [liquid-fueled rocket engines]," and the contract was refused. Another example was the expulsion from Russia of an Iranian citizen engaged in scientific-technical intelligence gathering, as well as the inclusion on Russian "blacklists" of the Iranian Sanam Company, which was observed to have a heightened interest in dual-use technologies.

—Olga Semenova, "Stiff Broom of Changes: Just So the Cumulative Experience of Constructive Russian and U.S. Cooperation Doesn't End Up Under It," *Nezavisimoye Voyennoye Obozreniye*, No.13, (Moscow), 13 April 2001, p. 7; in "RF, US Export Control Systems, Nonproliferation Regimes Must Be Improved Jointly," FBIS Document CEP20010413000291, 13 April 2001.

13-27 April 2001

U.S. intelligence reportedly discovers that a North Korean missile shipment to Iran is being delayed because of a dispute over a letter of credit between the two countries. The discovery is reported on 27 April, and is said to have occurred within "the last two weeks."

—Bill Gertz and Rowan Scarborough, "Inside the Ring," *Washington Times*, 27 April 2001, www.washtimes.com.

18 April 2001

Iran launches as many as 77 Scud-B missiles at the Iranian opposition Mujahidin-e Khalq Organization (MKO) camps in southern and eastern Iraq, says the group. Tehran acknowledges the attack, but neither confirms nor denies that 77 Scud missiles were used. Iran's representative to the United Nations, Hadi Nejad-Hosseinian, says that the attack targets the opposition group and "should not be interpreted as a measure against Iraq's territorial integrity." He also says that the attack lasted for 3 hours and 15 minutes, from 4:15 to 7:30 in the morning. Iraq sees this as an attack on their sovereignty in violation of international law and "reserves the right to respond with the appropriate means and at the appropriate time." A Gulf Cooperation Council (GCC) report says that "Iran was able to deploy 17 Scud launchers at the same time, far higher than previous assessments." Iran is estimated to have between 200 and 300 Scud-B missiles, casting doubt on claims that 77 were fired against the MKO. Given the proximity of the camps to the Iranian border, and the relatively high cost of Scuds, Iran likely used an indigenously produced rocket, such as the Zelzal-1, Nazeat-6, or Nazeat-10.

—"Statement No. 5: Final Count of missiles fired at Mojahedin camps, Iraqi cities stand at 77," People's Mojahedin Organization of Iran, 20 April 2001, www.iran-e-azad.org; "Iran informs UN that measures against MKO were defensive," *IRNA* (Tehran), 19 April 2001, www.irna.com; "Iran's 'Massive' Attack on MKO Bases in Relations with Elections," *Iran Press Service* (Paris), 19 April 2001, www.iran-press-service.com; "Iran Impresses Neighbors With Missile Capability," *Middle East Newslite* (Jerusalem), 24 April 2001; Amin Tarzi and Darby Parliament, "Missile Messages: Iran Strikes MKO Bases in Iraq," *Nonproliferation Review*, Summer 2001, Center for Nonproliferation Studies.

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18 April 2001

The Army Aviation research unit is in the process of designing air-to-air missiles and putting them on helicopters. They have been making repairs to the TOW anti-armor missile guidance system in Iran.

—"Explaining army's latest engineering and combat achievements," *Resalat* (Tehran), 18 April 2001, p. 6; in "Iran: Commander Details Achievements in Manufacturing Military Hardware," FBIS Document IAP20010504000061, 4 May 2001.

26 April 2001

Iranian Foreign Ministry spokesman, Hamid Reza Asefi, rejects Israeli Prime Minister Ariel Sharon's claim that Iran has set up a missile base in Lebanon. Asefi says that Sharon's allegation is a way to cover up Israel's recent aggression against Lebanon.

—"Iran: Foreign Ministry says Sharon claims of Iranian missile base in Lebanon 'pure fabrication'," *Vision of the Islamic Republic of Iran* (Tehran), 26 April 2001; in FBIS Document IAP20010426000080, 26 April 2001.

4 May 2001

The CIA publishes a report outlining the threats posed to U.S. national security and stating that Iran and Iraq's missile procurement and acquisition of nuclear power will be a threat by the year 2015. Iran proudly presents its military capabilities and states that it makes its own tanks, helicopters, guns, and long-range missiles such as the Shahab-3 that has a 1,300km range and the Shahab-4 that has a 2,000km range. Iran also states that military imports have risen 86% last year and that these imports come from 24 countries. Among the imports are 39 new kinds of weapons. In a display of Iran's weapons capabilities, it fired 66 Scud missiles on Iraqi bases of the Mujahedin opposition group on 18 April. [Note: Please refer to the entry for 18 April 2001 for more information, though the number of missiles reportedly launched varies.] Some information also states that 13 missiles were fired a day later. Iran was able to install 17 launch pads to fire the missiles. Iran's missile reserve is estimated at 200 Scud-B and 150 Scud-C missiles. With the recent missile firings, this estimate is being reevaluated. German intelligence reports state that Iran is acquiring missiles that, besides threatening the region, will be able to reach Europe and Germany by 2015. U.S. intelligence has similar information.

—Riyad Alam-al-Din, "Will War Break Out?," *Al-Watan al-Arabi* (Paris), 4 May 2001, pp. 18-21; in "Report on US-Iranian 'Deal,' Possibility of 'New' Iran-Iraq War," FBIS Document GMP20010503000175, 3 May 2001.

11 May 2001

Many delegations from Arab countries and organizations like Hamas, Hizbollah, and Islamic Jihad decide to intensify their support for the Palestinian uprising. As part of this support, the Palestinians are to receive training from the Hizbollah, such as how to install Katyusha rockets. The Iranian delegation says it would ensure that the Palestinians receive Sagre, TAW, and Katyusha rockets, the modern ones having a 70km range.

—Riyad Alam-al-Din, "Plans to Remove Arafat, Attack Israel Discussed at Iran-Sponsored Corfu Meeting," *Al-Watan al-Arabi* (Paris), 11 May 2001, pp. 16-18; in FBIS Document GMP20010510000184, 10 May 2001.

12 May 2001

Reports state that Russia has agreed to sell advanced ship-borne cruise missiles to the Iranian Navy, which will significantly increase Iran's military capability in the Hormuz Strait, leading into the shipping lanes of the Gulf. The

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sale of Russian Yakhont missiles was hinted at in March when Iranian President Khatami visited Moscow and discussed a deal with President Putin worth a predicted £5 billion.

—Michael Evans, "Russia sells missiles to Iran," *Times* (London), 12 May 2001, in Lexis-Nexis, www.lexis-nexis.com.

15 May 2001

The United States believes that Iran's surface-to-surface missiles could be intended for carrying weapons of mass destruction. The reason for U.S. policy to keep Iran from procuring nuclear weapons is because "medium-range surface-to-surface missiles with nuclear warheads would have by far greater strategic impact than use of chemical or microbiological weapons."

—"Iran's nuclear options," *Siyasat-e Ruz* (Tehran), 15 May 2001, p. 10; in "US pursuing 'double-standard' policy on Iran's nuclear ambitions," FBIS Document IAP20010521000093, 21 May 2001.

18 May 2001

Pakistan is exporting weapons to Iran and other countries made by Wah Factories.

—"Pakistan's prominent success in arms industry," *Jasarat* (Karachi), 18 May 2001, pp. 8, 7; in "Pakistan Sees Payoff From Last Year's Arms Exposition," FBIS Document SAP20010520000037, 20 May 2001.

18 May 2001

A report in the British paper the *Times* states that Russia has decided to give Iran the Yakhont anti-ship missile. This was discussed while President Khatami was visiting Russia.

—"News of the OPK (Defense-Industrial Complex) and VTS (Military-Technical Cooperation)," *Nezavisimoye Voyennoye Obozreniye No.17* (Moscow), 18 May 2001; in "Russia: Defense Industrial Complex News Briefs," FBIS Document CEP20010518000398, 18 May 2001.

18 May 2001

The head of the German Intelligence Services declares that Iran is developing a ballistic missile able to hit Germany. These weapons will be deployed by 2015.

—"Iraq and Libya are developing new weapons," *Assabah* (Rabat), 23 April 2001, www.assabah.press.ma.

26 May 2001

Reports state that Iran is self-sufficient in making its short-range Scuds. The Shahab-3, with a 1,200km range, is capable of striking Israel. Iran is supposedly also working on a Shahab-4 and perhaps even on a Shahab-5, which may be an intercontinental missile.

—"Iran's Weapons-A Bigger Punch," *The Economist*, 26 May 2001, p. 28.

28 May 2001

The Russian arms exporter Rosoboroneksport and Iranian military officials will meet at the end of May to discuss arms sales to Iran. Arms and spare parts, especially for the Tor-M1 and a close-range anti-aircraft missile system, are items under discussion.

—"Russia to discuss selling air-defense missile system to Iran," Itar-Tass (Moscow), 28 May 2001; in FBIS, Document CEP20010528000022, 28 May 2001.

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31 May 2001

Iran says that it has tested a solid-fueled, surface-to-surface missile Fateh-110. Iran claims that the missile was completely designed by Iranian experts and is part of the self-sufficiency weapon program. The missile is said to be the most effective Iranian-made missile and is able to be guided towards its targets with high precision.

—"Iran successfully test-fires domestic solid-fuelled missile," IRNA (Tehran) 31 May 2001, www.irna.com.

31 May 2001

Iran carries out a successful test of its solid-fueled Fateh (Victorious)-110 missile. The missile was launched from a simple launcher and uses "'composite solid' fuel." "The Fateh 110 appeared far smaller—about twice the height of a standard army truck." Experts involved in Iran's military self-sufficiency program made the missile. This surface-to-surface guided missile is viewed to be among the more efficient weapons in Iran's armed forces. Andrew Brooks, defense analyst at the International Institute for Strategic Studies in London, says that the Fateh-110 looks as though it could be a self-made form of a Chinese missile. He also states that it could be part of Iran's strive to make shore-to-ship missiles. Iran has made other advances in the defense industry and was able to manufacture new military transportation, as well as a guided-missile warship.

—"Iran successfully test-fires domestic solid-fuelled missile," IRNA, 31 May 2001, www.irna.com; "Iran test-fires new home-made guided missile," *Gulf News*, 1 June 2001, www.gulfnews.com.

31 May 2001

The Fateh-110 that Iran tested was developed "with the likely assistance from North Korea's technology."

—"White house Expresses Worries over Iran's Missile Plan," *JoongAng Ilbo* (North Korea Net), 1 June 2001, 6 June 2001, english.joins.com.

31 May 2001

Official reports state that Iran has tested a "new version of its Shehab-3D-rocket." The rocket will be used as a satellite launch system and only for peaceful purposes. The United States doubts that Iran's missiles are used for satellite launches in to space because the Shahab-3D is a rocket, not just a space launch vehicle. [CNS translation]

—"Rocket-test In Iran Cause for Concern In the USA from Teheran/Washington," 6 June 2001, www.iran-now.de.

31 May 2001

Iran successfully tests its newly developed "Fateh (Victorious)-110." The *JoongAng Ilbo* reports that the missile was likely developed with North Korean assistance. The missile uses solid fuel, but all of North Korea's ballistic missiles use liquid fuel. If Iran transfers solid-fuel technology to North Korea, it could be used to enhance North Korean missile capability.

—"White House Expresses Worries over Iran's Missile Plan," English JoongAng Ilbo, 1 June 2001, english.joins.com; Justin Anderson, "Carnegie Analysis: Background on Test of New Iranian Missile," 31 May 2001, www.ceip.org; "Iran Successfully Test-Fires Domestic Solid-Fuelled Missile," IRNA (Tehran) 31 May 2001, www.irna.com; "Iran Successfully Test-Fires Domestic Solid-Fuelled Missile," IRNA, 31 May 2001, www.irna.com; "Iran Test-Fires New Home-Made Guided Missile," *Gulf News*, 1 June 2001, www.gulfnews.com; Doug Richardson, "Iran Tests Solid-Propellant Missile," *Jane's Defence Weekly*, 1 August 2001, p. 17; Jim Matthews, "Iran Claims Successful Test of First Locally Built Missile," *Aerospace Daily*, Vol. 198, No. 4, 1 June 2001, p. 7.

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31 May 2001

The Air and Space Industries Organization of the Ministry of Defense and Armed Forces Logistics successfully tests the Fateh-110 surface-to-surface missile. This missile was built through the continued efforts of Iranian experts. According to the Ministry of Defense, this is a guided missile and, because of the special efforts made on its guidance and targeting mechanisms, it should be put on the top level of the Iranian missile program. [CNS translation]

—"The first Iranian-made 'ultra-modern' surface-to-surface missile with composite solid fuel missile was successfully tested," Keyhan, 2 June 2001, www.neda.net.

1 June 2001

A recent report by the German customs intelligence (Zollkriminalamt) suggests that Iran is only able to manufacture minor missile parts and that it has failed at attempts to reverse-engineer imported Scuds. However, the CIA recently informed Congress that Iran has bought at least four ballistic missile launchers from North Korea, which doubles its launch capability. Libya is another potential partner. Despite vague reports, there have been suggestions that Iran is working with Libya to revive the country's stalled al-Fatah surface-to-surface (SSM) program, and Iran may have purchased Libya's designs for the project. The al-Fatah is a German-designed weapon with a possible range of 950km.

—Dr. Andrew Rathmell with contributions by James Bruce and Harold Hough, "Iran's Weapons of Mass Destruction," *Jane's Intelligence Review-Special Report*, No. 6, pp. 6, 21, 22.

1 June 2001

Turkish Foreign Ministry Spokesman Husayn Dirioz comments on Iran's test of the Fateh missile. Dirioz says, "Our nation is following the policy against creation and deployment of missiles with mass destruction capability as well as their launching devices. Therefore, we are apprehensive regarding efforts shown by some of our neighboring countries to become armed. With this context, our nation observed the deployment of the 'Fateh' missile by Iran on May 31, 2001, with great sensitivity. Our concerns were brought to Iran's attention in various ways and the missile related developments in Iran are being followed closely." [CNS Translation]

—"Turkish Foreign Ministry Spokesman Huseyin Dirioz's response to a Question," Republic of Turkey Ministry of Foreign Affairs, 1 June 2001, www.mfa.gov.tr.

4 June 2001

The Fateh-110 was developed with help from North Korea and using Russian and Chinese technology. The Fateh-110 is believed to have a range of at least 1500km, and efforts are being made to improve its range and accuracy. It will be armed initially with a conventional or chemical warfare warhead, yet Iran's ability to produce a suitable nuclear bomb in the near future, as soon as next year, must not be underestimated.

—"Iran nears nuclear status- Iraq could become a Western asset again?," Armed Forces Intelligence, 4 June 2001.

4 June 2001

The Fateh-110 that was tested on 31 May could have been a "technology demonstrator." Analysts from the Pentagon believe that the Fateh-110 is a "copy of a Chinese developed Scud missile." They also state that this test

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is not part of Iran's Shahab-3 missile program.

—"Middle East: Iran Said It Has Conducted...," *Aviation Week & Space Technology*, 4 June 2001, p. 22.

12 June 2001

Shai Feldman says that Iran is about to receive the advanced S-3000V anti-aircraft missile system from the Russians.

—"Rising Oil Prices Could Threaten Israel's Edge," *Middle East Newswire*, 12 June 2001, www.menewswire.com.

15 June 2001

According to a Western intelligence source, the test of the solid-fueled Fateh-110 was a failure despite the claims of the Iranian authorities. It should be noted that the origin of the missile is a subject of contention. Some claim it is a Chinese M-11, while others state that Iran simply gave a new name to the already existing Zelzal.

—"Iran Said to Have Failed in Solid-fuel Missile Test," *Middle East Newswire*, 15 June 2001, Vol. 3 No. 234, www.menewswire.com.

27 June 2001

Several Chinese and North Korean firms supposedly helped Iran in its weapons procurement. The U.S. government is therefore imposing sanctions against them. The Chinese Jiangsu Yongli Chemicals and Technology Import and Export Corp. provided "technical assistance controlled under a multilateral regime" last year, according to Susan Pittman, U.S. State Department spokesperson. The North Korean Changgwang Sinyong Corporation is in violation of the Missile Technology Control Regime for transferring related parts and technology to Iran. The two companies had sanctions imposed on them earlier in 1997 by then-President Bill Clinton.

—"U.S. says Chinese and North Korean firms aid Iran weapons bid," Reuters, in *South China Morning Post*, 28 June 2001, www.scmp.com.

9 July 2001

Iranian television announces the death of Colonel Ali Mahmoudi, the most eminent missile expert in Iran, without giving further details about the cause of his death. Ali Mahmoudi's family believes that he was killed by the Islamic Revolution Guards Corps' intelligence. They claim that Ali was arrested upon his arrival from the United States and was accused of spying for the United States. He was released after the intervention of President Mohammed Khatami and the Defense Minister Ali Shamkhani. Colonel Mahmoudi was a distinguished officer in the Iranian Air Force. He attended many training sessions in the United States, Pakistan, and other European countries as well as holding a degree in physics and missile manufacturing. He worked in the Aerospace Industry Organization of the Defense Industry Organization. Throughout his career, he produced 21 kinds of rockets and missiles. One of his projects was the design and production of copies of the American Sparrow and Sidewinder missile. He also worked on the Zelzal missile project and attended the testing of the Shahab-3 missile last year.

—Ali Nouri Zadeh "The Father of Iranian Missiles Died Before He Achieved His Dream of Making the American Sparrow and Sidewinder Missile," *Al Sharq al Awsat* (London), 11 July 2001, www.asharqalawsat.com.

9 July 2001

Iranian Defense Ministry Spokesman Keivan Khosravi denies accusations from a U.S. congressman that Iran is

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trying to extend the range of its ballistic missiles. According to the *Tehran Times*, another Iranian government official denied the accusation that Iran is seeking help from Russia and North Korea to do so.

—Maryam Karami, "Defense Ministry: Iran Has No Plan to Increase Range of Missiles," 10 July 2001, in "Tehran Times: Defense Ministry Denies Iran Planning to Increase Range of Missiles," FBIS Document ID IA20010710000053.

August 2001

U.S. government officials and congressional sources say they suspect China has been transferring missile components and technology to Iran, Libya, and Syria through North Korea.

—"N. Korea Serves as Chinese Front for Missiles," *Middle East Newslines*, Vol. 3, No. 324, 17 August 2001, www.menewslines.com.

1 August 2001

Reports indicate that Iran has flight-tested what it claims is an indigenously produced solid-propellant tactical ballistic missile called the Fateh (Victorious)-110. An Iranian state television report described the Fateh-110 as "Iran's most effective [missile] because of its high precision in destroying targets." A Tehran radio broadcast confirmed this report by stating that the missile is "a super-modern surface-to-surface missile; functions with combined solid fuel; is able to cause great damage and finds targets with accuracy. The missile is classified among Iran's most efficient missiles." Other reports suggest that Iran is developing a longer-range variant of the Chinese M-11 "single-stage solid-propellant short-range road-mobile ballistic missile" to be completed by the end of 2001. Work may also be under way on a second design of this missile based on the Chinese M-9 single-stage solid-propellant ballistic missile to be completed by 2003.

—Doug Richardson, "Iran tests solid-propellant missile," *Jane's Defence Weekly*, 1 August 2001, www.janes.com.

1 August 2001

An Iranian Aerospace Industries Official tells the London-based newspaper *Al-Sharq al-Awsat* that the Military Industry High Commission has reordered priorities of many major missile projects because of domestic and foreign factors. Some countries with strong ties to Iran alerted Tehran that its Zelzal ballistic missile program, which includes the Shahab-3 missile, causes regional and international concerns. Iran has reported successful tests of the Shahab-3. The United States has warned Iran about developing its missiles and required halting its development of the Shahab-4, which has a range of 2400km. Iranian Defense Minister Ali Shamkhani decides to postpone the Shahab-4 project for an indefinite period of time and to focus on shorter-range and more accurate missiles such as the Oghab, Nazeat, Fajr, Iran-130, Shahab-2, and Shahab-3, with the support of China and North Korea. According to an Arab diplomat, postponing the Shahab-4 project is also a result of Iran's will "to lower tension, particularly in the Gulf." He adds, "the Iranians are confident and feel that if they wait, they will control the entire Persian Gulf without a fight." The Iranian Defense Ministry has decided to increase the budget of the Aerospace Industry Institution to focus on less costly programs and to meet the needs of the Army, Air Force, and special forces of anti-armor, air-to-surface, and air-to-air missiles. Importing such missiles represents a financial burden and a logistic hindrance to the armed forces. Thanks to eminent experts such as the late Ali Mahmoudi, the Iranian Aerospace Industries manages to produce prototypes of different missiles by upgrading old models of the Raad, Toufan-1, Tondar, and Towsan. The last version of the Towsan missile is a copy of the Russian "Choncors 113." The

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Raad-1 and Toufan-1 missiles are already in service in the Iranian Army and the Islamic Revolution Guards Corps. The Saeqeh-1 missile underwent changes to improve its guidance system. According to the Iranian Defense Ministry, this missile is very accurate. The Ministry also says that American and Russian technologies are used in its development. The missile looks like the U.S.-made Dragon, but its components are copies of Russian products. —Ali Nuri Zadeh "Upon Regional and International Pressure, Iran Scales Down the Production of Ballistic Missiles and Focuses on Shorter Range and Better More Accurate Weapons; Iran Announced a Successful Test of Anti-Armor Saeqeh-1 Missile," *Al-Sharq al-Awsat* (London) 1 August 2001, www.asharqalawsat.com; Steve Rodan "Iran Changes Direction in Missile Development" *Middle East Newslines*, 2 August 2001, www.menewslines.com.

2 August 2001

Iran has reduced the emphasis on long-range ballistic missile development because of delays in the transfer of components and technology from Russia. Instead, Iran's Defense Ministry will focus on short- and medium-range missile development with Chinese and North Korean assistance. According to this report, the Shihab-3, which is based on the Nodong, has been plagued by engine problems.

—Steve Rodan, "Iran Changes Direction in Missile Development," *Middle East Newslines*, Vol. 3, No. 302, 2 August 2001, www.menewslines.com.

8 August 2001

Chinese President Jiang Zemin tells U.S. Senate Foreign Relations Committee Chairman Joseph Biden that China does not want North Korea to have intercontinental ballistic missiles (ICBMs), and that Beijing would not provide missile technology to Pyongyang. Biden tells reporters on 9 August that he asked Jiang to end missile-related transfers to Pakistan, Iran, Libya, and North Korea. However, Biden says that Jiang was very emphatic when he stressed that China had nothing to do with North Korea's ICMB development.

—"China Vows Not to Help North Korean Missile Program: Senators," Agence France Presse, 9 August 2001; Lee Jong Hwan, "Jiang Zemin 'Puk Missile Kaebal Pandae'," *Donga Ilbo*, 10 August 2001, p. 5; Kim Chin, "Chungguk Chang JJŏ Min Chusŏk 'Pukhan Missile Kaebal Wŏnch'i'anhta'," *Joongang Ilbo*, 10 August 2001, p. 8, www.joins.com.

10 August 2001

Iraq reports that Iranian military agents fired nine rockets in Iraq's Wasit province. An Iraqi military spokesman says that the Iranian agents crossed the border from Iran, fired the rockets, and fled back to Iran.

—"Iraq Reports New Iranian Attacks Near Baghdad," *Middle East Newslines*, 10 August 2001.

13 August 2001

Expediency Council Chairman and former President Ayatollah Ali Akbar Hashemi-Rafsanjani describes trilateral cooperation between Moscow, Tehran, and Beijing as "strategic." He states that this three-way cooperation could serve as a counterweight against the West and the United States. This alliance has already resulted in extensive missile proliferation; China and Russia have been significant sources of missile-related assistance to Iran. According to CIA Deputy Director John McLaughlin, "Firms in China over the years have provided missile-related items, raw materials, or other help to several countries of proliferation concern, including Iran, Libya, and North Korea." McLaughlin continues, "Last year, Russian entities continued to supply ballistic missile-related goods and technical

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know-how to countries like Iran...The transfer of ballistic missile technology to Iran...was substantial and we believe it will permit Iran to further accelerate its missile development programs and to move ever closer toward self-sufficiency in production." McLaughlin describes Iran's own ballistic missile program as "one of the region's largest and most capable...the inventory includes hundreds of short-range missiles capable of hitting most of Iraq as well as targets—including US forces—in the Persian Gulf." He predicts that Iran will field the 1,300km-range Shihab-3 "soon" and that it is expected to be able to reach Israel, most of Saudi Arabia, and Turkey. McLaughlin believes that Tehran is likely to test an intercontinental ballistic missile (ICBM) that could reach the United States in the next 10-15 years, and maybe as soon as 2005. McLaughlin also states that "secondary proliferation" is another risk posed by the maturing state-sponsored programs of countries like Iran. Private firms, engineers, and scientists from Russia and China, who take advantage of "weak or unenforceable export controls," contribute to the missile proliferation threat. Moscow and Tehran are expected to sign a military cooperation agreement in early September when Minister of Defense and Armed Forces Logistic Ali Shamkhani visits Russia.

—Bill Samii, "A Tehran-Moscow-Beijing Axis against the West," RFE/RL Iran Report, Vol. 4, No. 33, 3 September 2001.

15 August 2001

Jane's Defence Weekly reports that the Hadid Armament Industries Group of the Iranian Defense Industries Organization (DIO) is producing a complete 155mm/39-cal towed artillery system. The new howitzer is designated as the HM41 and is understood to be an upgraded version of the U.S. 155mm M114. According to Iranian sources, the 155mm/39-cal HM41 can fire an unassisted projectile to a maximum range of 22,000m and a rocket-assisted projectile to a maximum range of 30,000m.

—Christopher F. Foss, "Tehran is building 155mm towed artillery system," *Jane's Defence Weekly*, Vol. 36, No. 37, 15 August 2001.

21 August 2001

Deputy CIA Director John E. McLaughlin delivers a speech at the Fourth Annual Space and Missile Defense Conference in Huntsville, Alabama, and addresses the North Korean missile issue. McLaughlin says that North Korea may pose an intercontinental ballistic missile (ICBM) threat to the United States within 15 years, and that the August 1998 failed satellite launch with the Taepodong-1 (Paektusan-1) could have delivered a small biological or chemical warhead to U.S. territory if it had flown an ICBM trajectory. According to McLaughlin, North Korea has transferred the Nodong to Pakistan, and the technology to Iran for its Shahab-3, which is supposedly a "direct descendent of the Nodong." McLaughlin also says that North Korea has received "missile-related items, raw materials, or other help from firms in China," and that Pyongyang is "still selling missile-related equipment, components, materials, and technical expertise to the Middle East, South Asia, and North Africa."

—John E. McLaughlin, "Remarks of the Deputy Director of Central Intelligence John E. McLaughlin at the 4th Annual Space and Missile Defense Conference," 21 August 2001, www.cia.gov.

23 August 2001

Officials from the United States and China meet to discuss suspected exports of Chinese missile technology to countries thought to include Iran and Pakistan. The talks were held under the bilateral "non-proliferation arrangement" agreed upon in 2000 to discuss U.S. concerns about China's "mixed" record under the agreement.

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China has denied strongly U.S. claims that it has shipped missile parts to Pakistan and thus has violated the agreement.

—"China, U.S. hold talks on missile non-proliferation," *Deutsche Press-Agentur*, 23 August 2001, in Lexis-Nexis, www.lexis-nexis.com.

1 September 2001

An Israeli satellite has photographed what appears to be the excavation site of missile storage bunkers in Fasa, Iran. [Note: Fasa is located approximately 150 miles east of Bushehr.] The operators of the Eros A1 satellite, ImageSat International, assume that based on the size of the excavation, "this is either [for] the storage of large objects such as missiles, or a center for command and control." The images clearly identify "a hexagonal pattern of roads" that seem to be wide enough to accommodate mobile carriers for Iran's Shahab-3 and Shahab-4 ballistic missiles. The Shahab-3 is 15.2 meters long, and the Shahab-4 is expected to be as long as 20 meters. Fasa is not known for other missile activities, but may be the site of the Rudan Nuclear Research Center, believed to be a clandestine uranium hexafluoride conversion facility to help produce weapon-grade uranium.

—Doug Richardson, "Is this Iran's Shahab base?," *Jane's Missiles and Rockets*, 1 September 2001.

3 September 2001

It is announced that the upcoming talks between Russia and Iran will "center on boosting military cooperation and opening of new possibilities to implement mutually advantageous and long-term projects to update the Iranian armed forces."

—Anatoly Yurkin, "Russian-Iranian military cooperation has good prospects," ITAR-TASS, 3 September 2001, in Lexis-Nexis, www.lexis-nexis.com.

4 September 2001

Iran's Minister of Defense and Armed Forces Logistics Vice Admiral Ali Shamkhani cancels his trip to Moscow because it would have overlapped with a visit of Israeli Prime Minister Ariel Sharon to Moscow. Shamkhani claims that he will reschedule his visit for sometime before the next meeting of Caspian leaders, planned for November or December. At his Russian meeting, discussions reportedly will "concern arms...technical and technological cooperation, and part of those discussions will be about the purchase of arms." On 25 August, Chairman of the Committee for Military-Technical Cooperation with Foreign States (KVTS) Mikhail Dimitriev told the Russian newspaper *Izvestia* that the forthcoming agreement with Iran on military-technical cooperation will earn Russia between \$3.5 billion and \$4.5 billion per year.

—"Russians Anticipate Shamkhani Arms Purchases," Info-Prod Research (Middle East) Ltd., 23 September 2001, in Lexis-Nexis, www.lexis-nexis.com.

5 September 2001

A senior Bush administration official says that Russian companies continue to provide Iran with weapons of mass destruction technology. The official claims that this technology could assist Iran in developing chemical, biological, and nuclear weapons. Although Russia officially agrees with the United States that there should be limits on providing technology to Iran, Russian authorities do not appear to have "clamped down" on this.

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—Barry Schweid, "Russians still provide Iran technology for weapons of mass destruction, U.S. official says," The Associated Press, 5 September 2001, in Lexis-Nexis, www.lexis-nexis.com.

6 September 2001

China has "largely taken over the Iranian Shehab-4 project." According to intelligence sources, Russian assistance over the last year has been "significantly reduced" following the implementation of missile technology export controls under President Putin. The decline in Russian assistance has apparently resulted in China's return to the program. The greatest help by the Chinese is said to be simulation testing with supercomputers, which has reduced the need for flight-testing. [Note: Many analysts believe the Shahab-4 is a copy or variant of the Paektusan-1. The Iranian reliance upon Russian and Chinese assistance may indicate that the North Korean Paektusan program has also been dependent upon substantial foreign technical assistance.]

—Steve Rodan, "China Comes to the Rescue of Iran's Long-Range Missile Program," *World Tribune.com*, 6 September 2001, www.worldtribune.com; Iranian Student News Agency, 7 September 2001, in "Iran: ISNA Says Iran Continues Attempts to Manufacture of [*sic*] Shehab-4 Missile," FBIS Document ID IAP20010907000019.

6 September 2001

Despite a slowdown in Russian aid, Iran continues to develop its long-range Shahab-4 missile. Reports of a suspension of the missile program are said to be a result of "Iranian disinformation." U.S. sources assert that Russia has provided the technology for the missile's engine and has helped design its fuselage, but also indicate that there has been a significant reduction of the transfer of Russian missile technology under President Vladimir Putin in the last year. The Russian slowdown in technology transfer to Iran has resulted in China's return to the Shahab-4 program. The Chinese have provided Iran with technology for both solid-fueled engines and specially treated metal required for the missile. The Chinese have also helped with simulation testing of the missile through the use of supercomputers. Previous U.S. assessments about the Shahab-4 determined that the missile could be ready by next year. U.S. sources say that the Shahab-4 program is actually the development of two missiles—one with a 2,400km range and another with a 5,500km range. The 5,500km-range missile is sometimes referred to as the Shahab-5. These sources consider the biggest challenge for the program to be the integration of the two missiles. Iranian and EU representatives met on 3 September to discuss strategic issues and trade relations. In this meeting, EU officials complained to Iran that they might be forced to participate in the U.S. missile defense system because of the Shahab-4's apparent ability to strike much of southern Europe.

—Steve Rodan, "Iran Continues Shihab-4 Missile Project," *Middle East Newslines*, 6 September 2001.

7 September 2001

The Iranian Students News Agency (ISNA) confirms that Iran is continuing its attempts to manufacture the Shahab-4 missile. Some sources claim that reports about the delay of the project were because Iranian officials had kept the project quiet. According to a senior Iranian information source, Iran stopped publishing information about the missile due to international pressure, especially from the EU.

—"Agency says Iran has not ceased manufacture of Shahab-4 missile," Iranian Students News Agency (ISNA), www.isna.net, in Lexis-Nexis, www.lexis-nexis.com.

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9 September 2001

Diplomatic sources state that Iran and Syria are preparing high-level visits over the next few weeks, beginning with a visit by Iranian Defense Minister Ali Shamkhani to Damascus and a visit by Syrian Defense Minister Mustafa Tlas to Tehran. Sources indicate that Iran and Syria plan to discuss increased military and defense coordination. The two countries have collaborated in several weapons programs in the past, particularly in the development of Scud-C missiles.

—"Iran, Syria Want to Upgrade Strategic Ties," *Middle East Newslines*, 9 September 2001.

10 September 2001

Sudanese opposition sources allege that Sudan has deployed tactical missiles purchased with oil sales revenues. Sudanese government troops reportedly used these missiles in recent conflicts with the Sudanese People's Liberation Army. The sources did not identify the specific type of missiles, but they claim that the missiles were sold by Iran.

—"Sudan Said to Have Deployed Missiles," *Middle East Newslines*, 10 September 2001.

10 September 2001

The Bush administration acknowledges that China has resumed considerable aid to Iran's missile development programs. Administration officials state that China has been helping Iran complete a range of missile programs, including the Shahab-3 and Shahab-4 intermediate- and long-range missiles. The administration also confirms that North Korea and Russia continue to be a significant source of aid to Iran's strategic weapons program. According to a CIA report, "During the second half of 2000, entities in Russia, North Korea, and China continued to supply crucial ballistic missile-related equipment, technology and expertise to Iran. Teheran is attempting to develop a domestic capability to produce various types of weapons...and their delivery systems." The report also states, "The expertise and technology gained, along with the commercial channels and contacts established—particularly through the Bushehr nuclear power plant project—could be used to advance Iran's nuclear weapons research and development program."

—"CIA: China Helps Iran's Missile Programs," *Middle East Newslines*, 10 September 2001.

12 September 2001

Iran's outgoing ambassador to Moscow, Mehdi Safari, denies allegations by the CIA about the transfer of Russian missile manufacturing technology to Iran. Safari claims, "I strongly deny this allegation. No such cooperation has ever existed between Iran and Russia. Ties and cooperation between Iran and Russia do not threaten any country."

—"Iran's outgoing envoy in Moscow denies transfer of missile technology," Iran web site, Tehran, 12 September 2001, in Lexis-Nexis, www.lexis-nexis.com.

13 September 2001

Iran reportedly launches a missile attack against Iraq. The Baghdad-based Mujahedin-e Khalq claims that Iran fired five missiles toward a base of the opposition group in Jaalaula northeast of Baghdad.

—"Iran Launches Missile Attack on Iraq," *Middle East Newslines*, 16 September 2001.

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24 September 2001

North Korea's ambassador to Iran meets with Iranian Cooperation Minister Ali Sofi to discuss bilateral cooperation. Minister Sofi says an Iranian-North Korean joint economic commission would renew its activities, but he gives no details on the type of cooperation North Korea is seeking.

—"Iran Plans Strategic Upgrade with N. Korea, Russia," *Middle East Newslines*, 1 October 2001, menewslines.com; *Middle East Newslines*, 1 October 2001, in "Iran reportedly Planning Strategic Weapons Upgrade with Russia, N. Korea," FBIS Document ID GMP20011001000106.

27 September 2001

Iran has reportedly provided missiles and Katyushka rockets to Lebanon's Hezbollah (or Party of God), which are deployed along the Israeli-Lebanese border. Iranian Ambassador to Beirut Mohammad Ali Sobhani claims at a news conference that Hezbollah is a resistance group, as opposed to a terrorist organization. He stressed earlier this week while meeting a visiting EU delegation in Iran that "one should not place Hezbollah on the same level as those who have committed such attacks as the ones on the United States."

—"Hezbollah Is Resistant Rather Than Terrorist Group: Iranian Ambassador," Xinhua General News Service, 27 September 2001, in Lexis-Nexis, www.lexis-nexis.com.

Late September 2001

Iranian state television announces that Iran is among the top 20 missile-building countries in the world. Deputy head of Iran's Aerospace Industries Organization Yadgari claims that Iran first produced Tufan series anti-armor missiles, then surface-to-surface missiles, and then anti-ship missiles.

—"Military Stresses Ideology and Production," Info-Prod Research (Middle East) Ltd., 30 October 2001, in Lexis-Nexis, www.lexis-nexis.com.

1 October 2001

Iran's Defense Minister Ali Shamkhani arrives in Moscow to conduct long-delayed discussions on Russian arms purchases. Iran reportedly seeks Su-25 armored fighter planes, S-300 air-defense missiles with a range of 125m, MiG-29 jets, and an array of sea and ground weapons, including anti-ship missiles. During these talks Russia also may sign a military technical agreement with Iran. Although Russian officials claim that any arms sales to Iran would be defensive and within the boundaries of nonproliferation agreements, those statements have not dispelled U.S. concerns about the weapons sales.

—Michael Wines, "U.S. Watchful As Iran Envoy Seeks Weapons From Russians," *New York Times*, 2 October 2001, p. A8, in Lexis-Nexis, www.lexis-nexis.com.

2 October 2001

Iran and Russia sign a new military agreement that reportedly could lead to \$300 million in annual sales of missiles, jets, and other weapons. Russia's NTV television network reports that the total value of Iranian arms purchases from Russia under the agreement could reach \$1.5 billion. The United States strongly opposes the agreement, as it considers Iran to be a leading sponsor of terrorism.

—"International News: Iran, Russia Sign Arms Sales Agreement," Facts on File, Inc., 2 October 2001, in Lexis-Nexis,

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



www.lexis-nexis.com; Michael Wines, "Russia and Iran Sign Arms Deal; Nuclear Reactors on the Way," *New York Times*, 3 October 2001, p. 12, in Lexis-Nexis, www.lexis-nexis.com.

5 October 2001

Russian military sources state that the military-technical cooperation between Iran and Russia solidified by Iranian Defense Minister Shamkahn's visit to Moscow is "an important phase in building military cooperation between Russia and Iran." The 10-year agreement reportedly will bring approximately \$7 billion in revenue to Russia's federal budget and defense industry. Iran has expressed interest in purchasing Russian anti-ship missiles, new-generation anti-aircraft systems, and high-precision army weaponry. To protect troops and strategic sites, Iran also plans to purchase Iskander-E and Tochka-U army missile systems, mobile anti-aircraft systems, and Kornet-E anti-tank systems. Russia has not concealed its desire to establish closer military-technical cooperation with Tehran because, according to a high-ranking diplomat, "Russia strictly abides by the international commitments and treaties on the nonproliferation of weapons of mass destruction and missile technologies, in particular, in its relations with Iran."

—"Russia-Iran cooperation is regional stability factor-experts," ITAR-TASS, 5 October 2001, in Lexis-Nexis, www.lexis-nexis.com.

16 October 2001

Israeli and U.S. defense sources report that Iran began serial production of the Shahab-3 missile earlier this year, including the production of missile subsystems and the assembly of entire missiles. Sources state that Iran has the capacity to produce 20 Shahab-3 missiles in a year. North Korean Nodong missile engines, which power the Shahab-3 missile, have assisted Iran's efforts, as sources indicate that Iran has not yet produced an indigenous engine for this missile.

—Steve Rodan, "Iran Begins Serial Production of Shihab-3," *Middle East Newsline*, 16 October 2001.

18 October 2001

U.S. intelligence officials report that Chinese technicians are working on an advanced air-defense radar system, known as JY-14, near Iran's border with Afghanistan. Iran has been purchasing the JY-14 radar system since the late 1990s, but China reportedly has accelerated the project since the start of U.S. military operations in Afghanistan. A Bush administration official asserted that China's military cooperation with Iran could result in U.S. sanctions against China under the 1992 Iran-Iraq Nonproliferation Act, which calls for sanctions on any nation that sells weapons that could be considered destabilizing to Iran or Iraq. The JY-14 system provides long-range surveillance of aircraft and missiles as part of an automated air-defense system. This system can simultaneously track up to 100 targets and can feed the data to missile-interceptor batteries. It can track targets flying as high as 75,000 feet and 186 miles in distance.

—Bill Gertz, "China steps up air-defense work on Iran's border fears," *Washington Times*, 18 October 2001, p. A3.

20 October 2001

According to Iranian opposition sources, Iranian gunners fire 107mm Katyushka rockets at military bases in southern Iraq. The military bases reportedly are associated with the Mujahedin-e Khalq. The Mujahedin-e Khaq

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claims that this is the sixth such attack since mid-September.

—"Iran Shells Military Camps in Iraq," *Middle East Newslines*, 21 October 2001.

22 October 2001

Iranian state television announces that the Armored Research Department of the Defense Industries Organization has designed and manufactured a second generation of armored vehicles. These vehicles are designed to withstand two-stage armor-piercing missiles more effectively.

—"Military Stresses Ideology and Production," Info-Prod Research (Middle East) Ltd., 30 October 2001, in Lexis-Nexis, www.lexis-nexis.com.

29 October 2001

Iran and Syria sign an agreement to cooperate in developing radar and satellite facilities. Western intelligence sources say that Syria has pursued satellite reconnaissance technology to improve the accuracy of its Scud-C missiles. Syria and Iran have worked together to produce and develop the Scud-C, which has a range of 550km.

—"Iran, Syria Could Join in Spy Satellite," *Middle East Newslines* (Jerusalem), 29 October 2001.

31 October 2001

According to Senator Jon Kyl, the top Republican on the Senate subcommittee on Technology, Terrorism and Government Information, China continues to sell ballistic missile technology and advanced cruise missiles to Iran, despite a 2000 pledge to halt such sales to the Middle East. Kyl claims the Chinese assistance is helping facilitate Iran's ability to deploy nuclear tipped missiles. He also says that China has provided nuclear technology, and assistance for Iran's chemical weapons program.

—"Amid Afghan War, China Sells Missiles to M.E.," *Middle East Newslines* (Jerusalem), 31 October 2001.

31 October 2001

U.S. officials claim that Beijing continues missile sales to the Middle East. U.S. intelligence agencies reportedly have evidence of sales and deliveries to an array of countries, including Iran, Iraq, Syria, and Libya. China also allegedly is selling nuclear technology to Iran, violating its 1997 pledge to cease deliveries of nuclear material.

—"Amid Afghan War, China Sells Missiles to M.E.," *Middle East Newslines*, 31 October 2001.

31 October 2001

A high-ranking Russian diplomat, who refuses to be identified, rejects U.S. accusations about leakages of missile technology to Iran. The diplomat states that Russia "is not interested in Teheran possessing mass destruction weapons and their delivery vehicles." He continues, "Russia seeks to develop military cooperation with Iran under its international obligations and in such a way that it would not upset the balance in the region."

—Dmitry Gorokhov and Dina Pyanykh, "Iran, Iraq still 'apple of discord' between Russia and US," ITAR-TASS, 31 October 2001, in Lexis-Nexis, www.lexis-nexis.com.

13 November 2001

Russian President Vladimir Putin said that Russia would not sell Iran weapons that could threaten Israel, including hand-held missiles similar to the Stinger. Iran and Russia agreed to a \$300 million deal for conventional weapons in October 2001. Details of that deal have not been released, but Iran is believed to be seeking advanced missiles and

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MiG-29 fighter jets.

—Janine Zacharia, "Putin: Russia won't sell Iran weapons that could threaten Israel," *Jerusalem Post*, 15 November 2001, via Lexis-Nexis, www.lexis-nexis.com.

December 2001

Unconfirmed reports indicate that Iran started to regularly produce its 1300km-range Shahab-3 ballistic missile sometime in 2001. Iran purchases the missile engines from North Korea, but is able to manufacture the missile components and assemble the final product indigenously. The Shahab-3 is based on North Korea's Nodong missile and also incorporates technology from the former Soviet Union. Intelligence reports have indicated that Iran—like North Korea with its Nodong program—may produce missiles without undergoing extensive testing programs. The Shahab-3 failed in two of three flight-tests.

—"Shahab-3 enters production," *Jane's Missiles & Rockets*, December 2001, p. 6.

7 December 2001

The *Moscow Vremya MN* reported that Iran would like to acquire Russian S-300 and Tor-M-1 air defense missile systems, portable anti-aircraft Iglas, and anti-ship missiles. The report also said that a deal could possibly include Russia's Tochka-U and Iskander-E long-range surface-to-surface systems.

—"New Orders Seen Making Iran Russia's No 3 Arms Customer," *Vremya MN* (Moscow), 7 December 2001, via FBIS, Document CEP20011207000331.

14 December 2001

According to Russian defense industry sources, Iran is negotiating to purchase surface-to-air and sea-to-sea missiles from Russia. Iran is seeking the S-300 strategic air defense system, and the short-range Tor-M-1, as well as the shoulder-launched Iгла, in what could amount to a \$300 million deal.

—"Iran Seeks Additional Arms Deals with Russia," *Middle East Newslite* (Jerusalem), 14 December 2001.

19 December 2001

Russian Defense Minister Sergey Ivanov said that Moscow is not helping Iran develop missile technology nor to produce other similar weapons. Ivanov also said that Russia's cooperation with Iran's nuclear program "is fully in line with international standards of nonproliferation."

—"Russia: Defense minister denies missile cooperation with Iran," *ITAR-TASS* (Moscow), 19 December 2001, via FBIS, Document CEP20011219000240.

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2000

Early 2000

Western intelligence sources say North Korea is helping Iraq in its medium-range missile and nuclear weapons programs. Sources say Iraq is trying to acquire its pre-1991 strategic weapons capability by increasing its oil revenue through enhanced exports. Former UN chief arms inspector Richard Butler says that Iraqi weaponization

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would continue to pose a threat to the United States and Israel. U.S. experts say that despite repeated appeals, North Korea also continues to sell intermediate- and long-range missiles such as the Nodong and Taepodong-1 to Iran, Syria, and Libya. Sources say that commercial contacts are mostly used to hide the weapons transactions. Aerospace Industries Organization (AIO) announces that it is manufacturing another longer-range anti-tank guided weapon (ATGW) called Toophan.

—Christopher F. Foss, "Iran offers new anti-tank missiles for export," *Jane's Missiles & Rockets*, 1 July 2000, in Lexis-Nexis, www.lexis-nexis.com.

2000

Several Chinese and North Korean firms supposedly help Iran in its weapons procurement, leading to the U.S. government imposing sanctions against the two Asian countries. The Chinese Jiangsu Yongli Chemicals and Technology Import and Export Corp. provides "technical assistance controlled under a multilateral regime," according to Susan Pittman, U.S. State Department spokesperson.

—Reuters, "U.S. says Chinese and North Korean firms aid Iran weapons bid," *South China Morning Post*, 28 June 2001, www.scmp.com.

2000

According to Anthony Cordesman of the Center for Strategic and International Studies, most estimates indicate that Iran has between 6 and 12 Scud-B launchers, and as many as 200 Scud-B ballistic missiles, with a range of 230-310km. Other sources, including Israel, indicate that the number could be as high as 300 Scud-Bs with 15 launchers. U.S. analysts say that Iran can domestically produce all of the Scud-B, except for the most sophisticated components of the guidance system and motors. Iran may also have between 5 and 10 Scud-C launchers, each with several missiles. This number probably includes four transporter-erector launchers (TEs) that Iran received from North Korea in 1995. The North Korean Scud-C has a range of 500km, carrying a 700kg warhead. Iran has reportedly tested the new missiles from mobile launchers near Qom, to a target area about 500km south of Shahroud. Iran may be working with Syria on developing chemical or biological warheads for the Scud-C. North Korea may have sold such technology to Iran as part of the Scud-C sale.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), pp. 35-36.

2000

According to a senior research professor at the Center for Counterproliferation Research at the U.S. National Defense University, Iran will likely possess a missile capable of reaching the United States by 2010. Given continued technical support from Russia, the main problem Iran faces is the development of long-range ballistic missile warheads capable of delivering weapons of mass destruction.

—W. Seth Carus, "Iran and Weapons of Mass Destruction," 3 July 1999, www.ajc.org.

January 2000

Iran inaugurates a new production line for mass production of the Towsan-1 and M113 anti-tank guided missiles (ATGM). The ATGM is believed to be a local version of the Russian Konkurs (AT-5 Spandrel), which was developed by the Tula KBP Instrument Design Bureau. The missile is expected to be installed on Iranian-designed and built

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light-armored vehicles. The Parchin Missile Industries Division of the Iranian DIO has been manufacturing an improved version of the Russian AT-3b Sagger anti-tank guided weapon (ATGW) under the local name of I-Raad. Iran is also believed to be making a reverse-engineered copy of the U.S. Raytheon Systems tube-launched optically-tracked wire-guided ATGW as well as a McDonnell Douglas Dragon ATGW. Both of these missiles were supplied in large numbers before the fall of the Shah.

—Christopher F. Foss, "Iran starts mass production of Russian Konkurs missile," *Jane's Defence Weekly*, 12 January 2000, in Lexis-Nexis, www.lexis-nexis.com.

3 January 2000

Unnamed intelligence sources say Iran's 18 missile programs are mired in enough bureaucratic, financial, and technical dilemmas to prevent the completion of any one over the next year. These difficulties involve a lack of proper coordination with Russian companies and failure to integrate Russian subsystems into the North Korean missile design. The intelligence source states that Iran is pursuing so many missile programs in an effort to compensate for its lack of air power.

—Steve Rodan, "Iran's Missile Programs are Said to Be Stuck," *Middle East Newslines*, 3 January 2000, www.menewslines.com.

3 January 2000

According to Israeli intelligence sources, Iran has 18 missile programs involving surface-to-surface and surface-to-air missiles, but the projects are hindered by bureaucratic, financial, and technical difficulties. "We are talking about an extraordinarily large number of projects for any country, let alone a developing country such as Iran, but the lion's share of these programs will never be completed," states one intelligence source. The most important programs are the Shahab-3 with a range of 1,300km and the Shahab-4, expected to have a range of up to 2,400km. The intelligence sources say the Shahab-3 is based on the North Korean Nodong missile, which was previously exported to Iran. Despite assistance from Russia, Iran decides to halt plans to produce a significant number of the Shahab-3 due to technical and financial difficulties. Among the problems with the Shahab-3 program are the lack of coordination with Russian companies, and the failure to integrate Russian subsystems into the North Korean missile design. According to the same sources, Iran will likely focus most of its efforts on producing the Shahab-4, and will conduct only one or two tests before deployment. Iran is also likely to bypass problems with the Shahab-3 program by purchasing the North Korean Taepodong-1, which has a range between 4,000 and 6,000km. U.S. officials say Iran sold Scud-B and C missiles to the Democratic Republic of Congo in October 1999. Iran is also believed to be developing the Shahab-5 with an expected range of up to 10,000km, which could be completed by 2010.

—Steve Rodan, "Iran's Missile Programs Are Said to Be Stuck," *Middle East Newslines* (Jerusalem), 3 January 2000; in "Israel: Iranian Missile Program in Difficulties," FBIS Document FTS20000103000886, 3 January 2000.

3 January 2000

According to a spokesman for Iran's Ministry of Defense and Armed Forces, Keyvan Khosravi, allegations that Iran purchased "Rodong" (Nodong) missiles from North Korea are false. The Japanese Broadcasting Network (NHK) cites Japan's defense agency on the allegations, which Khosravi says are unfounded. "A country which is capable of building long-range Shahab-3 missiles does not need to buy similar weapons from abroad," he says, emphasizing

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Iran's self-sufficiency.

—"Iran Denies Buying Missiles From Abroad," IRNA (Tehran), 3 January 1999; in FBIS Document FTS19990103000224, 3 January 1999.

5 January 2000

Israel plans to upgrade its Arrow anti-tactical ballistic missile (ATBM) defense system due to concern over the Iranian missile program. The Arrow-2 system will be able to intercept missiles such as the Iranian Shahab-3 and Shahab-4. According to an Israeli official, "The goal is that by the time Iran completes the Shahab-3 or Shahab-4, we will be ready with an answer."

—Steve Rodan, "Israel plans upgrade for Arrow-2 missile system," *Jane's Defence Weekly*, 5 January 2000.

11 January 2000

According to a South Korean government source, North Korea helps Iran improve the accuracy of the target identification system of its C801 and C802 naval cruise missiles.

The Iranian Navy hopes to improve its coastal defense and anti-ship capability with the joint program. Iran received about half of the 150, 80-mile-range C802s ordered from China before the supply was frozen in 1997. In the early 1990s, Iran purchased the 30-mile-range C801 missile from China. The C802 closely resembles France's Exocet missile, but the French manufacturer, Aerospatiale, denies any technology exchange took place.

—Chu Yong-song, "North Korea, Iran, and Egypt Work Together to Develop Missiles," *Yonhap* (Seoul), 12 January 2000; in "DPRK Said to Aid Development of Iran, Egypt's Missiles," FBIS Document FTS20000113000046, 13 January 2000; Michael Evans, "Tehran Upgrades Chinese Missile," *Times* (London), 11 January 2000; in "UK Daily: Iran, DPRK Upgrade Chinese Missile," FBIS Document FTS20000111000858, 11 January 2000.

11 January 2000

Iran and North Korea work together to improve the accuracy of a naval cruise missile that Tehran bought from China in the mid-1990s. The new weapon is an improved version of the Chinese C802 cruise missile, which resembles France's Exocet missile. The joint program is intended to provide the Iranian Navy with an advanced weapon capable of being used in a coastal defense or anti-ship role. According to intelligence sources, Iran received about 75 C802 missiles of 128km range in 1997. The missiles do not have target designation systems, which is why Iran is developing the advanced equipment with the help of North Korea. Latest reports indicate that North Korea is working on an "over-the-horizon" designation system to increase the chances of a successful hit.

—Michael Evans, "Tehran Upgrades Chinese Missiles," *Times* (London), 11 January 2000, in Lexis-Nexis, www.lexis-nexis.com.

12 January 2000

According to the Tokyo Metropolitan Police Department, Ichiro Takahashi and Tsuneo Ishida, former directors of Sun Beam K.K. trading firm, are arrested on 12 January on suspicion of exporting a total of 3,100 sighting lenses for RPG-7 anti-tank rocket launchers to Iran in April and December 1995. [Note: According to the *Tehran Daily* (Iran) 15 January 2000, the firm named is Cogao Company.] Police allege that the firm used a Japanese manufacturer to make the parts with Russian technology. According to Tokyo's *Sankei Shimbun* paper, Sunbeam sold the sighting lenses to Iran Electronics Industry. The police also suspect the Iranian Embassy in Tokyo was involved in making

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payment for the lenses. The *Kyodo* reports that this is believed to be the first case of illegal export of military equipment from Japan to Iran since 1991, when Japan Aviation Electronics Industry Ltd. exported missile parts. However, the *Sankei Shimbun* reports the investigation has revealed evidence that Sunbeam illegally exported an additional 2,500 sighting lenses to Iran in 1994. The lenses exported to Iran are very similar to those found in a North Korean submarine that ran aground in South Korean waters, and police believe that North Korea may be importing this and other military equipment from Iran.

—"Tokyo Firm Head Nabbed for Illegal Exports to Iran," *Jiji Press* (Tokyo), 12 January 2000; in FBIS Document FTS20000112000125, 12 January 2000; "Police Suspect that DPRK Imports Japanese Parts From Iran," *Sankei Shimbun* (Tokyo), 16 January 2000, p. 1; in FBIS Document FTS20000118000572, 18 January 2000; "What's Up?" *Iran Daily* (Tehran), 15 January 2000; in "Iran Daily Views Current Events," FBIS Document FTS20000115000404, 15 January 2000.

12 January 2000

According to the *Times* (London), North Korea agrees to supply technology and equipment to aid Iran in upgrading the C802 anti-shiping and cruise missiles it purchased from China in the early 1990s and deployed on French and Chinese-built missile boats in the Persian Gulf and in coastal batteries. China has promised the United States several times to stop deliveries of the C802 to Iran, but U.S. intelligence reports last year documented deliveries by China far in excess of what has publicly been reported. The C802s were assembled in Iran under a co-producing agreement signed with Communist China, and use a sophisticated motor supplied by a French manufacturer. The French government denies any knowledge of the sale, and the company, Microturbo, denies any wrongdoing. The latest reports indicate that North Korea is working on an "over-the-horizon" designation system for Iran's arsenal of hundreds of C802s, to increase the chances of a successful hit.

—"North Korea upgrades Iranian C802," *The Iran Brief*, 12 January 2000, in Lexis-Nexis, www.lexis-nexis.com.

12 January 2000

Iran and China work together to improve the accuracy of a version of the Chinese C802 cruise missile that has a 30-mile range. In the 1990s, Iran ordered 150, 80-mile-range C802s, but the order was frozen under U.S. pressure in 1997; 75 of the C802s were shipped to Iran.

—Michael Evans, "Tehran Upgrades Chinese Missile," *IAEA Daily Press Review*, 12 January 2000; "Iranian-North Korean Cooperation to Develop a Chinese Rocket," *Al-Zaman* (London), 18 February 2000, p. 3.

15 January 2000

The Japanese Metropolitan Police Department's (MPD) public safety division arrests two former executives of a now defunct Japanese optical equipment manufacturer on the suspicion that the company had exported sensitive equipment to Iran. The company, known as Sunbeam, reportedly illegally sold 3,100 sighting lenses in April and December 1995 to Iran. The sighting lenses can be used with "RPG-7" anti-tank weapons. Similar sighting lenses, also sold by Sunbeam, were found on board a North Korean submarine that ran aground in South Korean waters in September 1996. Japanese officials believe that the sighting lenses were sold to Iran, which in turn supplied them to North Korea in exchange for missile technology. North Korean defectors have reportedly told interrogators, "North Korea has imported Japan's high-tech devices necessary for the development of nuclear weapons and other military equipment through third countries." Japanese officials are concerned that equipment made in Japan and

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sold illegally by Japanese companies may pose a threat to Japan's security.

—"Police Suspect That DPRK Imports Japanese Parts From Iran," *Sankei Shimbun* (Tokyo), 16 January 2000; in FBIS Document FTS20000118000572, 18 January 2000.

18 January 2000

According to Ephraim Sneh, Israel's Deputy Defense Minister, the United States is failing in its attempts to contain Iran's nuclear capability. Sneh says that Israel must continue to build a wall of deterrence against Iran, "perhaps different and greater than the one we have today." Referring to Iran's missile arsenal, Sneh states that "it's clear that such missiles with such a large radius and warhead capability are not intended to solve their problems with Iraq, their enemy neighbor." Sneh implies that Israel might try to stop the progress of Iranian nuclear projects, but did not give specifics. He says, "there is a list of other things...but I'm not sure they should be discussed publicly." In the past, Sneh has expressed the opinion that Israel should think about launching a pre-emptive strike against Iran to destroy its nuclear facilities.

—"US Faulted on Iran Nuke Containment," *Washington Post*, 18 January 2000, www.washingtonpost.com.

19 January 2000

A military industry official tells ITAR-TASS that Iran has begun to mass-produce the Russian-developed 9M13 (presumably 9M113) Konkurs anti-tank missile. A military official says that the inexpensive missile can be launched autonomously or from mobile and portable anti-tank missile systems mounted on many types of vehicles. The Konkurs missile has been devised at the Tula-based instrument-making design bureau and has a range of fire from 75m to 4km in the daytime and as far as 2.5km at night. The missile warhead pierces armor as thick as 800mm. The Konkurs missile has a semi-automatic control system with the transmission of commands via a wire communication line. A license for production of the Konkurs missile was sold to Iran in the mid-90s, but it is only now that Iranian specialists have completed all work on testing the missile production technology and establishing a quantity production line, states the official. The military-industrial official declines to give the cost of the license but pointed out that the missile "was sold through the Rosvooruzheniye Company for very little money, since a military-technical cooperation system in Russia was only in the making in those years."

—"Iran begins production of anti-tank missiles," British Broadcasting Corporation, 28 January 2000, in Lexis-Nexis, www.lexis-nexis.com.

19 January 2000

Moscow's ITAR-TASS reports that Iran begins mass production of the Russian-developed 9M13 Konkurs anti-tank missile. Russia's Rosvooruzheniye Company sold the license and production technology to Iran in the mid-1990s, but Iran has only recently set up a quantity production line. The missile has a range between 75m and 4km, or as far as 2.5km at night. It can be launched autonomously or from mobile and portable anti-tank missile systems. The missile has a semi-automatic control system and commands are transmitted via a wire communication line.

—Nikolay Novichkov, "Iran Begins Production of Russian Antitank Missile," ITAR-TASS (Moscow), 19 January 2000; in FBIS Document FTS20000119000716, 19 January 2000.

20 January 2000

During an official visit to Belarus, an Iranian parliamentary delegation led by Hasan Rowhani, deputy chairman of

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the Majles (Iranian Parliament) visits the MAZ auto enterprise, which produces chassis for mobile missile launchers. The Iranian delegation also meets with officials from the Russian and Belarus military-industrial complex, after discussions in Moscow over construction of a nuclear power station.

—Sergey Anisko, "Asian Dimension of Belarusian Military-Industrial Complex," *Segodnya* (Moscow), 20 January 2000, p. 4; in "Iran Deputy Speaker Visits Belarus Military Plants," FBIS Document FTS20000120001299, 20 January 2000.

27 January 2000

Iran inaugurates the mass production line of the Towsan-1 anti-armor guided missile, which is designed to destroy different types of state-of-the-art tanks, armored vehicles, dams and concrete structures, and can be launched from ground-delivery systems as well as a variety of domestically manufactured personnel carriers. The missile has a range of 4,000m, and is equipped with a night-vision device that enables it to accurately reach and destroy a target in the dark as far as 2,500m away. Both the Army and the Navy use this missile in their tactical operations. The warhead of the missile is composed of two parts, a forward section, and a main section, enabling it to destroy installations armed with responsive ground-to-air defense capabilities. Iranian Defense Minister Ali Shamkhani states, "The Towsan-1 and M113 demonstrates our highest achievement in missile manufacturing, and its production line was inaugurated by domestic experts today. We hope that after meeting our internal quota, we will be able to acquire a share of the regional market as well. This is also part of the production plan."

—"Iranian defence minister praises new missile production facility," BBC Worldwide Monitoring, 27 January 2000, in Lexis-Nexis, www.lexis-nexis.com.

31 January 2000

According to Iranian Defense Minister Admiral Ali Shamkhani, Iran is now self-sufficient in producing solid fuel for rockets. Three major research and industrial projects are commissioned at the Education and Research Institute of the Defense Ministry. The projects include production of hydroxyl-terminated polybutadiene (HTPD) resin, aluminum powder and potassium chlorite, which Shamkhani claims is "the last link in the chain" of solid-fuel production.

—"Iran Self-Sufficient in Rocket Solid Fuel Production," IRIB Television First Program Network (Tehran), 31 January 2000; in FBIS Document FTS20000131000670, 31 January 2000.

31 January 2000

According to the 1998 report of the independent "Commission to Assess the Ballistic Missile Threat to the United States," known as the Rumsfeld Commission, U.S. forces today are virtually unequipped to defend against the existing long-range missile threats from North Korea, Iran, and Libya. If full funding of about \$500 million a year were available, the U.S. Navy could deploy a limited Navy Theater Wide (NTW) missile defense capability as early as 2003. The NTW system would be capable of defending against the threat posed by ballistic missiles such as the North Korean Nodong or the Iranian Shahab-3. The initial NTW would comprise test versions of the SM-3 Standard anti-air missile outfitted with the Lightweight Exoatmospheric Projectile, which destroys enemy ballistic missiles by ramming them at high speeds. This system would be capable of defending against "an unsophisticated separating warhead threat." Pentagon officials so far have authorized the Navy only to finish the test program for NTW. Decisions about production and deployment are being deferred, pending successful testing. A growing number of

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the U.S. scientists, military experts and congressional aids say that it is time to slow the pace of national missile defense (NMD) program, and perform more tests before attempting any more live flight-tests.

—Robert Holzer, "U.S. Navy Urges Funding for Limited NTW," *Defense News*, 31 January 2000; Gopal Ratnam, "Defense Experts Urge Slower Approach to NMD Program," *Defense News*, 31 January 2000.

February 2000

According to James Cotton, U.S. specialists maintain that North Korea is developing a longer-range version of the Taepodong missile that could strike targets in the continental United States and much of Asia by 2003. North Korea has exported about 400 Scud-type missiles to Iran, Syria, and Pakistan. Cotton asserts that at present, despite having a missile development program, North Korea does not have the capability to arm its missiles with nuclear warheads.

—James Cotton, "North Korea Nuclear and Missile Nonproliferation and Regional Security," *Australia and Security Cooperation in the Asia Pacific (AUS-CSCAP) Newsletter No. 9*, February 2000, .

February 2000

According to Anthony Cordesman of the Center for Strategic and International Studies, Iran's missile development programs include a design center, at least two assembly plants, a test range and monitoring complex, and a variety of other design and re-fit facilities. Iran's Defense Technology and Science Research Center operates the design center outside Karaj, near Tehran. Iran's largest missile assembly and production plant is a North Korean-built facility near Isfahan. This plant may also employ Chinese equipment and technology. Local industries may be producing liquid fuels and missile parts. China may also be helping Iran produce solid-fueled rocket motors, and assemble missiles such as the CS-801 and CS-802. Iran is also reportedly extending the range of Scud missile with Russian assistance, and developing the 700km Tondar-68 missile. Some reports claim that Iran has divided its missile production sites into plants near Pairzan, Seman, Shiraz, Maghdad, and Islaker. Companies allegedly involved in missile production are also involved in producing poison gas. These include the Defense Industries, Shahid, Bagheri Industrial Group, and Shahid Hemat Industrial Group. Iran's main missile test range is near Shahrud, along the Tehran-Mashhad railway, with a telemetry station 350km south, at Taba. These facilities are likely controlled by the Islamic Revolution Guards Corps.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 37.

February 2000

Israeli and U.S. intelligence assessments indicate that Iran is developing the 2,000km-range Shahab-4 missile, with a 2,000-pound payload. The system could be operational within five years. The Shahab-4 may be based on the Soviet SS-4, and some reports indicate it has a range of up to 4,000km with a 1-ton payload. Russian firms have supplied much technology and material to Iran's missile programs, including specialized laser equipment, mirrors, tungsten-coast graphite material, and maraging steel.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), pp. 40-41.

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February-March 2000

Iran test-fires two rounds of a missile, said to be an improved version of the RIM-66 Standard SM-1 surface-to-air missile. According to Iranian spokesman Rear Admiral Abdullah Manavi, the development of the missile—assigned the name Fajr—took almost four years. Some of the parts of the modified missile had been built by the Iranian Navy experts. The missile's electronics have been digitized, permitting the use of a frequency-agile receiver for the semi-active command guidance system. This affords greater resistance to jamming measures. The solid-fueled motors, warhead, and power cells are now being manufactured indigenously. Manavi also says that an air-launched anti-ship missile (ASM) identified as the "Fajr-e Darya," a locally assembled version of the Chinese C802 ASM, is successfully tested during the Vahdat-78 military exercises. Rear Admiral Abbas Mohtaj, commander of the Navy, says that an "upgraded fire-control system" is employed during the test-firings. Manavi says that all the systems, projects and equipment used in the Islamic Revolution Guards Corps (IRGC), Army, and Navy exercises are designed by research staff of the Iranian Navy in cooperation with other scientific and industrial centers of the armed forces.

—Doug Richardson, "Iran-Upgraded Standard test-fired," *Jane's Defence Upgrades*, 16 April 2000, in Lexis-Nexis, www.lexis-nexis.com.

February 2000

Gulf sources report that an air-launched variant of the C802, dubbed the "Fajr-e-Darya" and an upgraded version of the U.S. RIM-66 Standard SM-1 SAM, undergo initial tests during the "Vahdat-78" exercises in February.

—Ed Blanche, "Iranian Navy test-fires new and modified missiles during exercises," *Jane's Defence Weekly*, 15 November 2000, p. 14.

1 February 2000

Iran's Network 1 TV station reports that the Zolfaqar-e-Velayat-1 military exercises begin with "heli-borne operations carried out by the pious, crack commandos of the Ground Forces" including training in heavy artillery and 107mm missile launchers.

—"Iran: Main Phase of War Games Begin," Vision of the Islamic Republic of Iran Network 1 (Tehran), 1 February 2000; in FBIS Document FTS20000201300543, 1 February 2000.

2 February 2000

A Japanese newspaper reports that Iran and North Korea plan to upgrade the C802 cruise missile that Iran purchased from China in the mid-1990s to make it more accurate.

—"N. Korea, Iran Jointly Develop Missile Project," *Korea Times*, 2 February 2000.

2 February 2000

According to the Hong Kong AFP, Japanese police look for an Iranian national, Masoud Momtahan, 38, alleged to be involved in the illegal export case involving the Sunbeam Company and sale of sighting lenses for anti-tank rocket launchers. Police say Momtahan is suspected of ordering 3,100 lenses, which are banned for export without special permission under Japanese law. The police will not confirm reports that the Iranian embassy in Tokyo is linked to the case. According to the Hong Kong AFP, the Japanese paper *Asahi Shimbun* reports that the Iranian Embassy paid ¥6.1 million in March 1994 as an advance payment for 5,600 sighting lenses, which were shipped in

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three installments from April 1994 to December 1995. The embassy has denied the allegations. The Hong Kong AFP also reports that one of the Japanese suspects from Sunbeam, Ichiro Takahashi, purchased the lenses from an Israeli dealer for "several hundred dollars" and then subcontracted a Japanese factory to modify the lenses to aim at taller tanks.

—"AFP: Japan Hunts Iranian Over Arms Export Scandal," AFP (Hong Kong) 2 February 2000; in FBIS Document FTS20000202000302, 2 February 2000.

2 February 2000

A Japanese newspaper reports that Iran and North Korea plan to upgrade a missile that Iran purchased from China in the mid-1990s to make it more accurate. The missile, China's C802 cruise missile, has a range of 120km. The article states that Iran uses North Korean know-how to improve its missiles, and in return, North Korea can earn foreign currency and oil.

—"N. Korea, Iran Jointly Develop Missile: Report," *Korea Times*, 2 February 2000.

4 February 2000

Boris Labusov, the chief of the Press Center of the Russian Foreign Intelligence Service, denies CIA Director George Tenet's allegations of Russia's continuing exports of chemical, biological, and ballistic missile production technologies to Iran. According to Labusov, the United States does not support these statements with verifiable evidence. Labusov did not comment on reports that hackers from Russian special services could have broken into the personal computer of former CIA Chief John Deutch.

—"SVR denies CIA director's allegations of continuing exports of rocket technologies from Russia to Iran," Interfax, 4 February 2000.

5 February 2000

Voice of the Islamic Republic of Iran reports that assembly lines for the production of heavy anti-armor missile launchers are put into operation today. According to Iranian TV, the launchers are for Tufan storm missiles. Another project that started today relates to the production of testing equipment, which will be used by those who are involved in the repair and the maintenance of missiles.

—"Defense minister inaugurates advanced electronic projects in Shiraz," BBC Worldwide Monitoring," 6 February 2000, in Lexis-Nexis, www.lexis-nexis.com; "Defense minister comments on electronics projects," BBC Worldwide Monitoring, 6 February 2000, in Lexis-Nexis, www.lexis-nexis.com.

5 February 2000

According to Iranian Defense Minister Vice-Admiral Ali Shamkhani, six defense projects are implemented in Shiraz. The projects include producing launchers for the Tufan (storm) heavy anti-tank missile and producing "testers" to assist in repair and maintenance of missiles.

—"Production of Anti-Tank Missile Launchers Begins," Vision of the Islamic Republic of Iran Network 1 (Tehran), 5 February 2000; in FBIS Document FTS20000205000864, 5 February 2000.

6 February 2000

According to a report by the German Intelligence Service (BND), Iran undergoes "massive armament efforts...to

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procure high-quality weapon systems, especially for the land and naval forces." The report says North Korea helps Iran to develop longer-range delivery vehicles, including the development of a longer-range anti-ship cruise missile, and unmanned aerial vehicles. According to the report, Iran uses dealers in Dubai for technology procurement, as well as the Bonyad Mostafaza Ve Janzeban Foundation, which makes legal purchases for many Iranian firms, but also maintains bogus firms abroad to facilitate the transfers.

—"German Report Notes Iran's Nuclear Arms Efforts," *Frankfurter Rundschau*, (Frankfurt/Main), 6 February 2000; in FBIS Document EUP20000305000169, 5 March 2000.

7 February 2000

Iran's *Khorasan* paper reports that at a 6 February conference in Munich, U.S. Defense Secretary William Cohen said Iran likely will have technology for long-distance ballistic missiles within the next 5-10 years. The report also quotes CIA director George Tenet as saying, "The Iranian authorities have asked countries like Russia, China, and North Korea, as well as West European countries, to give them access to the technology and equipment related to weapons of mass destruction." In response, Dr. Hamidreza Asefi, a spokesman for Iran's Foreign Affairs Ministry, strongly denies the statements and says, "These claims are being made in a situation in which the Zionist regime is still the source of threat and danger in the region, and this regime's policy of high expectations is the cause of instability in the region."

—"Discussed With Seyyed Baqer Mir-Abbasi, Director of Legal and International Group at Tehran University's Political Sciences College: 'Hidden Policy of America, and Continuous Statements Against Iran'," *Khorasan* (Mashhad), 7 February 2000, p. 3; in "Iran: US Said Trying to Pressure Iran," FBIS Document IAP20000323000012, 23 March 2000.

9 February 2000

Robert Walpole, national intelligence officer for strategic and nuclear programs, tells Congress that North Korea continues to supply ballistic missile components and technology to other hostile countries. The official says that North Korea has been so active lately that it has "supplanted Russia as the major supplier of technical know-how and equipment for missile programs." However, the official would not confirm a recent report in the *Washington Times* that North Korea transferred twelve missile engines to Iran in November 1999. The official also noted that North Korea was continuing the development of its own ballistic missiles despite a pledge to halt the program. According to the *Washington Times*, Walpole says, "Those engines are critical to the Taepodong program, and they would be critical to the Shahab-3 program and any extensions of the Shahab-3 program." It is believed that North Korea may be able to deploy intercontinental ballistic missiles (ICBMs) capable of reaching the United States within the next ten years.

—Christopher Wilson, "North Korea Said Major Supplier of Missile Parts," Reuters, 9 February 2000, in *Excite.News*, news.excite.com; Bill Gertz, "'Critical' N. Korea Missile Parts Seen Aiding Iran's Program," *Washington Times*, 10 February 2000, p. A3.

9 February 2000

North Korea sold 12 medium-range ballistic missile engines to Iran. According to U.S. intelligence reports, the engines arrived in Iran on 21 November 1999 via an Iran Air Boeing 747 cargo jet from Sunan International Airfield, located 12 miles north of Pyongyang, North Korea. The missile engines are the same as those of the Nodong

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medium-range missile, which has a range of 620 miles. Iran used the Nodong engine to build the first stage of the Shahab-3 missile.

—Bill Gertz, "N. Korea sells Iran missile engines," *Washington Times*, 9 February 2000, www.washingtontimes.com.

9 February 2000

North Korea's nuclear program has been constrained since 1994 by the Agreed Framework. However, the agreement is threatened by a possible North Korean missile test, according to James Cotton. The North Korean nuclear program is visibly halted, but the North Korean missile program has been under no such constraints. U.S. specialists maintain that North Korea is developing a longer-range version of the Taepodong missile, which could strike targets in the continental United States and much of Asia by 2003. North Korea has exported about 400 Scud-type missiles to Iran, Syria, and Pakistan. Cotton asserts that at present, despite having a missile development program, North Korea does not have the capability to marry the missile and nuclear technology.

—James Cotton, "North Korea Nuclear and Missile Proliferation and Regional Security," *Australia and Security Cooperation in the Asia Pacific (AUS-CSCAP) Newsletter No. 9*, February 2000, www.aus-cscap.anu.edu.au.

9 February 2000

Robert Walpole, the Central Intelligence Agency's official for strategic and nuclear issues, tells a Senate hearing that North Korea continues to develop its long-range ballistic missiles despite recent promises to stop development. Walpole testifies that even if active missile testing is not taking place, North Korea is still testing various missile components on the ground. Walpole also says that North Korea continues to be involved in the sale and trade of ballistic missile parts and technology with Iran.

—Tom Raum, "CIA Agent Warns on Korean Missiles," AP, 10 February 2000, in *ExciteNews*, 10 February 2000, www.news.excite.com.

12 February 2000

An Israeli soldier killed on 11 February is believed to have been a casualty of an American-made missile. Intelligence sources believe that TOW anti-tank weapons, supplied to Iran in 1986, were transferred to Hezbollah via Syria during the last two months.

—"Israelis Killed by US Missiles," *Times* (London), 12 February 2000, www.sunday-times.co.uk.

13 February 2000

The latest evidence of Iran's involvement in the upsurge of violence in Southern Lebanon occurred at the end of last week when an anti-tank missile fired by Hizbollah fighters killed an Israeli soldier.

—Con Coughlin and Tom Gross, "International: Iran 'arms Hizbollah' for attacks on Israel Tehran blamed for recent spate of attacks on Lebanon," *Sunday Telegraph* (London), 13 February 2000, in *Lexis-Nexis*, www.lexis-nexis.com.

14 February 2000

It is believed that the YJ-1 is being built under license in Iran, where it has the name "Karus." "Huangfen" fast-attack craft, known as "Hudong," have been exported to Iran for use with both YJ-1 and YJ-2 missiles, and YJ-2 missiles are being built in Iran with the name "Tondar." Reports in 1994 indicated that an increased-range version of the YJ-2 was in development as well, designated YJ-21. A second development, YJ-22, was reported in 1997,

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which added wings to the YJ-21 designs to increase its range to 400km.

—"CSS-N-4 'Sardine' (YJ-1/C801) and CSSC-8 'Saccade' (YJ-2/C802)," *Jane's Strategic Weapons Systems 33*, in Jane's Online, fore.Thomson.com.

14 February 2000

According to North Korean Central News Agency (KCNA), Russian Foreign Minister Igor Ivanov and his North Korean counterpart, Paek Nam-Sun, discuss missile cooperation during Ivanov's visit to North Korea. KCNA reports that this move comes in response to increasing Japanese and U.S. efforts to set up a theater missile defense system. William Schneider, a U.S. expert on international security, says that within five years North Korea, Iran, Russia, and China will possess a nuclear potential sufficient to inflict major destruction on the United States, even if their systems are inferior to U.S. systems in accuracy and capability. Russia and North Korea sign a new friendship pact requiring each country not to support any state that attacks the other.

—"North Korea and Russia to cooperate on missiles," *Middle East Newslines*, 14 February 2000, www.menewslines.com.

17 February 2000

According to "Western military sources" quoted in Japan's *Sankei Shimbun*, North Korea and Iran jointly develop an advanced version of the Chinese C802 cruise missile. According to the source, North Korea helps Iran improve the accuracy of the C802 missiles. Iran first purchased the missiles, with a range of 120km, from China in the mid 1990s. However, Iran only received about half of the anticipated 150 missiles before the sales were halted under United States' demands. The *Sankei Shimbun* also reports that North Korea has sold missiles to Iran and Pyongyang, and may have received money from Tehran to jointly develop the C802.

—"Japanese Report: DPRK, Iran Jointly Develop Missiles," *Korea Times* (Seoul), 17 February 2000; in FBIS Document KPP20000217000057, 17 February 2000.

17 February 2000

The *Sankei Shimbun* reports that North Korea and Iran are jointly developing a new missile based on China's C802 cruise missile. The report claims that Iran had acquired about 125 C802 cruise missiles from China in the mid-1990s, but that China suspended sales to Iran after the United States demanded a halt to the sales in 1996.

—Kyodo News Service, 17 February 2000, in "Sankei Shimbun: DPRK, Iran Jointly Developing Missile," FBIS Document ID JPP20000217000006.

18 February 2000

IRNA reports that the Iranian press attaché, Heshmatollah Qalami-Zadeh, says, "The Iranian government denies allegations on any kind of cooperation between Tehran and Pyongyang on missile technology." Iran is accused of having a huge stock of Silkworm missiles.

—"Iran denies Japanese paper report on missile cooperation with North Korea," British Broadcasting Corporation, 19 February 2000, in Lexis-Nexis, www.lexis-nexis.com; "Iran's President Khatami to visit China," Deutsche Presse-Agentur, 22 February 2000, in Lexis-Nexis, www.lexis-nexis.com.

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18 February 2000

Press attaché Heshmatollah Qalami-Zadeh of the Iranian embassy in Tokyo denies allegations of Iranian cooperation on missile projects with North Korea. The spokesman says, "the Iranian government denies allegations of any kind of [missile] cooperation between Tehran and Pyongyang." He points to Iran's self-sufficiency, saying, "the Islamic Republic of Iran has the necessary defense power and does not need foreign assistance."
—"Iran Denies Cooperating With DPRK on Missile Technology," IRNA (Tehran), 18 February 2000; in FBIS Document IAP20000218000020, 18 February 2000.

18 February 2000

China rejects accusations that it cooperates with Iran in developing weapons of mass destruction, including missiles, nuclear weapons, and chemical weapons.
—"The Chinese Foreign Affairs Minister in Teheran to launch cooperation," Agence France Presse, 18 February 2000, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

20 February 2000

Iran successfully tests the missile equipped with a North Korean engine that arrived in November. According to a U.S. intelligence source, the operational test took place from a transporter-erector launcher (TEL) at a new Islamic Revolution Guards Corps (IRGC) air base at Mashhad. The test from a mobile launcher surprises the U.S. intelligence community. Reportedly, the test was regarded as a demonstration of the integration of the engine and missile subsystems.
—Steve Rodan, "Iran now able to deploy Shahab-3," *Jane's Defence Weekly*, 22 March 2000, p. 15.

20 February 2000

In an interview with Tehran's *Sanayeye Havai* newspaper, the general manager of Iran's aviation industries, Mohammad Hasan Tavalai, discusses the importance of the "PAHPAD," which can be either a manned or unmanned warplane. He says, "'PAHPAD' can be a good replacement for cruise or ballistic missiles. It can increase speed and recognize the unevenness of the terrain. Also it has a small radar surface and cannot be detected easily by radar and is easily guided. We can program it for a specific mission and can distinguish between false targets and real ones." He also stresses that the "PAHPAD" is always under control, and can be recalled or re-targeted mid-mission. The unmanned aerial vehicle (UAV) can also be used for a variety of missions. "In short," he says, "if we have something worthy in 'PAHPAD' (which we do), then we can move toward planning for unmanned warplanes." Tavalai also discusses the future of warfare, saying, "Evidence shows that defensive wars will be replaced by offensive wars. Offensive wars revolve around offensive arms, and its philosophy is that the first offensive move is the determining factor and whoever strikes the first blow will have the momentum."
—"In the Next 20 Years We Must Have Something Worthwhile to Say to the World in Our Aviation Industry," *Sanaye-ye Havai* (Tehran), 20 February 2000, pp. 2-6; in "Interview with General Manager of Aviation Industry," FBIS Document IAP20000501000095, 1 May 2000.

23 February 2000

In an interview with South Korea's *Yonhap* paper, Iranian Ambassador to the ROK Mohsen Talaei strongly denies alleged cooperation in missile technology with North Korea. The ambassador says the allegations are "groundless"

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and that "the United States should present the evidences to the world to prove its allegations." The ambassador also denies the import of North Korean missile technology on the premise that Iran's level of sophistication makes such technology transfer unnecessary. The ambassador also notes that Iran and North Korea have "ordinary" rather than "special" relations.

—Hwang Sok-chu, "Iran Strongly Requests Improved Relations With the ROK Following the General Elections in Iran; Denies Missile Cooperation With North Korea," *Yonhap* (Seoul), 23 February 2000; in "Interview With Iranian Envoy to ROK on Missile, Oil Prices," FBIS Document KPP20000224000102, 24 February 2000.

23 February 2000

The German chancellery head, Frank Walter Steinmeier, presents a report by the German foreign intelligence agency (BND) to the German cabinet, which states that Iraq would possess missiles with a range of 3,000km, thus capable of hitting targets in Western Europe, within five years. According to the BND, Iraq is shopping for spare parts for German machinery it bought years ago to construct high-tech weapons. The report states that Iraqi middlemen are using "dummy" companies to order machine parts and chemical processing equipment. According to the *Sueddeutsche* newspaper, Iran, Pakistan, and India are also actively trying to acquire atomic, biological, and chemical weapons.

—"German Assessment: Iraqi missiles will reach Europe by 2005," Deutsche Presse Agentur (Berlin), 23 February 2000, www.BerlinOnline.de.

24 February 2000

The U.S. Senate unanimously approves a bill that is designed to penalize Russia and other countries that are alleged to be aiding Iran to develop long-range ballistic missiles or nuclear weapons. According to Sen. Joseph Lieberman, the bill "sends a message to the administration" about "the broad bipartisan support here in Congress and about the need for tougher action." The bill stipulates that President Clinton is required to cut off arms sales or economic aid to countries that transfer classified technology to Iran, unless such measures would harm U.S. national security. According to a Russian foreign ministry spokesman, the bill is an attempt by the U.S. Senate to coerce Russia and other countries into compliance.

—"Senate OKs Bill Against Weapons Allies," *Los Angeles Times*, 25 February 2000, www.latimes.com; "Moscow Sees U.S. Senate Bill As Pressure Attempt," Interfax CIS Daily News Brief (Moscow), 25 February 2000, Volume 2, Issue 36.

24 February 2000

A report by the German Federal Intelligence Service (Bundesnachrichtendienst-BND) concludes that the illegal export of material for weapons of mass destruction (WMD) in "rogue" nations is difficult to control. The report warns that the relevant WMD in combination with correspondingly efficient missiles present a greater danger for Germany and NATO. BND considers North Korea the most active designer and exporter of carrier missiles, which are based upon the old Soviet technology of Scud missiles and have ranges of up to 500km. New longer-range missiles, called the Taepodong-1 and -2, are probably in the test or prototype stage. The BND estimates that North Korea will also attempt to export its new missile technology if there is demand in the international acquisition network that North Korea has already established. Over this network, North Korea is said to acquire missiles not only for its own needs, but also for Pakistan, Syria, and Iran. North Korea is said to use this business as a source of

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foreign exchange. The BND report determines the type of technology and materials likely to be subjected to illegal exports, and also describes the methods of illegal weapons acquisitions, explicitly in the example of Iraq.

—"Schwer zu Konrollieren (Difficult to Control)," *Frankfurter Allgemeine Zeitung*, 24 February 2000.

24 February 2000

The naval Vahdat-78 (Unity-78) exercises, staged jointly by the three forces of the Islamic Republic of Iran's Armed Forces and the Islamic Revolution Guard Corps, begin today. The exercises involve the use of new equipment and missile facilities including the surface-to-sea Fajr-Darya missile. Spokesman of the war game, Admiral Abdollah Manavi, says that missile boats launch search operations and intercept vessels of the hypothetical enemy.

—"Army Guard Corps stage joint naval exercises," British Broadcasting Corporation, 26 February 2000, in Lexis-Nexis, www.lexis-nexis.com; "Iran: Naval exercises continue in the Gulf," BBC Worldwide Monitoring, 28 February 2000, in Lexis-Nexis, www.lexis-nexis.com.

24 February 2000

The Islamic Revolution Guards Corps opens its third air base, in Mashhad in northeastern Iran. Major General Rahim-Savavi says "the objective of this air base is to increase the defense and security capability of the Islamic Republic of Iran in the northeastern region of the country." He also says, "The Islamic Revolution Guards Corps, by fully recognizing the recent regional and global developments, has taken steps to expand air bases all over the country in order to create a lasting security in the country." The commander of the IRGC adds, "The air force of the guards corps is armed with the most powerful surface-to-surface and surface-to-air missile units."

—"Iran: Guards Corps Opens Third Air Base in NE Iran," Vision of the Islamic Republic of Iran Network 1 (Tehran), 24 February 2000; in FBIS Document IAP20000224000050, 24 February 2000.

24 February 2000

Iran begins the Vahdat-78 (Unity-78) military exercises in the Strait of Hormuz, the Persian Gulf, and the Gulf of Oman. According to Iranian naval commander Rear Admiral Abbas Mohtaj, "Another objective of the exercises is the assessment of our technical capabilities [domestically manufactured equipment] produced recently, God be praised, with the help of research and industrial units of the armed forces, the country's universities and research centers. [This equipment] will be tested and assessed during the exercises." Rear Admiral Mohtaj also says they will assess a domestically designed and built air-to-surface missile, as well as the launch and fire control systems.

—"Iran: Army, IRGC Hold Joint Naval Maneuvers in Gulf," Vision of the Islamic Republic of Iran Network 1 (Tehran), 24 February 2000; in FBIS Document IAP20000224000035, 24 February 2000; "Iran: Navy Chief on Vahdat 78 Exercises," Vision of the Islamic Republic of Iran Network 2 (Tehran), 24 February 2000; in FBIS Document IAP20000224000094, 24 February 2000.

24 February 2000

The head of the German Federal Intelligence Service (BND), August Hanning, reports that Iran, as well as Iraq, Pakistan, and India, purchase missile components through subcontractors and "bogus firms" in Germany. Iran is developing the Shahab-4 missile with an expected range of 2,000km.

—Stephen Kornelius, "BND Report Views Iran, Iraq Missile Threat," *Sueddeutsche Zeitung* (Munich), 24 February

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2000; in "Everybody is Building Missiles--BND sees Europe Endangered By Iraq's and Iran's Arms Projects," FBIS Document EUP20000223000461, 23 February 2000.

25 February 2000

The Sayyad armored vehicle is a new vehicle similar to the old M-113 personnel carriers, but with extensive modifications including the TOW missile, which is mounted on the vehicle.

—"Army commander comments on Zolfaqar-3 exercises," British Broadcasting Corporation, 27 September 2000, in Lexis-Nexis, www.lexis-nexis.com.

25 February 2000

According to an official representative of the Russian Ministry of Foreign Affairs, the bill passed by the U.S. Senate today calling for financial and economic sanctions against exporters of nuclear and missile technologies to Iran is an attempt to put pressure on Russia and other countries. The official points out that the United States alone should be held responsible for the possible negative impact of this bill on bilateral and multilateral cooperation in nonproliferation and export controls and on Russian-American relations in general. However, Russian Deputy Prime Minister Ilya Klebanov believes that while this bill applies to a number of countries suspected of military cooperation with Iran, it does not apply to Russia, since Russia does not export military nor nuclear technologies to Iran. Klebanov states that Russia and the United States will continue their cooperation in creating an international space station.

—"Moscow views the bill on sanctions for cooperation with Iran passed by the US Senate as an attempt to put pressure on Russia," Interfax, 25 February 2000.

27 February 2000

According to the Israeli newspaper *Haaretz*, Iran has provided Lebanon with Fajr-5 rockets, which have a range up to 70km. Lebanon also has the Fajr-3 rocket, with a 43km range. Both missiles are produced by the Iranian military industry. The missiles have not been supplied to Hezbollah; rather, Iranian militants in Lebanon are in control of the weapons, which can reach the Israeli city of Haifa.

—Zeev Schiff, "Iran Supplies Lebanon Fajr Missiles, Can Hit Haifa," *Haaretz* (Tel Aviv), 27 February 2000; in "Missiles in Lebanon Can Hit Haifa," FBIS Document GMP20000227000052, 27 February 2000.

28 February 2000

Israeli intelligence reports that Iran has sold the Iranian-made Fajr 5 missile to the Hizbullah guerillas in Southern Lebanon. Israeli officials warn Washington that the missiles have already been moved to Lebanon, although as of today they have not been given to the Hizbullah.

—"Iranian Fajr 5 missiles can strike Haifa," Israel Wire, 28 February 2000, www.isrealwire.com.

28 February 2000

According to Israeli Deputy Defense Minister Ephraim Sneh, the United States and Israel draft a strategic pact that will probably accompany a peace agreement with Syria. The pact addresses missile or unconventional attacks on Israel. Israel specifically requests assistance "to forestall long-range threats from Iran and Iraq," including weapons

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of mass destruction.

—"Sneh: US, Israel Drafting Strategic Pact," *Jerusalem Post*, 28 February 2000, www.jpost.com.

March 2000

Currently, Iran has nine surface-to-surface missile production and research programs and four artillery rocket programs.

—Ben Sheppard, "Ballistic Missile Proliferation," *Jane's Special Report*, March 2000, p. 152.

March 2000

The director of the Central Intelligence Agency presents a report to the U.S. Congress that states that the Iranian Shahab-3 medium-range ballistic missile has probably achieved an emergency operational capability. The report states, "Tehran could deploy a limited number of the Shehab-3 prototype missiles in an operational mode during a perceived crisis situation." According to the Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, suppliers in Russia and China provided a considerable amount of ballistic missile related goods and technology to Iran during the first half of 1999. The materials reportedly accelerated Iran's Shahab-3 missile program and technology provided by Russia. The materials and technology provided in the first half of 1999 are expected to accelerate Iran's development of indigenous ballistic missile systems. The report states that Iranian defense minister publicly admitted to Iran's work on the Shahab-4, which was originally classified as a more advanced ballistic missile than the Shahab-3 and later categorized as a non-military space launch vehicle. In addition, the Iranian defense minister publicly mentions plans for a Shahab-5. According to the report, North Korea has probably assisted Syria's program to manufacture Scud-C missiles. Russia is allegedly the principle source of foreign assistance for Syria's liquid-propellant missile program.

—"Iran's Shahab-3 may have 'emergency operational capability'," *Jane's Missiles & Rockets*, March 2000, www.janes.com.

1 March 2000

The Iranian forces successfully test-fire an improved "Standard" missile, according to reports by the official Islamic Republic News Agency. The surface-to-air missile, developed partly by the Iranian Navy's experts, was test-fired during the ongoing Vahdat-78 exercises, says spokesman of the exercises, Abdollah Manavi. However, he did not disclose the missile's range nor which countries cooperated with Iran in building the missile. The spokesman says the improvement of the missile took nearly four years and Iranian experts, saving the country millions of U.S. dollars, built some parts of the missile. The maneuvers aim to examine application of modern weapons and equipment in the Navy's arsenal, including air-to-surface missiles, military sources say.

—"Iran Successfully Test-fires Improved Missile," Xinhua General News Service, 1 March 2000, in Lexis-Nexis, www.lexis-nexis.com.

1 March 2000

Iranian Rear Admiral Manavi announces a surface-to-air missile is successfully tested for the first time during the Vahdat-78 military maneuvers. The missile's guidance and control system as well as its launcher were designed in Iran. Iranian researchers and military experts have been modifying the missile over its standard design for the past

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four years. The missile will be used on the Paykan-class missile boats. Rear Admiral Manavi also announces that the Fajr-e-Daria air-to-surface missile is fired at a mock enemy during the third stage of the exercises in the Persian Gulf.

—"Iran: Navy 'Successfully' Tests Surface to Air Missile," Vision of the Islamic Republic of Iran Network 1 (Tehran), 1 March 2000; in FBIS Document IAP20000301000087, 1 March 2000; "Iran: Air to Surface Missile Tested During Exercises," IRNA (Tehran), 2 March 2000; in FBIS Document IAP20000302000026, 2 March 2000.

1 March 2000

The Iranian Navy declares the successful test of a surface-to-air missile dubbed "Standard," partially manufactured by Iranian specialists. The missile is fired during the Vahadat-78 military exercises. Rear Admiral Abdollah Manavi, spokesman for these military exercises, says that building the missile took four years and saved Iran millions of dollars.

—"Iran declares having 'successfully' tested a surface-to-air missile in the Gulf," IRNA, 1 March 2000, in Agence France Presse, 1 March 2000, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

2 March 2000

According to spokesman of the exercise Rear Admiral Abdollah Manavi, the air-to-sea Fajr missile is test-fired on a hypothetical enemy during the third phase of the Vahdat-78 (Unity-78) war games in Persian Gulf waters.

—"Fajr Air-to-Sea Missiles Testfired in Vahdat 78 War Games," IRNA (Tehran), 2 March 2000, www.irna.com; Doug Richardson, "Iran: Upgraded Standard Test-fired," *Jane's Defence Upgrades*, 16 April 2000, www.janesonline.com.

6 March 2000

According to a report by the German Federal Intelligence Service (BND), Iran has imported a substantial amount of arms in recent years despite financial difficulties. Iran is striving to acquire high-quality weapons systems, especially for land and sea. The report states that China and Russia are cooperating with Iran on its nuclear program. It also notes that Iran is trying to buy a research reactor that is suitable for producing plutonium. Iran would like to produce longer-range delivery vehicles itself, and North Korea is said to be helping with this effort. Iran is also preparing to build a longer-range cruise missile for targets at sea and for developing drones. According to the BND, Iran procures arms through the importer Bonyad- Mostafaza-Ve-Janzeban Foundation, which makes legal purchases for Iran, but also maintains dummy firms abroad. The report also states that Iran uses dealers in Dubai for procuring technology.

—Helmut Loh, "Iran's massive armament efforts despite financial difficulties," *Frankfurter Rundschau*, 6 March 2000, www.fr-aktuell.de.

7 March 2000

According to Japanese police, Ichiro Takahashi has been indicted for illegally exporting weapons parts to an Iranian state-run company. Takahashi allegedly tried to buy Chinese C801 and C802 anti-ship missiles at the request of Masoud Momtahahn, an Iranian businessman. Takahashi and another individual were indicted last month for selling anti-tank rocket sighting devices through the Japanese company, Sunbeam, without government permission.

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—"Japanese Tried to Help Iranian Buy PRC Missiles," *Kyodo* (Tokyo), 7 March 2000; in FBIS Document JPP2000030700061, 7 March 2000.

7 March 2000

According to Japanese police, Masoud Momtahan, an Iranian national, tried to obtain Chinese-made C801 and C802 anti-ship missiles from the now defunct Sunbeam K.K. trading house in 1995. The deal would have made 100 missiles available for \$140 million through a Hong Kong weapons dealer. The deal did not succeed, though, because Iran decided to import completely disassembled missiles along with technical experts. Police suspect that Ichiro Takahashi, the former president of Sunbeam, also exported gyroscopes to Iran illegally from 1987 to 1992. Takahashi and another Japanese person were indicted last month on charges of exporting 3,100 dials for sighting devices used in anti-tank rocket launchers to Iran Electronics Industries, an Iranian state-run company, in April and December 1995 without government permission.

—"Japanese Tried To Help Iranian Buy PRC Missiles," *Kyodo* (Tokyo), 7 March 2000; in FBIS Document JPP20000307000061, 7 March 2000; "Article on Illegal Arms Exports to Iran From Japan," *Sankei Shimbun* (Tokyo), 14 March 2000; in FBIS Document JPP20000314000036, 14 March 2000.

7 March 2000

A whole section of a report by the German intelligence (BND) on the worldwide proliferation of weapons of mass destruction and missiles is devoted to Iran's armament efforts. Aside from the fact that Iran seems to be heading in the direction of building its own nuclear weapons program, Iran is making its own Shahab-1, -2, and -3, all with a range of more than 200km. Iran is also working on a Shahab-4, which, according to the BND, has a range of 2,000km and could be produced as of the year 2005.

—"Tehran is Working on Development of Missiles and Nuclear Weapons; German Intelligence Worried About Armament," *Die Welt* (Berlin), 7 March 2000, www.diewelt.de. [CNS translation]

14 March 2000

Two former executives of the now defunct Japanese optical equipment manufacturing and distributing firm, Sunbeam, have been indicted at the Tokyo District Court for allegedly exporting sensitive items. The two are charged with exporting sighting devices for anti-tank missiles, gyroscopes for internal navigation of missiles, and infrared devices for night-imaging capabilities to Iran over a five-year period. Further, an Iranian national who had lived in Japan alleges that one of the executives arranged for the purchase and shipment of one hundred Chinese-made C801 and C802 anti-ship missiles to Iran. The deal would have been worth approximately \$140 million. However, the deal was not concluded, and it is suspected that the Sunbeam executive was used by Iran to determine missile prices.

—"Article on Illegal Arms Exports to Iran from Japan," *Sankei Shimbun* (Tokyo), 14 March 2000; in FBIS Document JPP20000314000036, 14 March 2000; "Japanese Tried to Help Iranian Buy Chinese Missiles," *Kyodo* (Tokyo), 7 March 2000, in Lexis-Nexis, www.lexis-nexis.com.

14 March 2000

General Director and Designer of NPO Energomash, Boris Katorgin, states that Energomash has no contacts with Iran in the sphere of missile and space technologies. According to Katorgin, a U.S. delegation, including

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representatives of the Department of State, NASA, and the CIA, inspected the facility a number of times and found no evidence of such contacts. In 1997-1998, Energomash was known to be building a mobile fire-extinguishing unit in Iran. However, due to the importance of its agreement with the U.S. company Lockheed Martin regarding the export of RD-180 rocket engines for Atlas-3 launch vehicles, Energomash breached its contract with Iran and consequently suffered significant losses.

—"Energomash denies contacts with Iran in the sphere of space technology," Interfax, 14 March 2000; "Moscow doubts that Washington will impose sanctions on Russia in connection with alleged Exports of missile technologies to Iran," Interfax, 25 February 2000.

15 March 2000

According to Kaywan Khosravi, spokesman for the Iranian Ministry of Defense and Armed Forces Logistics, the U.S. delivery of anti-ballistic missiles to Israel will increase tension in the Middle East region. Khosravi states that such missile deliveries to Israel pose new threats to the region. He also says that the United States is engaged in an effort to impose restrictions on the legitimate defense needs of other countries in the region. Khosravi believes that Israel plays a destructive role in Middle East regional peace and security. He states that "the strengthening of Israel's military might lead to new security formations in the region." In addition, he says, "delivery of new missiles to Israel, on the pretext of imaginary threats, only reveals Washington's destructive role in peace and security in the region."

—"US delivery of missiles to Israel will increase tension in region," IRNA (Tehran), 15 March 2000, www.irna.com.

15 March 2000

Russian Vice Prime Minister Ilya Klebanov says Russia is not violating any agreements with the United States on exporting military equipment to Iran. "Everything we supply to Iran has been agreed upon within the framework of the protocol signed by Russia and the US," he says. Klebanov describes as discriminatory the U.S. law that sanctions companies helping Iran create missiles or nuclear weapons.

—"Russia: Supplies to Iran 'Do Not Violate' US Agreements," ITAR-TASS (Moscow), 15 March 2000; in FBIS Document CEP20000315000189, 15 March 2000.

21 March 2000

CIA Director George Tenet testifies about threats to U.S. national security, saying that the proliferation of weapons of mass destruction is "of particular concern." He notes the increased proliferation of missiles in India, Pakistan, North Korea, and Iran, and says that information about missiles as well as chemical, biological, and nuclear weapons was becoming more common. He also states that proliferation by non-state actors, such as Osama bin Ladin, is a concern, and that terrorists have exhibited interest in chemical and biological weapons. He cites Russia, China, and North Korea as sources of materials and information related to WMD and missile proliferation, and that states such as Iraq and Syria could become suppliers in the future. He also discusses the political situations in China, India-Pakistan, Russia, Iran, Iraq, the Balkans, North Korea, and Colombia.

—"Statement by Director of Central Intelligence George Tenet Before the Senate Foreign Relations Committee," Central Intelligence Agency, 21 March 2000, www.odci.gov.

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21 March 2000

CIA Director George Tenet addresses the Senate Foreign Relations Committee and says, "US cities will face ballistic missile threats from a wider variety of countries—North Korea, probably Iran, possibly Iraq—over the next 15 years." He charges that proliferation of mid-range ballistic missiles by North Korean missile sales upsets the strategic balance. Tenet says, "The US is more vulnerable than ever to surprise."

—"US Loudmouthed Missile Threat From North Korea," Korea Central News Agency (KCNA), 24 March 2000, www.kcna.co.jp.

22 March 2000

Israeli defense officials and the United States agree that Iran has achieved the capability to deploy the Shahab-3 ballistic missile and is now focusing on limited emergency deployment of the missile. According to *Jane's Defence Weekly*, Iranian sources report that the Shahab-3 has only an inertial navigation system (INS), with a circular error probability (CEP) of approximately 3km.

—Steve Rodan, "Iran now able to deploy Shahab-3," *Jane's Defence Weekly*, 22 March 2000, p. 15.

24 March 2000

According to U.S. intelligence officials, the CIA and the U.S. intelligence community are taking a new approach to assessing missile development programs of rogue countries such as Iran. In this new approach, the CIA considers the first successful flight-test of a missile as a demonstration of near-term deployment. According to John Holum, senior advisor for arms control and international security at the U.S. State Department, ballistic missiles do not have to be deployed in huge numbers nor be very precise and reliable for coercive purposes. Holum also says "there is no need for robust test programs, or for deployment of large numbers of missiles in dedicated long-term deployment sites. That, combined with uncertainties in assessing the threat, means our warning times have sharply diminished." Holum states that the first successful launch of a ballistic missile could happen with only a few months warning.

—"CIA Changes View of Rogues Missile Programs," *Middle East Newslines*, 24 March 2000, www.menewslines.com.

25 March 2000

According to knowledgeable sources, Iran will not give up its efforts to develop long-range missiles capable of carrying nuclear and chemical warheads, despite the victory of reformists in the recent Iranian parliamentary elections.

—"Iran Will Not Abandon Developing Its Long-Range Missiles," *Al-Quds* (London), 25 March 2000, www.alquds.com.

28 March 2000

Egypt is importing engines for missiles without any U.S. interference, and government sources warn that Washington may be the next exporter of the systems. Furthermore, the sources say that Washington may make it easier for Egypt and other nations to export components banned by the Missile Technology Control Regime (MTCR), adding that Egypt and Pakistan are among U.S. allies in the Middle East and South Asia that are importing missile engines for their ballistic missile programs (the biggest supplier of rocket engines is North Korea). Earlier this month, a CIA report pointed to cooperation in missile technology between Egypt and North Korea. Gary

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Milhollin, director of the Wisconsin Project on Nuclear Arms Control, reports that Egypt, Syria, Iran, and Pakistan are importing these rocket motors easily and in sufficient quantities. Milhollin testifies in front of the Senate Armed Services Committee against a bill that would liberalize U.S. exports of numerous types of dual-use equipment. He says that the Export Administration Act would lift restrictions on the export of rocket motors. Milhollin adds that the bill would decontrol dual-use equipment used in the development of nuclear weapons and long-range missiles. This includes the release for export of nuclear weapons triggers, and glass and carbon fibers used in ballistic and cruise missiles.

—"Egypt, Iran import engines for missiles," *Middle East Newslines*, 28 March 2000, www.menewslines.com.

31 March 2000

According to Stephen R. Sestanovich, ambassador-at-large and special advisor to the Secretary of State on the Newly Independent States (NIS), the United States must face the reality of the potential emergence of long-range ballistic missile capabilities in countries such as Iran and North Korea.

—"State Dept. Focuses on Russian Transfer of Technology," *Aerospace Daily*, 31 March 2000.

April 2000

Iran releases additional information on the Fajr-3 and Fajr-5 series of unguided surface-to-surface rocket systems, now in service with Iranian armed forces. Both systems have been developed by the Shahid Bagheri Industries Organization, possibly with technical assistance from North Korea.

—Christopher F. Foss, "Iran reveals more details of Fajr rocket system," *Jane's Defence Weekly*, 26 April 2000, p. 16.

April 2000

Russian Deputy Minister Alexander Kondakov says the Baltiyskiy (Baltic State) Technological University in St. Petersburg will no longer teach Iranian students, in light of U.S. allegations that the Iranian students would be learning missile-related technologies. "The educational plans and programs proposed to Iranians are open to general use, but under certain circumstances they can be applied to the preparation of missile experts," Kondakov says. "Considering the importance of the nonproliferation of missile technologies, we suggested that the university stop training Iranian specialists," he says. The decision affects 17 Iranian students who were to start studying at the university in September 2000. University rector Yuriy Savelyev says the postgraduate students are writing theses in the field of applied mechanics and automation of control systems, which have nothing to do with "dual-purpose" technologies. The rector also says that the university was to obtain \$2.5 million per year for the eight-year education program.

—"Russia Stops Teaching Iranians at Technology University," ITAR-TASS (Moscow), 4 April 2000; in FBIS Document CEP20000404000268, 4 April 2000; "Russia: Iranian Postgraduate Students Banned From Studies," ITAR-TASS (Moscow), 11 April 2000; in FBIS Document CEP20000411000298, 11 April 2000.

April 2000

Iran completes development of its Shahab-3 surface-to-surface missile, according to a senior Israeli defense official. Israeli and U.S. intelligence sources agree that Iran is capable of deploying the 1,300km-range missile. The Shahab-3 has a North Korean engine, one of a shipment of engines from Pyongyang in November 1999. The 20

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February 2000 test-launch at Mashhad was a demonstration of the integration of the engine and missile subsystems, according to an Israeli defense source. That launch was supervised by the commander of the Islamic Revolutionary Guards Corps, Major General Yahya Rahim Safavi. A U.S. intelligence source says it is not likely that Iran is setting up a production line of the missile, and as yet the Shahab-3 does not have a sophisticated nor unconventional warhead. In December 1999, the U.S. military commander in the Persian Gulf, General Anthony Zinni, said the Shahab-3 will eventually have a non-conventional warhead.

—Steve Rodan, "Iran Completes Shihab-3 Development," *Middle East Newsline* (Jerusalem), 4 April 2000; in "Shihab-3 Minus Lethal Warhead Viewed by Israeli Officials," FBIS Document GMP20000404000166, 4 April 2000.

April 2000

The latest CIA report says Russian companies and scientific institutions continue to assist Iran's missile programs, despite agreements not to. The report says the "Russians have failed to carry out their promise not to supply missile technologies to Iran and right now remain the main suppliers of equipment, materials, and technologies associated with weapons of mass destruction." The Russian Foreign Ministry denies the accusations, and says the United States has not provided any proof of Russian involvement. Furthermore, London's *Times* reported in April 2000 that illegal shipment of missile components was being conducted from Astrakhan, Russia to Bandar-e-Anzali, Iran via the Caspian Sea. During recent Congressional hearings, a spokesman for the CIA said Iran would be able to test a ballistic missile capable of reaching the United States by 2010. Other U.S. officials say the transfer of Russian technology could shorten this time span.

—"*Izvestiya* Reports CIA Allegations of Russian Aid for Iran's Missile Programs," *Izvestiya* (Moscow), 11 August 2000; in FBIS Document CEP20000811000112, 11 August 2000.

4 April 2000

The United States stated previously that Iranians are being trained in missile-related fields at the Russian Baltic State Technological University. After an inspection into the matter, the Russian Education Ministry decides not to have Iranian students come to study, as the materials one can learn at that university can foster the proliferation of missile technology.

—"Russia Says Iranians Not to be Trained In Missile-Related Technologies," British Broadcasting Corporation, 5 April 2000, in Lexis-Nexis, www.lexis-nexis.com.

11 April 2000

According to London's *Foreign Report*, an Iranian ship carrying ballistic missile components arrived in Libya in mid-February 2000 as part of a large arms deal between Iran and Libya. The as-yet-unconfirmed report from Middle East sources says the ship left Iran in early January and avoided Africa by sailing through the Straits of Gibraltar. The report says an additional supply of equipment is due to leave for Libya on an Iranian transport plane in a few days. The shipment includes pumps, machines, and spare parts for a liquid-fuel plant designed and supervised by Iranian missile experts. The report alleges that Libyan personnel are learning missile technology in Iran. The deal is said to be an agreement between Iranian spiritual leader Ayatollah Khamenei and Libyan President Muammar Qaddafi to settle a portion of Libya's debts to Iran. The deal was likely reached in February 1999 when Iranian Foreign Minister Kamal Kharazi met with Qaddafi in Libya. The report says that officials from the armed forces and defense industries in both countries have regular working meetings and cooperation on technological

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assistance, training courses and procurements in the field of ballistic missiles. An unconfirmed report says a Libyan delegation witnessed three launches in Iran in July 1998 and three engine static-tests in 1999.

—"London report: Iranian Ballistic Missiles to Libya?," *Foreign Report* (London), 11 April 2000; in FBIS Document GMP20000411000182, 11 April 2000.

14 April 2000

U.S. State Department spokesman James Rubin states that the United States is imposing sanctions on one North Korean company and the Iranian Ministry of Defense and Armed Forces Logistics, the Aerospace Industries Organization, the Shahid Hemat Industrial Group, and the Sonam Industrial Group. According to him, these organizations have made "Category I" violations of the Missile Technology Control Regime, which include the transfer of "complete missile systems, major sub-systems, rocket stages or guidance systems, production facilities or technology associated with medium-range missiles."

—"U.S. Penalizes North Korean, Iranian Firms for Missile Sales," *Deutsche Presse-Agentur*, 14 April 2000, in Lexis-Nexis, www.lexis-nexis.com.

16 April 2000

The Iranian Brigadier-General Fasihi says that the Islamic Republic of Iran Military was able to produce a "Standard" missile and surface-to-surface laser missiles and other artillery through 26 research projects over the course of the last year.

—"Iran: Senior Officer Comments on Armed Forces' Achievements," *British Broadcasting Corporation*, 16 April 2000, in Lexis-Nexis, www.lexis-nexis.com.

16 April 2000

Mr. Hamid Reza Asefi, Iranian Foreign Ministry Spokesman, states that Iran's missiles are only for defensive and deterrent purposes. He also states that all of Iran's technology that serves its national interests comes from domestic sources.

—"Foreign Ministry Spokesman Says US Sanction 'inappropriate'," *British Broadcasting Corporation*, 18 April 2000, in Lexis-Nexis, www.lexis-nexis.com.

24 April 2000

Russia's Education Ministry has suspended the rector of Baltic State Technical University, Yuri Savelyev, over allegations that the school leaked ballistic missile technology to Iranian students there. Education Minister Vladimir Filippov issued an edict on 16 February to suspend Savelyev. Voenmeks University, based in St. Petersburg, has won two deals with Tehran Technological University to train the latter's students. Education Ministry Spokesman Yuri Semyonov confirmed on 3 April that Filippov ordered Savelyev to be "temporarily relieved of his duties," but did not elaborate, saying the edict is classified.

—Simon Saradzhyan, "Russia Alleges University Gave Iran Rocket Technology," *Defense News*, 24 April 2000.

25 April 2000

The United States decides to lift sanctions on the Russian organizations INOR, a research center, and Polyus, a scientific and production organization. The sanctions had been placed on them for suspected missile technology

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cooperation with Iran. The organizations no longer deal with Iran, so the sanctions can be lifted.

—"Itar-Tass Foreign News Digest of Tuesday, April 25," ITAR-TASS (Moscow), 25 April 2000, in Lexis-Nexis, www.lexis-nexis.com.

25 April 2000

According to U.S. State Department Spokesman James Rubin, sanctions were imposed on the Baltic State Technical University after an investigation by the Russian Ministry of Education revealed that the rector, Yuri Savelyev, was involved in the transfer of sensitive technology to Iran. Rubin says that the United States is imposing a ban on government assistance to and procurement from Savelyev. In addition, any U.S. exports or imports involving Savelyev are banned.

—"Sanctions Imposed Against Russia," *Washington Times*, 25 April 2000, p. 11.

28 April 2000

Scientists and lawyers say that the U.S.-planned missile defense against attack by North Korea would provoke China into greatly increasing its nuclear arsenal. Stephen Schwartz, publisher of the *Bulletin of Atomic Scientists*, says in a telephone interview, "China has a very circumscribed arsenal with only 400 warheads and two dozen long-range missiles." China believes it needs a credible nuclear deterrent to protect itself from attack. Schwartz says, "if the US deploys a defense shield, they will do what we would do in the circumstances, which is to build enough missiles to make sure that some could get through." According to U.S. experts, the missile shield is needed to protect U.S. territory against attack by "rogue states" such as North Korea and Iran. Jack Mandelsohn, vice president and director of Lawyers Alliance for World Security (LAWS), says in a telephone interview that at present there are no North Korean missiles aimed at the United States. He states, "if we put a defense system in Alaska, no matter what we say, the Chinese will think it is meant for them." He adds that China has about 20 intercontinental ballistic missiles (ICBMs) capable of hitting the United States; "with 100 interceptors, that means we get five shots. It is conceivable we could shoot down all their missiles, so China will naturally build lots more. What it means is that we will end up with many more nuclear weapons aimed at us than now."

—"Proposed US Missile Shield Would Provoke China, Lawyers Say," *Yahoo Asia News*, 29 April 2000, asia.dailynews.yahoo.com.

17 May 2000

Acting Commander of the Iranian Air Force, Brigadier General Iraj Osareh, reports that Iran's air-to-air, air-to-surface, and surface-to-air missiles are all being built in the country with the most sophisticated technology.

—"Commander: Iran's Air Force Well Equipped," IRNA (Tehran), 17 May 2000; in FBIS Document IAP20000517000029, 17 May 2000.

19 May 2000

Heydar Karrar, the second phase of military exercises with the use of missiles and anti-aircraft batteries, has begun in the Ramsheh General Area in Esfahan Province.

—"Iran: Second Phase of Heydar Karrar Military Exercises Begins," British Broadcasting Corporation, 19 May 2000, in Lexis-Nexis, www.lexis-nexis.com.

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19 May 2000

According to a U.S. intelligence official, the U.S. intelligence community is writing a secret report warning the Clinton administration that construction of a national missile defense (NMD) system could result in a sharp buildup of strategic and medium-range nuclear missiles by China, India, and Pakistan, and further spread missile technology in the Middle East. John Peters, an arms control specialist at Rand Corporation, however, rules out the possibility of India getting into an arms race with China. An intelligence official further says that the CIA-led analysis and updated threat-assessment are the first official evaluations of how the NMD system could generate new threats. CIA analysts believe Russia would accept the U.S. arguments that Russian deterrence will remain preserved despite deployment of NMD, but China, with an arsenal of only 20 strategic intercontinental ballistic missiles (ICBMs; CSS-4), is unlikely to be persuaded. As a result, China is likely to take measures, such as the installation of multiple nuclear warheads on its missiles, the building of mobile launchers for its DF-31 missiles, and the addition of missile countermeasures such as booster fragmentation, low-power jammers, chaff, and simple decoys. Furthermore, intelligence officials believe that Russia and China would sell missile countermeasures to countries like North Korea, Iran, Iraq, and Syria. Michael O'Hanlin, who tracks the missile defense issue at the Brookings Institution in Washington, argues that the potential willingness of China to sell missile countermeasures to countries like North Korea is a bigger threat to the United States than an enhanced nuclear buildup by China.

An intelligence official further states that U.S. allies in Europe and NATO could be angered if the United States is seen to be walling itself off from its allies with an anti-missile shield. An updated threat-assessment as a supplement to the secret report notes that although North Korea has frozen its program to test its Taepodong-2 ICBM since the U.S. administration proposed relaxing economic and diplomatic sanctions in September 2000, the missile could be tested on short notice. In addition, the CIA officials who warned that Iran may test an ICBM by 2010 have not seen further progress in Iran's missile program. Critics of NMD argue that the missile threat from North Korea and Iran is exaggerated, and that the anti-missile technology is unproven. Critics also say NMD deployment would undermine crucial arms control and nonproliferation regimes.

—Bob Drogin and Tyler Marshall, "Missile Shield Analysis Warns of Arms Buildup; Defense: US System could Lead Other Nuclear Powers to Enhance Arsenals, Spread Technology, Report Says," *Los Angeles Times*, 19 May 2000, in Lexis-Nexis www.lexis-nexis.com.

21 May 2000

As part of their military maneuvers, Iran's Army and the Islamic Revolution Guards Corps begin a missile war in the Gulf of Oman that should last a week.

—"Iranian Army, IRGC Start Military Manoeuvres," Xinhua News Agency, 21 May 2000, in Lexis-Nexis, www.lexis-nexis.com.

21 May 2000

In a report by IRNA, Brigadier General Iraj Osareh, Iranian acting Commander of the Air Force, states that all of Iran's air-to-air, air-to-surface, and surface-to-air missiles are produced in Iran using the newest in modern technology.

—"Airforce Commander Discusses the Strengths of the Irani Airforce," IPR Strategic Business Information Database, 21 May 2000, in Lexis-Nexis, www.lexis-nexis.com.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



21 May 2000

Iranian TV states that the missiles to be used in the military exercises in the Gulf are called Saeqeh (Lightning).

—"Iran Begins Three Joint Exercises in Gulf Region," British Broadcasting Corporation, 21 May 2000, in Lexis-Nexis, www.lexis-nexis.com.

21 May 2000

The Iranian Navy starts the Saeqeh (Lightning) exercise involving missiles and missile boats. The maneuvers are part of the Val-Adiyat and Misaq ba Velayat joint exercises between its Army, Navy, and Air Force in Khorramshahr, the Persian Gulf, and the Oman Sea.

—"Iran TV Reports on Joint Exercise in Persian Gulf Region," Vision of the Islamic Republic of Iran Network 1 (Tehran), 21 May 2000; in FBIS Document IAP20000521000037, 21 May 2000.

21 May 2000

The Army, Navy, and Air Force of the Islamic Republic of Iran Military (IRIM) start its joint military exercises in Khorramshahr, the Persian Gulf, and the Gulf of Oman. One of the exercises with the navies of the IRIM and the Islamic Revolution Guards Corps using Saeqeh (Lightning) missiles on missile boats and ships commences today as well.

—"Iran Begins Three Joint Exercises in Gulf Region," British Broadcasting Corporation, 23 May 2000, in Lexis-Nexis, www.lexis-nexis.com.

24 May 2000

The Iranian Ministry of Defense and Armed Forces Logistics implements a project for the "assembly line for mass production of advanced air defense missiles, Shehab-e Saeqeb."

—"Iranian Defense Ministry Inaugurates Industrial Projects," Vision of the Islamic Republic of Iran Network 1 (Tehran), 24 May 2000; in FBIS Document IAP20000524000109, 24 May 2000.

24 May 2000

At the time of President Khatami's visit to Khorramshahr, the Ministry of Defense and Armed Forces inaugurates 10 industrial, defense, and production projects. Among them is an "assembly line for mass production of advanced air defence missiles, Shehab-e Saeqeb."

—"Defence Ministry Projects Inaugurated," British Broadcasting Corporation, 3 June 2000, in Lexis-Nexis, www.lexis-nexis.com.

24 May 2000

According to Brigadier General Ashtiyani, Iran successfully executes its Bayt al-Maqdis 12 and Val-Adiyat exercises. He says the military is "able to successfully launch a well-coordinated massive ground and air attack utilizing missiles, artillery fire, Cobra helicopters, and air force bombers."

—"Military Commander Interviewed on Maneuvers," Vision of the Islamic Republic of Iran Radio 1 (Tehran), 24 May 2000; in FBIS Document IAP20000524000038, 24 May 2000.

26 May 2000

President Bill Clinton plans to discuss Russian transfer of missile and nuclear weapons technology to Iran with

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President Vladimir Putin in Moscow on 3 June. White House National Security Adviser Samuel Berger also expects discussions regarding missile and nuclear proliferation, and cooperation to prevent leakage of Russian technology, to resume. Berger states that Russian nuclear and missile technology has been obtained by Iran. Berger says that some progress has been made in preventing future information leaks from occurring but indicates that the problem persists. According to U.S. officials, the biggest remaining problem is Russian aid to Iran's nuclear weapons program. However, Berger recognizes the initiatives that Russia has begun in their efforts to tighten control over the proliferation of strategic weapons.

—"US Places Russian Tech Transfer to Iran on Summit Agenda," *Middle East Newslines*, 26 May 2000, www.menewslines.com.

26 May 2000

At a scheduled 3 June summit in Moscow, President Bill Clinton plans to discuss Russian transfer of missile and nuclear weapons technology to Iran with president Vladimir Putin. White House National Security Adviser Samuel Berger states, "we expect to continue our discussions about missile and nuclear proliferation, and cooperation to prevent leakage of Russian technology to countries like Iran."

—"U.S. places Russian tech transfer to Iran on summit agenda," *Middle East Newslines*, 26 May 2000, www.menewslines.com.

29 May 2000

North Korea begins supplying Syria with the new, longer-range Scud ballistic missile. North Korea is in negotiations with Egypt to sell the same weapon. The longer-range Scud-D has an approximate range of 700km. The additional range of the Scud-D allows Syria to deploy the missiles deep in its territory while keeping Israel within range. It is also believed that the Scud-D has been sold to Libya, whose interest in acquiring and developing missiles has been renewed. Syria already possesses the Scud-C, which has an approximate range of 500km, and has begun to assemble its own Scud-C missiles in a local plant that was designed by the North Koreans. Syria is able to produce some of its own parts for the Scuds but must still purchase other parts for the Scud-C missiles from other countries. Some believe that Syria is producing Scud parts and selling them to Egypt. Syria also possesses chemical warheads for its missiles. Experts estimate that Syria has more than 300 missiles, Scud-Bs and -Cs, and 26 launchers. Syria is cooperating closely with Iran, which is providing Syria with rocket fuels.

China is also involved in helping both Iran and Syria to develop advanced surface-to-surface ballistic missiles. China is assisting Syria in creating missile engines and guidance systems and in developing rocket fuels. China has also reportedly built a range for ballistic missiles in Iran and a supersonic wind tunnel for Libya to test missiles.

—Zeev Schiff, "Syria adds new long-range Scud to arsenal," *Haaretz*, 29 May 2000, www3.haaretz.co.il; Ross Dunn, "Syria gets new scud," *BBC News*, 30 May 2000, www.news.bbc.co.uk; "Beijing helping Syria with missiles," *Times*, 5 June 2000, www.the-Times.com; "Syria acquires 700 kilometer range Scud Missile," 29 May 2000, www.israelwire.com.

June 2000

U.S. experts say that despite repeated appeals, North Korea has also continued to sell intermediate- and long-range missiles such as the Nodong and Taepodong-1 (Paektusan-1) to Iran, Syria, and Libya. Sources say that mainly commercial contacts are used to hide the weapons transactions.

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—"Iraq, N. Korea Believed Cooperating on Missiles, WMD," *Middle East Newsline*, Vol. 2, No. 218, 8 June 2000, www.menewslines.com.

2 June 2000

CNN reports that Iran is ready to test a medium-range ballistic missile able to strike Israel, Turkey, and parts of Russia. Marine General Tony Zinni, Commander of U.S. forces in the Persian Gulf, expects the test to be a success. According to Zinni, this would be very important because it would mean that Iran would have a missile with a range of 800 miles. Zinni's assessment is that it is only a matter of years before Iran has weapons of mass destruction and the means to deliver them.

—Jeanne Merseve and Jamie McIntyre, "Marine General says Iran Ready to Test medium-Range ballistic Missile," CNN Worldview, Live Report, 2 June 2000, in Lexis-Nexis, www.lexis-nexis.com.

4 June 2000

Israeli sources confirm that China has supplied advanced ballistic missile technologies to Iran and Syria. The sources say that while China has not sold complete missile systems, it has sold materials for the production of solid rocket fuels, has helped set up a factory for the production of rocket engines, and has transferred missile guidance technologies to Iran and Syria. The guidance technology is designed for use in both long-range and short-range ballistic missiles. Israel has asked China to stop its transfer of missile technologies several times in the past. At present, however, the United States is arguing that Israel is not doing enough to pressure China because Israel has its own military dealings with China. However, Israeli sources report that Israel was successful in stopping the transfer of Chinese M-9 ballistic missiles to Syria in the past. China has so far committed itself not to help Iran or any other countries develop nuclear weapons.

—Zeev Schiff, "China Helping Iran and Syria Develop Long-Range Missiles," *Haaretz* (Tel Aviv), 4 June 2000; in "China Aids Iran, Syrian 'Advanced' Ballistic Missile Projects, Israeli Sources Confirm," FBIS Document GMP20000604000081, 4 June 2000.

4 June 2000

According to an unnamed U.S. source, China is assisting Iran and Syria in the development of advanced surface-to-surface ballistic missiles. China is also selling Iran materials for the development of solid rocket fuels and for setting up a plant to manufacture the NP-110 missile engine. China has already constructed a fully equipped missile range with telemetry equipment for long-range ballistic missiles in Iran. China is transferring missile-guidance technologies, including satellite sensors, which are applicable to both long-range ballistic missiles and short-range Scud missiles, to Iran. China is setting up a similar missile engine plant in Syria. According to unnamed Israeli sources, Israel has protested to China repeatedly about their sales of advanced ballistic missile technology to Arab states.

—"China aids Syria and Iran in long-range missile development" *Middle East Newsline*, 4 June 2000, www.menewslines.com.

5 June 2000

U.S. military officials provide Israel with the information that China is helping Syria and Iran develop surface-to-surface missiles and in making missile engines and guidance systems that are meant for the long-range ballistic

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missiles and the Scud missiles. Supposedly China has also built a test range in Iran for ballistic missiles.

—"China Helping Iran, Syria Build Missiles, U.S. Warns Israel: Barak Tightly Guarded After Extremist Threats," *Ottawa Citizen*, 5 June 2000, in Lexis-Nexis, www.lexis-nexis.com.

5 June 2000

The United States is concerned about reports of China's involvement in helping Iran and Syria develop sophisticated missile capabilities. U.S. State Department Spokesperson Philip Reeker expresses concern over Chinese firms selling missile-related technology to Iran. Reeker also mentions the significance of reports that Syria may be seeking assistance from China for its missile program. According to the *Times* of London, the United States provides Israel with information about China's sale of missile-guidance technology to both Iran and Syria.

—"US concerned about Chinese arms sales to Iran and Syria," Deutsche Presse-Agentur, 5 June 2000; via Lexis-Nexis, www.lexis-nexis.com.

7 June 2000

The U.S. State Department spokesman states, "We have said many times before and are continuing to say that we have long-standing concerns about Chinese firms selling missile-related technology to Iran, and we have made these concerns known to the Chinese government. We also take seriously reports that Syria may be seeking from China materials for its missile program." This is the first time a U.S. official publicly acknowledges Chinese help to the Syrian missile program. In the past, North Korea was cited as an exporter of missiles components and systems to Syria.

U.S. and Israeli officials agree that China continues to supply missile components to both Iran and Syria for development of medium-range missiles including the Scud-D missile, which can be tipped with a non-conventional warhead. Reeker says that there is no relation between the U.S. concern over Chinese sale of missiles and the Israeli sale of Phalcon aircraft to China.

—"U.S. Concerned Over Chinese Missile Sales to Syria," *Middle East Newslines*, Vol. 2, No. 216, 7 June 2000, www.menewslines.com.

8 June 2000

U.S. intelligence officials, quoting a National Security Agency (NSA) report of 8 June 2000, say that Russia and Uzbekistan are cooperating on the sale of missile parts to North Korea. The parts being sold include a special aluminum alloy, laser gyroscopes used in missile guidance, and connectors and relays used in missile electronics, the officials say. The report also says that Russia has been collaborating with a North Korean missile company in sending missile components to Yemen. According to officials, the gyroscopes for the North Korean Scud missiles were first sold to North Korea's Changgwang Sinyong Company in Kazakhstan and then resold to Yemen. The United States has placed an export ban on the firm since April 2000 for selling Scud missiles to Iran.

—Bill Gertz, "Russia Sells Missile Technology to North Korea," *Washington Times*, 30 June 2000, p. A1.

8 June 2000

Western Intelligence sources say North Korea is helping Iraq in its medium-range missile and nuclear weapons programs. Sources say Iraq is trying to acquire its pre-1991 strategic weapons capability by increasing its oil revenue through enhanced exports. Former UN chief arms inspector Richard Butler says that Iraqi weaponization

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would continue to pose a threat to the United States and Israel. U.S. experts say that despite repeated appeals, North Korea also continues to sell intermediate- and long-range missiles such as the Nodong and Taepodong-1 to Iran, Syria, and Libya. Sources say that mainly commercial contacts are used to hide the weapons transactions. —"North Korea Sells Long-Range Ballistic Missile to Syria and Libya," *Middle East Newslines*, 29 May 2000, www.menewslines.com; "Iraq, N. Korea Believed Cooperating on Missiles, WMD," *Middle East Newslines*, Vol. 2, No. 218, 8 June 2000, www.menewslines.com; "N. Korea is Selling Missiles to Arab Countries," *Middle East Newslines*, Vol. 2, No. 218, 8 June 2000, www.menewslines.com.

13 June 2000

Yugoslavia has expressed its willingness to sell Iraq any military systems it requests, including missile components. Yugoslav Prime Minister Momir Bulatovic says that Belgrade will not rule out any sales to Iraq. Yugoslav officials say that the two countries have been brought closer together by the experience of international sanctions. Western intelligence sources suspect that Baghdad has looked to Belgrade for help with non-conventional weapons and missiles. Belgrade is also courting Iran.

—Steve Rodan, "Belgrade Ready to Sell all to Iraq," *Middle East Newslines*, 13 June 2000, www.menewslines.com.

15 June 2000

U.S. officials are alleging that North Korea has rejected U.S. appeals and is selling virtually all of its long-range and medium-range ballistic missile components to Middle Eastern clients such as Iran, Syria, and Libya. These components include parts of the Nodong ballistic missile with a range of approximately 1000km and the Taepodong ballistic missile with a range of about 1500km. The Nodong has already served as the foundation for the Iranian Shahab-3 ballistic missile.

—"North Korea is selling Missiles to Arab Countries," *Middle East Newslines*, 15 June 2000, www.menewslines.com.

18 June 2000

Israeli defense sources reveal that Israel has secretly test-fired cruise missiles involving two German-built Dolphin-class submarines capable of carrying nuclear warheads last month off the coast of Sri Lanka. The Israeli-made missiles, equipped with conventional warheads, hit targets at sea at a range of approximately 1,500km. They are designed to simulate swift retaliation against a pre-emptive nuclear attack from Iran. However, the Israeli Navy dismissed the report and denied the tests reported in a statement by the IDF Spokesperson. Israel paid a cut rate of £200 million for the submarines to compensate for Iraq's use of German-made non-conventional weapons against Israel during the Gulf War. A third submarine is expected to be operational within weeks. Israel plans to equip each of the three undetectable submarines with four cruise missiles. Under a system of rotation, two of the submarines will remain at sea—one in the Red Sea and Persian Gulf, the other in the Mediterranean. The third will remain on standby. The 1,720-ton diesel-electric submarines can remain at sea for as long as 30 days. The missiles could be fired only after approval from four people: prime minister, defense minister, chief of staff of the Israeli Army, and the commander of the Navy. Israel remains concerned about its vulnerability to attack from within the region, especially from Iran. Israeli intelligence believes that Iran will have nuclear weapons within two years.

—"Israel testing out cruise missiles," *AlKhbar*, 17 June 2000, www.akhbar.com; "Israel testing out cruise missiles: report," Agence France Presse, 17 June 2000, in Lexis-Nexis, www.lexis-nexis.com; Uzi Mahnaimi and Peter Conradi "Fears of new arms race as Israel tests cruise missiles," *Sunday Times* (London), 18 June 2000,

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hwww.suntimes.co.za; "Israel test fired nuclear capable, sub-launched cruise missiles," *Jerusalem Post*, 19 June 2000, www.jpost.com; Uzi Mahnaimi and Matthew Campbell, "Israel makes nuclear waves with submarine missile test," *Sunday Times*, 18 June 2000, hwww.suntimes.co.za.

21 June 2000

According to U.S. officials, Iran has succeeded in improving the range and accuracy of its intermediate-range missiles through tests of the Shahab-3 missile this year. This missile, based on the North Korean Nodong, has a range of 1,300km and was tested in February. The tests were reported successful amid accelerated assistance from Russia. The Iranians use Russian subsystems to modify the Nodong structure. The U.S. officials have said that Iran appears ready to complete development of the Shahab-3 by the end of the year.

—"Iran improves accuracy of its missiles," *Middle East Newslines*, 21 June 2000, www.menewslines.com.

21 June 2000

Two Canadian men, Mohsen Lessan and Reza Akrami, are wanted by the United States on grounds of smuggling missile parts to Iran and thus violating export controls. Lessan, however, has said that the United States is offering him a plea bargain. The two men attempted to ship a Klystron tube, which is a necessary part for the Hawk missile, to Iran. Because the tubes were to be paid for with heroin, the U.S. Drug Enforcement Agency caught the men using another Iranian man as an undercover agent. Akrami's lawyer suspects that entrapment was involved in the deal.

—"Missile Plot Suspect Tells of Plea Deal: Mohsen Lessan Tells an Extradition Hearing the U.S. Government Has Offered Him a Plea-Bargain. He Says He Has Countered," *Vancouver Sun*, 21 June 2000, in Lexis-Nexis, www.lexis-nexis.com.

22 June 2000

Though Zhu Bangzao, the Chinese Foreign Ministry spokesperson, states that Iranian President Khatami's visit "had nothing to do with the issue of military cooperation," the London-based Arabic newspaper *Asharq al-Aswat* writes that technological cooperation between China and Iran was the key issue of the visit. Supposedly, Iran wants to gain assistance in the manufacture of newer medium- and long-range missiles. Since 1994, China and Iran have been working on a new Silkworm missile that will form the basis of Iran's ballistic missile-based defense policies.

—"Khatami in Beijing to Seal Iran's 'Strategic Partnership' With China," *Mideast Mirror*, 22 June 2000, in Lexis-Nexis, www.lexis-nexis.com.

22 June 2000

A senior U.S. State Department official says that following a North Korean announcement to continue its moratorium on missile testing, the United States will soon resume negotiations with North Korea on the missile issue. The official says a visit to the United States by a North Korean high-level delegation and talks on reaffirmation of North Korea's pledge to halt nuclear weapons will also be announced soon. If the talks succeed, missile-related shipments to Iran, Pakistan, and possibly other nations will end.

However, a senior U.S. official on condition of anonymity says that the United States still faces a threat of missile attack from North Korea; as a result, the United States might be constrained in continuing to develop its national missile development (NMD) program. "One summit does not make a safe situation, and the North Korean missile

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problem is by no means solved," the official says.

—"U.S. to Announce Missile Talks with North Korea," Associated Press, 22 June 2000, in Lexis-Nexis, www.lexis-nexis.com; "US Expects Resumption of Missile Talks with Nkorea Shortly: Official," 22 June 2000, in Lexis-Nexis, www.lexis-nexis.com.

26 June 2000

For the time being, the 1,300km-range Shahab-3 missile is the last missile under production in Iran. Iran, however, has begun manufacturing the Shahab-4, which is capable of launching satellites and is not intended for military use. Iran says that it is making its own missiles and other armor and denies speculations of major military cooperation with China, North Korea, or Russia. Iran also states that its missiles will never be aimed at an Islamic country.

—"Iranian Attack Helicopters Delivered to Revolutionary Guards," Deutsche Presse-Agentur, 26 June 2000, in Lexis-Nexis, www.lexis-nexis.com.

26 June 2000

Israeli assessments hold that Iran is planning a second test-launch of the Shahab-3 ballistic missile, which has a range of about 1300km. The missile was first tested in July 1998. The steering committee for arms control, headed up by Israel's acting chief of the National Security Council Major General (Res.) Gideon Shefer, met recently to discuss the developments of the issue. Military intelligence personnel assess that Iran is moving swiftly toward making its long-range missiles operational. It believes that the second test is strategic and not tactical or operational. Iran is alleged to be within five years of being able to fit a nuclear warhead on the Shahab-3 missile. According to the CIA, Iran is also working toward a Shahab -4 or Shahab-5, believed to be able to strike the United States with a non-conventional warhead in a decade.

—Amir Oren, "Israel readying for Iran's Shihab-3," *Haaretz* (Tel Aviv), 26 June 2000, www3.haaretz.co.il.

26 June 2000

Iranian President Mohammed Khatami says that Iran has good relations with China, but he had not discussed the issue of nuclear cooperation with Chinese officials in an interview in Beijing. According to Khatami, discussions between China and Iran have focused on economic, industrial, technical, and technological cooperation. A Chinese government spokesman says that Khatami's visit to China had nothing to do with military cooperation. His statement is an apparent response to Western suspicions that Iran and China share weapons technology, including missile technology.

—"Iran's Khatami on Nuclear Issue, US Accusations, Peace Process," *Al Hayat* (London), 26 June 2000; in FBI Document GMP20000626000034, 26 June 2000; "Khatami denies nuclear links," Reuters, 26 June 2000; in *South China Morning Post*, 26 June 2000, www.scmp.com.

30 June 2000

U.S. intelligence officials, quoting a National Security Agency (NSA) report of 8 June 2000, say that Russia and Uzbekistan are cooperating on the sale of missile parts to North Korea. The parts being sold include a special aluminum alloy, laser gyroscopes used in missile guidance, and connectors and relays used in missile electronics. The report also states that Russia was collaborating with a North Korean missile company in sending missile

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components to Yemen. According to officials, the gyroscopes for the North Korean Scud missiles were first sold to North Korea's Changgwang Sinyong Company in Kazakhstan and then resold to Yemen. The U.S. has placed an export ban on the firm since April 2000 for selling Scud missiles to Iran. Officials say that Russian sales of missile parts is contrary to Russian President Vladimir Putin's proposed continent-wide missile defense that will protect capitals from Lisbon to Vladivostok from missile attack. Putin's suggestion follows U.S. President Bill Clinton's June 2000 declaration on the willingness to share U.S. defense technology with Russia and other "civilized nations." U.S. Congressman Curt Weldon, a senior member of the U.S. House Armed Services Committee, has attributed the Russian arms proliferation to the failure of the Clinton administration's arms control policies.

—Bill Gertz. "Russia Sells Missile Technology to North Korea," *Washington Times*, 30 June 2000, p. 1.

1 July-31 December 2000

North Korea is said to provide assistance and equipment for Syria's liquid-propellant missile program. North Korea is also reportedly a supplier of "missile-related equipment, materials, technology, and expertise to Libya and Iran." —"Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 July Through 31 December 2000," CIA, 7 September 2001, www.cia.gov; "Russia, N. Korea, China Give Iran Missile Aid-CIA," *Joongang Ilbo*, 11 September 2001, english.joins.com; Bill Gertz, "CIA Uncovers Missile moves by China," *Washington Times*, 8 September 2001, www.washtimes.com; "CIA Says Iran Got New Missile Aid," *Washington Post*, 8 September 2001, p. 9.

1 July 2000

Iranian Aerospace Industries Organization (AIO) has established production lines for a number of anti-tank guided weapon systems (ATGW). Several of these missiles are offered for export. The first ATGW to be manufactured in Iran was the Raad, a locally produced version of the Russian AT-3b Sagger. It is not known which country was the origin of Iran's Sagger, but countries known to have licensed or unlicensed copies of this missile include Bulgaria, China, North Korea, Poland, Romania, and Yugoslavia. The first version of the Raad was followed by the Raad-T, which is fitted with a nose-mounted precursor charge to detonate any explosive-reactive armor. In early 2000, AIO announced that it was manufacturing another longer-range ATGW called Toophan. It is now known that there are at least two versions of the Toophan manufactured—the standard Toophan with a single HEAT warhead weighing 3.6kg, capable of penetrating 550mm conventional steel armor, and the Toophan-2, which has a 4.1kg tandem HEAT warhead, capable of penetrating a 760mm conventional steel armor protected by explosive-reactive armor. According to the AIO, the Toophan can be retrofitted with the Toophan-2 warhead. The Toophan is reportedly similar to the U.S. Raytheon TOW missile. Toophan is comparable to the Basic TOW, while the Toophan-2 is comparable to the Improved TOW. Toophan can be launched from existing TOW launchers and has a range identical to TOW. The Toophan specifications are 1,160mm length; no probe extended; 150mm diameter; 450mm fin length; and 18.5kg missile weight. The Toophan-2 specifications are 1,160mm length, 1,450mm with probe extended; 150mm diameter; 450mm fin length; 19.1kg missile weight. Iran is also understood to be manufacturing the AT-5 Spandrel ATGW with the local designation of Towsan-1 and M113. Iran is also believed to be manufacturing an improved version of the McDonnell Douglas Dragon ATGW. The new locally produced version is believed to have a tandem warhead and increased range. Iran has stated that it has developed an ATGW called "Super Dragon," which could well be the extended-range version of the U.S. missile.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—Christopher F. Foss, "Iran offers new anti-tank missiles for export," *Jane's Missiles & Rockets*, 1 July 2000, in Lexis-Nexis, www.lexis-nexis.com.

2 July 2000

During a ceremony to introduce the new commander of the Islamic Revolution Guards Corps (IRGC) Air Force, with the presence of state and military officials, Major General Safavi says, "The organization of five ballistic missile units is one of the major tasks which was accomplished by the air force....The deterrent ability of the Islamic Republic has increased as a result of its ballistic missile power and Iran is among the great missile powers in the region." Safavi describes the design and production of drones as another of the important projects of the IRGC's air force. He adds that conversion of surface-to-air missile (SAM) sites to SAM units is another one of the actions taken in the field of guided missiles.

—"Islamic Revolution Guard Corps set up ballistic missile units," *Kayhan* (Tehran), 2 July 2000, in Lexis-Nexis, www.lexis-nexis.com.

2 July 2000

Major General Rahim-Safavi declares the creation of five ballistic missile groups in the Iranian Air Force. He says Iran is one of "the great missile powers in the region," and has increased its deterrence through its ballistic missile programs. He also notes the ability to design and produce unmanned aerial vehicles (UAV) as another important project of the Iranian Air Force.

—"Five New Ballistic Missile Units Formed," *Keyhan* (Tehran), 2 July 2000; in FBIS Document IAP20000703000081, 3 July 2000.

4 July 2000

Islamic Republic News Agency, IRNA, reports that Iran made five new launch pads for ballistic missiles. Though it had been stated last year that the Shahab-3 would be the last missile under production for a while, Iran is producing the Shahab-4, which is supposedly only intended for launching satellites.

—"Iran Builds Launching Pads for Ballistic Missiles," Deutsche Presse-Agentur, 4 July 2000, in Lexis-Nexis, www.lexis-nexis.com.

4 July 2000

Islamic Revolution Guards Corps (IRGC) General Rahim Safavi announces that Iran possesses five ballistic missile launching pads. [Note: See other 4 July entry.]

—"Five launching pads for ballistic missiles built in Iran," IRNA (Tehran), 4 July 2000, www.irna.com.

5 July 2000

The Iranian armed forces have organized special groups to operate the five missile launchers that were announced by General Rahim Safavi.

—"Iran builds missile launchers for Shihab-3," *Middle East Newslines*, 5 July 2000; www.menewslines.com.

11 July 2000

U.S. Defense Secretary William Cohen raises the issue of Chinese missile exports to Libya during talks in Beijing. U.S. officials believe that Libya has been a recipient of Chinese missiles. While Libya's progress in developing long-

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range missile development is unknown, Cohen states that Libya is considerably behind the progress made by North Korea and Iran. U.S. intelligence officials also claim that North Korea is aiding Libya in missile development and has offered Libya the Taepodong-1 missile.

—"China helping Libya develop ICBMs," *World Tribune* (Washington, D.C.), 11 July 2000, www.worldtribune.com.

15 July 2000

An informed source in the Iranian Ministry of Defense and Armed Forces Logistics reports that the Ministry successfully test-fired the Shahab-3 missile for the second time. According to the source, the second test-fire of the missile was conducted to examine the scientific standards of the missile and to upgrade the defense power of the country in line with Iran's policy of deterrence. The source makes it clear that the missile was developed for defense purposes only and poses no threat to any country in the world.

—"Shahab Missile Testfire," IRNA (Tehran), 15 July 2000, www.irna.com.

15 July 2000

In Israel, Deputy Defense Minister Ephraim Sneh expresses concern about Iran's missile test and states that Israel is "prepared to forestall" the dangers of Iran's weapons technology.

—"Iran Tests Ballistic Missile," *Washington Post*, 15 July 2000, www.washingtonpost.com.

15 July 2000

According to the Ministry of Defense and Armed Forces Logistics, Iran successfully conducts the second test of the Shahab-3 missile today, "in order to compare its defensive capabilities with scientific standards." The Ministry of Defense states that the test is to strengthen Iran's deterrence and should not be viewed as a threat to other countries.

—"Defense Ministry Says Shahab-3 Missile Tests To Strengthen Deterrence," Voice of the Islamic Republic of Iran Radio 1 (Tehran), 15 July 2000; in FBIS Document IAP20000715000019, 15 July 2000.

16 July 2000

During an interview with Jerusalem Post Radio, spokesman for the defense information publisher *Jane's*, Paul Beaver, says that Iran's testing of the Shahab-3 missile does not surprise him. He describes Israel and "other places that Iran is currently feeling uncomfortable about" as possible targets for the Shahab-3 missile. He also reports that Iran is believed to be working on "sophisticated warheads....Whether they're nuclear or not is a matter for debate."

—"Jane's: 'Iran may have nuclear warheads'," *Jerusalem Post*, 16 July 2000, www.jpost.com.

16 July 2000

The Israeli newspaper *Haaretz* reports that the head of the Islamic Revolution Guards Corps (IRGC) air force, General Rahim Safavi, has claimed that Iran currently has "five initial ballistic missile units." [Note: See entry for 2 July 2000.]

—Amos Harel, "Iran tests missile that puts Israel within reach," *Haaretz* (Tel Aviv), 16 July 2000, www3.haaretz.co.il.

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16 July 2000

A senior Israeli Defense Force (IDF) officer has accused Russia and North Korea of assisting Iran in its missile program.

—"Israel: 16 July Radio, Press Report on Reactions to Iran Shahab-3 Missile Test," FBIS Press Report; in FBIS Document GMP20000716000051, 16 July 2000.

16 July 2000

A Tel Aviv University expert says that there is no conclusive evidence yet that the Shahab-3 missile test on 15 July was successful.

—"Israel preparing to answer Iran," *Jerusalem Post*, 16 July 2000, www.jpost.com.

17 July 2000

Israel will ask the United States to apply renewed pressure on the Russian administration to end Russian aid to Iran.

—"Israel Begins Campaign Following Iranian Missile Launch," ISRAEL line, 17 July 2000, in email subscription.

17 July 2000

Officials in Israel are concerned about Iran's missile test of "an upgraded Shehab-3 ballistic missile" but feel that they are not the target of that missile. The Shahab-3 has a range between 1,200 and 1,300km, putting all of Israel within reach. Iran's Shahab-4 missile, which is in development, will supposedly have a 2,000km range.

—"Officials: Israel not Iran's immediate target," *Jerusalem Post*, 17 July 2000, via Lexis-Nexis, www.lexis-nexis.com.

17 July 2000

Israeli Army Chief of Staff General Shaul Mofaz says, "Apparently, the Iranians have successfully tested the Shahab-3 missile....Coupled with their efforts to secure non-conventional arms, that constitutes a threat not only to Israel but also to all countries in the Middle East that are in range of these missiles."

—Maryam Karmai, "Israel Focuses Attention on Iran's Shahab-3 to Overshadow Deadlock in Camp David," *Tehran Times*, 17 July 2000, www.tehrantimes.com.

17 July 2000

During a Defense Department briefing, U.S. Secretary of Defense William Cohen says that the Shahab-3 missile test "has not come as a surprise." He states, "You may no doubt have noticed over the past several months during the course of my...presentations, I have pointed to Iran in the testing of the Shehab-3 and what I assume will be the testing of the Shehab-4 in the future, and beyond that. It is one of the reasons why it is important for the United States to undertake research and development, and potentially deploy an NMD [National Missile Defense] system that will provide protection against countries such as Iran posing a threat to the United States."

—"Department of Defense Briefing," Federal News Service, 17 July 2000, in Lexis-Nexis, www.lexis-nexis.com.

18 July 2000

During a regularly scheduled briefing, Chinese Foreign Ministry Spokesman Zhu Bangzao claims that the report that Iran is developing missile technologies based upon Chinese designs at a factory purchased from China in 1998 is

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"baseless." He says, "We hope the Middle East and the Gulf will maintain peace and stability."

—"China denies helping Iran develop missile technology," Agence France-Presse, 18 July 2000, www.akhbar.com.

18 July 2000

In defense of the Iranian missile program, Kamal Kharazi, Iranian Foreign Affairs Minister states, "how come that Israel can have all kinds of offensive weapons including weapons of mass destruction and that other countries in the region should have defensive weapons?"

—"Iran Defends its Missile Program," Agence France Presse, 18 July 2000, in Lexis-Nexis, www.lexis-nexis.com.

[CNS translation]

18 July 2000

According to Moscow's *Izvestiya*, Iran's Shahab-3 missile was developed with "the latest Russian technology" and possibly Russian scientists' assistance. Intelligence reports say the Shahab-3 is a modification of a North Korean missile, which was developed out of the Soviet Scud missile. The Shahab-3 missile has a range of 1,300km and can deliver a chemical or biological warhead. *Izvestiya* notes the success of the recent test of the missile and indicates the Shahab-3 will be placed on alert duty in five years.

—David Markish, "Shihab, Granddaughter of Scud," *Izvestiya*, (Moscow), 18 July 2000; in "'Latest Russian Technology' Used in Development of Iranian Shihab-3 Missile," FBIS Document CEP20000718000127, 18 July 2000.

18 July 2000

Chinese Foreign Ministry Spokesman Zhu Bangzao denies that China helped Iran develop missile technology and considers a report of the accusations to be "baseless." The report alleges Iran's missile technology is based on Chinese designs manufactured at a factory bought from China in 1998. Hong Kong's AFP says the 1,300km-range Shahab-3 is based on North Korea's Nodong-1, modified with Russian technology.

—"FM Spokesman Denies China Helped Iran Develop Missile Technology," AFP (Hong Kong), 18 July 2000; in FBIS Document CPP20000718000118, 18 July 2000.

19 July 2000

Iranian Foreign Minister Kamal Kharrazi rejects U.S. and Israeli allegations that the Shahab-3 missile test was indicative of a desire to acquire an offensive weapons capability. "Iran uses its defense capabilities to insure the stability and security of the region, and Iran's might reinforces friendship among the brotherly and friendly states in the region." Kharrazi also says that the United States and Israel are using Iran's missile test as an excuse to justify their "arms race" and budgets.

—Hengameh Mashiyati, "Iran Castigates US, Israel Allegations on Iranian Missile Test," *Tehran Times*, 19 July 2000, www.tehrantimes.com.

19 July 2000

Turkish Foreign Ministry deputy spokesman Husayn Dirioz says that the armament efforts of certain neighboring countries and circles are a cause for concern. He says that within that framework, Turkey views with sensitivity the missile-test conducted by Iran on 15 July and is closely monitoring related developments.

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—"Turkey Closely Monitoring Iran's Shahab-3 Missile Tests," TRT 1 Television (Ankara), 19 July 2000; in FBIS Document GMP20000719000115, 19 July 2000.

19 July 2000

Iranian Foreign Minister Kamal Kharrazi states that Iran's missile "test was done to boost the country's defensive capability and as a deterring force." It is also stated by Iran that this test has been used by the United States and Israel to further their propaganda against Iran and for a national missile defense system.

—"Iran Insists Missile Test Was a Defensive Move," *Jerusalem Post*, (Jerusalem) 19 July 2000, in Lexis-Nexis, www.lexis-nexis.com.

19 July 2000

U.S. Department of Defense Spokesman Kenneth Bacon comments on the 15 July missile-test of Iran's Shahab-3 medium-range ballistic missile (MRBM) and the possibility that Iran is pursuing a Taepodong-type intercontinental ballistic missile (ICBM). He says, "There isn't any conceivable reason why Iran needs a missile of intercontinental range if it's worried about regional security issues. It already has, in the Shahab-3, a missile that should allow it to deter or intimidate, if that's its goal, its neighbors. So, it's a little puzzling why they would want missiles of longer range...."

—Linda de France, "Iranian Shahab-3 Missile Test Sparks Pentagon Concern," *Aerospace Daily*, 19 July 2000; in www.nautilus.org.

19 July 2000

Iran's Ambassador to Turkey, Mohammad Husayn Lavasani, says the Shahab-3 test should not be seen as a threat to Turkey or other countries. "The missile-test is not against a third country, and the government in Tehran has also explicitly expressed this," he says in response to Turkish media discussions on the threat of the Shahab-3. In a written statement, the Iranian Embassy in Ankara declares that every country has a "natural right" to test missiles for defensive purposes. The statement also denies allegations that Iran has the necessary equipment for producing biological and nuclear weapons.

—"Iranian Envoy Says Shahab-3 Missile Test Not Against Third Country," IRNA (Tehran), 19 July 2000; in FBIS Document IAP20000719000090, 19 July 2000; "Iran's Ankara Embassy Says Shahab-3 for Defensive Purposes Only, Denies Report," *Anatolia* (Ankara), 20 July 2000; in FBIS Document GMP20000721000001, 21 July 2000.

19 July 2000

Although Libya has not supported terrorism for the past few years, the United States wants it to take further steps before it will support the formal lifting of sanctions. U.S. officials say that their largest remaining concern is Libya's alleged ballistic missile development activities. A U.S. Department of Defense (DOD) official has said that the suspension of sanctions has allowed Libya a series of contacts to be reinitiated in its missile program. The U.S. official has also said that although Libya does not have much indigenous capability, it does have money to buy missiles. Because Libya's missile programs "are wholly reliant on foreign technology," Tripoli's procurement of components to refurbish its Scuds and attempts to develop the al-Fatah medium-range ballistic missile (MRBM) are the United States' primary concern. According to the same U.S. officials, three suppliers—North Korea, Iran, and Yugoslavia—are providing Libya with the needed missile technology. They add, "most of the activity we are

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looking at is Iranian and North Korean deals that seem to be related to Scud or Scud-Nodong technology." In the past Libya has attempted to procure Scud-B components from Ukraine.

U.S. Department of Defense officials have said that if North Korea follows its past patterns, a Pyongyang-Tripoli deal will involve an initial supply of completed systems. That will be followed by the provision of a factory where components will be assembled and then later produced. "It's a turnkey operation, like they did with the Iranians...but that depends on hard cash...you are talking \$150-500 million for something like this," the officials have said.

The officials have advanced that Iran is a second potential supplier, noting that Iranian merchant ships have made several "unusual" voyages to Libya over the past couple of years, circumnavigating Africa conceivably so as not to pass through the Suez Canal. "We are not sure exactly what was on their [ships]..." Other sources have said the shipments included pumps and machinery for a plant to produce liquid fuel for missiles that is being built with Iranian assistance. A third potential supplier is Yugoslavia, which, "has been involved in the other developmental program of Libyan missiles, the al-Fatah program," U.S. officials said. They have explained that they couldn't rule out Yugoslavia-Libya cooperation both in the operational Scud capability and also the al-Fatah program. One Pentagon official stated that the al-Fatah program "hasn't produced a missile worth its name [Conquest]... they are not very far along." Another U.S. official agrees, "they have not been very successful." "I think Libya's ultimate aim is to get a medium-range ballistic missile along the lines of a Nodong or Shehab-3 so that they can hold Tel Aviv and US bases in NATO hostage," the U.S. official have said.

—"Andrew Koch, "USA rethinks Libya's status," *Jane's Defense Weekly*, 19 July 2000, pp. 22-23.

19 July 2000

According to a report prepared by Turkish intelligence units, Iran is believed to possess 1,595 medium-range and long-range missiles. The firing range of these missiles lies between 45 and 1,000km.

—"Missile Threat from Iran," *Milliyet* (Istanbul), 19 July 2000; in "Iranian Missile Program, Threat Against Turkey Viewed," FBIS Document GMP20000719000225, 19 July 2000.

21 July 2000

According to the Israeli daily *Haaretz*, the Scud-D is already operational in Syria, but still requires testing before deployment. Scud-D missiles deployed in northern Syria can hit any target in Israel, the newspaper says. Western defense sources say that Iran funded North Korea's development of the Scud-D for Syria. Iranian President Mohammed Khatami on 20 July 2000 stressed the continuation of strategic relations with Syria, the sources report.

—"Israel Assesses That Syria is Preparing to Launch Scud D," *Middle East Newslines*, 21 July 2000, www.menewslines.com.

26 July 2000

China is believed to be cooperating with Russia on Iran's missile programs, specifically the development of Iran's Shahab-3 missile. U.S. officials say that Iran apparently has reached an agreement with Beijing to receive the components and technology required to complete the Shahab-3 missile. The officials add that China is also being recruited to help complete the longer-range Shahab-4 and Shahab-5 missiles. Russia is reported to be the primary

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contractor of the Shahab-4, whereas China denies any involvement in developing Iran's missile program.

—"Officials: China helping Russia with Iranian missiles," *World Tribune*, 26 July 2000, www.worldtribune.com.

10 August 2000

According to a recent CIA report reviewing missile developments during the last half of 1999, the United States has been unsuccessful in preventing the increasing flow of Russian aid to Iran's missile and non-conventional weapons program. The CIA's national intelligence says Washington's appeals to Russia for an end of the transfer of missile technology to Tehran have fallen on deaf ears. The result, according to the report, is that Iran has significantly advanced in its program to launch intermediate- and long-range missiles.

However, Russia is not the lone supplier. Iran's non-conventional weapons program is also being aided by China, North Korea, and Western Europe; though China has limited its aid to Iran's nuclear programs, the report states Beijing seems to be adhering to its pledge not to expand aid beyond Iran's two nuclear projects. "In addition, firms in China provide missile-related items, raw materials, and/or assistance to several countries of proliferation concern, such as Iran, North Korea, and Libya," the report adds.

—"CIA: US has failed to stop Russian aid to Iran," *Middle East Newslines*, 10 August 2000, www.menewslines.com.

10 August 2000

China denies the latest U.S. Central Intelligence Agency report that it supplies missile technology to Iran, calling the accusations "baseless." The report, which covers July to December 1999, says China sends "missile-related items, raw materials, and/or assistance to several countries of proliferation concern, such as Iran, North Korea, and Libya."

—"PRC FM Spokesman Says U.S. Accusation of Technology Transfer 'Baseless'," AFP (Hong Kong), 10 August 2000; in FBIS Document CPP20000810000057, 10 August 2000.

10 August 2000

The Foreign Responses to U.S. National Missile Defense Deployment report says that Iran and Iraq will be able to test intercontinental ballistic missiles (ICBMs) by 2010 if they continue to receive assistance from Russia, China, and North Korea. According to officials, the report is likely to influence U.S. President Clinton's decision whether to approve the first steps towards NMD or postpone the decision until the next administration. The report is also likely to affect the 2000 presidential campaign, the officials say.

—Stevens Le Myres, "US Missile Plan Could Reportedly Provoke China," *New York Times*, 10 August 2000, p. 1.

11 August 2000

The latest CIA report says that despite Russian government agreements not to continue assisting Iran's missile program, companies, and scientific institutions still do. The report says the "Russians have failed to carry out their promise not to supply missile technologies to Iran and right now remain the main suppliers of equipment, materials, and technologies associated with weapons of mass destruction." The Russian Foreign Ministry denies the accusations, and says the United States has not provided any proof of Russian involvement. Furthermore, London's paper the *Times* has reported in April 2000 that illegal shipments of missile components was being conducted from Astrakhan, Russia to Bandar-e-Anzali, Iran via the Caspian Sea. During recent congressional hearings, a spokesman for the CIA has said Iran would be able to test a ballistic missile capable of reaching the

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United States by 2010. Other U.S. officials say the transfer of Russian technology could shorten this time span.
—Gennadiy Charodeyev, "Iran Will Have Ballistic Missiles in Ten Years," *Izvestiya* (Moscow), 11 August 2000; in "Izvestiya Reports CIA Allegations of Russian Aid for Iran's Missile Programs," FBIS Document CEP20000811000112, 11 August 2000.

13 August 2000

North Korean leader Kim Jong Il tells a group of South Korean media chiefs visiting Pyongyang, "We are selling rockets to a few countries like Iran." He says the rockets cost between \$200 and \$300 million. The comments imply Kim wants compensation from the United States in exchange for stopping the missile sales.

—"ROK's Yonhap: N.K. Leader Speaks About Missiles, Still Leaves Some Questions," *Yonhap* (Seoul), 13 August 2000; in FBIS Document KPP20000813000045, 13 August 2000.

13 August 2000

A South Korean news service reports that North Korean leader Kim Jong Il's discussion with Russian President Vladimir Putin in July 2000 about North Korea's missile program was an "exchange of views on science and technology." Kim says his remarks about giving up North Korea's missile program were made in humor. "We were talking about such a subject laughingly, and I said [it] to President Putin just as a laughing subject." Later, Kim says, Putin "grabbed my words" and reported the offer publicly. Kim denies sending a letter to Putin about North Korea's giving up its missile development program. However, Alexander Ivanov, a counselor at the Russian Embassy in Japan, explains "the North Korean statement meant that it might withhold independent (missile) development, if other countries cooperate with its space exploration program." Kim says that North Korea earns revenues from the sales of missiles to countries like Iran and Syria and that North Korea has to be compensated for giving up missile development. A Japanese news service also quotes Kim as saying that North Korea is willing to establish diplomatic relations with the United States if Washington removes it from a list of "terrorist" countries. Kim has said that North Korea has no plans to reduce the size of its military, since it is a source of power to the regime.

—"Speculation on DPRK Offer to Give up Missile Development Program," Seoul Sindong-a (Korea), 11 August 2000; in FBIS Document KPP2000811000081, 18 August 2000; "ROK Yonhap: N.K. Leader Speaks About Missiles, Still Leaves Some Questions," *Yonhap* (Seoul), 13 August 2000; in FBIS Document KPP2000813000045, 13 August 2000; "Kim Says North Korea will Keep Developing Satellites," *Kyodo* (Tokyo), 13 August 2000; in FBIS Document JPP20000813000027, 13 August 2000; Son Key Young, "Kim Jong Il Vows to Keep Military Power," *Korea Times*, 14 August 2000, www.hk.co.kr; Doug Struck, "N. Korea Dismisses Missile Idea," *Washington Post*, 15 August 2000, www.washingtonpost.com.

19 August 2000

Middle East Newsline quotes the U.S. Central Intelligence Agency (CIA) as saying that Iran, Iraq, and Libya continue to accelerate their missile programs with help from China, North Korea, and Russia. According to the report, Iraq is financing the construction of a \$400 million missile assembly plant in Sudan that will receive technical assistance from North Korea. Intelligence sources say they have obtained new evidence that in the absence of UN weapons inspectors, Iraq is transferring missiles as well as experts in missiles and non-conventional weapons to Khartoum. The report says Iraq is also financing efforts to build intermediate-range missiles in Libya, with North Korean help.

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Intelligence sources say China and Egypt are also cooperating in the Libyan missile development.

—*Middle East Newslines*, Vol. 1 No. 9, 19 August 2000.

22 August 2000

Minister of Defense and Armed Forces Logistics Ali Shamkhani discusses Iran's missile programs in an interview with a Central News correspondent, and says the country has designed and manufactured the Shahab-3 surface-to-surface missile. He also says the Saeqeh (Thunder) and Sayyad-1 (Hunter-1) air defense missiles as well as "an extraordinary" shore-to-sea missile will soon be inaugurated.

—"Iran: Shamkhani on 'Extraordinary Missile' To Be Inaugurated 'Very Soon'," Vision of Islamic Republic of Iran Network 1 (Tehran), 22 August. 2000; in FBIS Document IAP20000823000030, 23 August 2000.

23 August 2000

The Iranian Minister of Defense and Armed Forces Logistics Vice Admiral Ali Shamkhani tells state television, "God willing, we shall very soon bring an extraordinary missile to the inauguration phase." Soon to be inaugurated, Shamkhani says, are the Saeqeh and Sayyad-1 air defense missiles; and the Tufan, Towsan, and Misaq anti-tank missiles. Solid- and liquid-fueled variants of the various missiles, with different ranges and launching powers, have been produced. Shamkhani adds that Iran is "also investing in production of those military equipment that, with minimum cost, can have maximum effects on our deterrence capabilities. In fact, we are investing in [our access] to space technology by improving the range, accuracy, and destruction power of missiles. This is one of our main aims."

—"Extraordinary Missile On" the Way," *Iran Report*, 28 August 2000, www.rferl.org.

23 August 2000

Vice Admiral Ali Shamkhani, Iranian Minister of Defense and Armed Forces Logistics, states that 23 new defense projects will be started during "Government Week." He says that he hopes to introduce a new "extraordinary" shore-to-sea missile soon alongside the "Saeqeh and Sayyad-1 air defense missiles; and the Tufan, Towsan, and Misaq anti-tank missiles." All of these missiles have been produced with solid- and liquid-fueled variants. Iran is making an effort to invest in missile technology in order to improve the range, accuracy, and power of its missiles.

—"Extraordinary Missile' On the Way," IPR Strategic Business Information Database, 29 August 2000, in Lexis-Nexis, www.lexis-nexis.com.

23 August 2000

Iranian Minister of Defense and Armed Forces Logistics Ali Shamkhani says that in regards to the field of air defense, Iran should soon introduce the Saeqeh (Lightning) and Sayyad-1 (Hunter-1). In the field of anti-tank missiles, they will have the Tufan (Typhoon), Towsan (Mustang) and Misaq (Pledge). And in the field of shore-to-sea missiles, they shall soon bring "an extraordinary missile to the inauguration phase."

—"Iran: Shamkhani on 'Extraordinary Missile' To Be Inaugurated 'Very Soon'," Vision of the Islamic Republic of Iran (Tehran), 22 August 2000; in FBIS Document IAP20000823000030, 23 August 2000.

24 August 2000

The Vision of the Islamic Republic of Iran Network 2 broadcasts a live 26-minute interview with Iranian Minister of

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Defense and Armed Forces Logistics Ali Shamkhani. Shamkhani speaks about the reconstruction of the armed forces, military strategy, Iran's missile program, and the quality of Iranian-made weapons and systems. The program also shows the test-firing of the Shahab-3 missile.

—"FYI: Iranian TV Interviews Defense Minister, Shows Shahab-3 Missile," FBIS report; in FBIS Document IAP20000824000086, 24 August 2000.

24 August 2000

Minister of Defense and Armed Forces Logistics Ali Shamkhani discusses Iran's defense policy during a televised interview. He says Iran is investing in military equipment that will strengthen the country's deterrence capabilities, at a minimum cost. He specifically mentions investment in space technology and "its prerequisite field like missile technology by improving the range, accuracy, and destruction-power of missiles." He says the Shahab-3 and other missiles are an example of this strategy. Shamkhani comments on the July 2000 test of the Shahab-3, which he says exemplifies "the spirit of self-sufficiency which was instilled by Imam [Khomeini]." The Ministry of Defense and Armed Forces Logistics says Iran exports weapons to 11 countries with three goals: the promotion of Iran's technical capacity, emphasis on deterrence, and earning foreign exchange.

—"Tehran TV Interviews Shamkhani on Defense Policy," Vision of Islamic Republic of Iran Network 2 (Tehran), 24 August 2000; in FBIS Document IAP20000827000003, 27 August 2000.

27 August 2000

Minister of Defense and Armed Forces Logistics Ali Shamkhani inaugurates a project to manufacture laser gyroscopes at the Shiraz Electronic Industries. "This is one of the most sophisticated electronic devices which is used in naval, aviation, and aerospace-missile industries," he says. He also claims this project will complete Iran's goal of self-sufficiency in missile production.

—"Defense Minister Inaugurates Project to Manufacture Laser Gyroscopes," Vision of Islamic Republic of Iran Network 1 (Tehran), 27 August 2000; in FBIS Document IAP20000828000074, 28 August 2000.

2 September 2000

Iran has long relied on importing weapons and equipment, especially from Russia, China, and Korea. The Iranians also use foreign designs for producing modified and advanced copies of systems, including a variety of ballistic missile types that Tehran is trying to produce. One example is the Shahab-3, whose range is approximately 1,300km and which is believed to be an indigenous version of the North Korean Nodong missile.

—"Miniature Submarine for Espionage and Special Operations Developed by Iran With North Korean Cooperation" *Al-Hayat* (London), 2 September 2000, pp. 1, 6, www.alhayat.com.

5 September 2000

Israeli intelligence reports presented to Prime Minister Ehud Barak indicate continued Russian assistance of Iran's missile programs and that Russian aid is the most significant factor in Iran's efforts to obtain nuclear weapons. Russian President Vladimir Putin says, "There is no intentional official action on our part aimed at helping Iran. Show me concrete examples." Putin says his government has arrested several individuals who have provided technology to Iran. A senior Israeli official dismisses Putin's claims of innocence, saying, "It isn't possible that the Russian government is not at least aware of what we know, even if it is not intentionally directing the aid to Iran."

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—Aluf Ben, "Barak Tweaks a Friendship in the Nuclear Zone," *Haaretz* (Tel Aviv), 5 September 2000; in "Article Views Russian Aid for Iranian Nuclear and Missile Programs," FBIS Document GMP20000905000068, 5 September 2000.

5 September 2000

Iranian Navy Rear Admiral Abbas Mohtaj says the armed forces is reaching self-sufficiency in aerospace technology and military hardware, and that all naval vessels and bases have domestically made missiles. He points to the successful testing of Iranian-made equipment in different military exercises as proof of their self-sufficiency. He says, "Islamic Iran will become self-sufficient in terms of missiles on the basis of the country's scientific and technological achievements in the aerospace industry." Furthermore, Iran's aerospace organization recently designed and started production of an electronic guidance and flight control system, which can be used in missiles as well as non-military industries.

—"Iran Navy Chief: Armed Forces Reaching Self-Sufficiency in Aerospace Technology," IRNA (Tehran), 5 September 2000; in FBIS Document IAP20000905000079, 5 September 2000; "Navy commander of the Islamic Republic of Iran's armed forces in an interview with 'Resalat': Iran to become self-sufficient in designing and manufacturing missiles," *Resalat* (Tehran), 5 September 2000; in "Navy Commander Says Iran to Reach Self-Sufficiency in Missile Industry," FBIS Document IAP20000906000025, 6 September 2000; "Iran builds missile guidance system," Vision of the Islamic Republic of Iran Network 1 (Tehran), 6 September 2000; in FBIS Document IAP20000906000101, 6 September 2000.

7 September 2000

Iran's Minister of Defense and Armed Forces Logistics Ali Shamkhani stresses that Iran needs to strengthen its missile capability to fight foreign threats and safeguard national security. Iran faces threats from advanced missile technology imported mainly from the West, he says at a seminar on aerospace technology. The official Islamic Republic News Agency quotes Shamkhani as saying that Iran must bid for a strong missile capability to safeguard national security in the face of contingent regional and foreign threats. Iran has carried out several missile tests in recent years. In July, an upgraded Shahab-3 missile, with a range of 1,300km was successfully tested, causing concern in Israel and the United States.

—"Iran Needs to Strengthen Missile Capability: Minister," Xinhua General News Service, 7 September 2000, in Lexis-Nexis, www.lexis-nexis.com.

7 September 2000

Iranian Minister of Defense and Logistics of the Armed Forces Rear Admiral Ali Shamkhani says at a seminar on Aerospace Technology held in Tehran that the Islamic Republic does not seek unconventional nor offensive weapons. He also states that Iran follows a deterrent policy in the defense sector. This deterrent policy is based on three principles: power, national security, and space technology. He adds that in the face of contingent regional and foreign threats, Iran would have to bid for a strong missile capability. He concludes by stating that Iran now possesses aerospace technology and is capable of using the technology in the military or civilian industries.

—"Shamkhani says Iran does not seek unconventional weapons," IRNA (Tehran), 7 September 2000, www.irna.com.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



8 September 2000

During the Ashuraiyan military exercises near the town of Abqalla, Iran will flight-test unmanned aerial vehicles (UAVs).

—"Iran: 'Large-Scale' Military Exercises Held," Voice of the Islamic Republic of Iran Radio 1 (Tehran), 8 September 2000; in FBIS Document IAP20000908000062, 8 September 2000.

8 September 2000

U.S. intelligence officials claim that Iran has postponed conducting a flight-test of its new Shahab-3 ballistic missile to avoid embarrassing President Khatami during his visit to the United Nations Millennium Summit. The same source says that U.S. spy satellites have photographed preparations for the test. Michael Eisenstadt, a specialist on Iran at the Washington Institute for Near East Policy says that the delay was either political or technical. He adds that politics are very complicated in the Iranian armed forces.

This test, which follows the successful one carried out on 15 July, shows that Iran is stepping up efforts to develop long-range missiles. The Shahab, which is based on the North Korean Nodong and for which Russia has supplied subsystems and integration assistance, has an estimated range of 1,300km. Kamal Kharazi, Iran's foreign minister says that Shahab-3 is a deterrence against Israel's nuclear missiles. Iranian Defense Minister Ali Shamkhani says that a considerable number of Shahab-3s are deployed, but denies Iran's building of Shahab-4, a longer-range missile.

The Pentagon believes the Shahab-3 to be a medium-range missile capable of carrying high explosives, chemical, or biological warheads. U.S. intelligence agencies deem Shahab to be a key justification for the United States to develop the National Missile Defense (NMD) system. Shahab-4 and Shahab-5 are considered by U.S. intelligence to be intercontinental ballistic missiles (ICBMs). According to William Cohen, U.S. defense secretary, the launch of Shahab-3 shows that Iran has made significant progress in missile technology and that once its fundamentals are mastered progress will be rapid.

—Bill Gertz, "Iran Set for Another Flight Test of Missile," *Washington Times*, 8 September 2000, www.washingtontimes.com; "Iran Ready to Again Launch Shihab-3," *Middle East Newsline*, 8 September 2000 www.menewslines.com.

10 September 2000

The reduction in the 2001 defense budget favored by Prime Minister Ehud Barak will hamper strategic upgrade efforts designed to defuse threats posed by Iranian and Iraqi missiles and weapons of mass destruction. The Israeli Defense Forces (IDF) General Staff has decided that research, development, and procurement of long-range strategic weapons will not be insulated from the effects of the proposed budgetary slashing. Among other cutbacks, the reductions will apply to components in systems used to counter ballistic missiles.

—"Defense cuts will harm IDF anti-missile programs," *Haaretz*, 10 September 2000, www3.haaretz.co.il.

11 September 2000

Iran and Japan start the first round of arms control and disarmament talks in Tokyo. Mohammad Reza Alborzi, director general of political-international affairs of the Iranian Foreign Ministry, and Norio Hatori of Japan's

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Ministry of Foreign Affairs discuss disarmament and nonproliferation of missiles, and chemical and biological weapons. Both sides consider the talks to be productive and agree to continue the discussions.

—"Iran, Japan Begin Talks on Arms Control, Disarmament," IRNA (Tehran), 11 September 2000; in FBIS Document IAP20000912000003, 12 September 2000.

17 September 2000

Vice Admiral Abdollah Manavi of the Iranian Navy says the country would launch its first locally built mini-vessel, which functions as a rocket-launcher and destroyer, during the military exercises beginning 21 September 2000. Manavi says that 90% of the rocket-launcher body and 70% of the destroyer body were produced by Iran. He also notes that the "eye-opening improvements" of Iran's missile systems, and long-range anti-aircraft launchers. The naval war games, named "Courage-79," will include exercises involving logistics of rocket-launching and defending Iran's shores. The Iranian Army will test its 206 helicopters, or TS Ranger [*sic*], which has been newly equipped with missiles, during the Zolfaqar-3 exercises beginning 22 September 2000.

—"Iranian Navy to launch first locally-built mini destroyer/rocket launcher vessel," IRNA (Tehran), 17 September 2000; in FBIS Document IAP20000918000008, 18 September 2000; "Iran: Ministry on Improved Defense Capabilities; Navy to Hold Exercises in Gulf," IRNA (Tehran), 20 September 2000; in FBIS Document IAP20000920000021, 20 September 2000; "Iran: Military Exercises Set To Begin 22 Sep," Vision of the Islamic Republic of Iran Network 1 (Tehran), 21 September 2000; in FBIS Document IAP20000921000060, 21 September 2000.

19 September 2000

An Iranian military source says that Iran will launch its first indigenously made anti-torpedo ship, stating they "were able to build 90% of the missile launcher and 70% of the anti-torpedo ship."

—"Iranian Ships for missile launching," *Teshreen* (Damascus), 19 September 2000, www.teshreen.com.

21 September 2000

Iran successfully test-fires its first solid-liquid-fueled missile, the official Iranian agency IRNA reports. According to IRNA, Defense Minister Vice Adm. Ali Shamkhani says the missile, the Shahab-3D, will be used for non-military purposes. The report says the missile was built by the national aerospace authority as part of a program for building rockets that could launch satellites. Iran has built and tested a number of missiles, including the Shahab-3, which has a range of 1300km.

—"Iran tests missile, says it is for non-military purposes," The Associated Press, 21 September 2000, in Lexis-Nexis, www.lexis-nexis.com.

21 September 2000

According to Iranian Defense Minister Vice Admiral Ali Shamkhani, Iran successfully tests its first solid-liquid-fueled missile, called the Shahab-3D. Shamkhani says that the missile is a space launch vehicle built by Aerospace Industries Authority and is an "interlude" to related technologies for building missiles that launch information and communication satellites.

—"Iran successfully tests first solid-liquid fuel missile," IRNA (Tehran), 21 September 2000, www.irna.com.

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22 September 2000

The United States and Israel issue immediate reactions to the Iranian Shahab-3D test. State Department Deputy Spokesman Philip Reeker says, "We regard their aggressive efforts to develop missile capability as a serious threat." Israeli Deputy Defense Minister Ephraim Sneh says, "This [is] the second test in a short time. It's now obvious that Iran [is] embarking on a colossal effort to build a long-range missile capability....It means that in a few years time, Iran will be able to threaten with a nuclear weapon a very broad part of the world."

—"Iranian army begins three-day war games near Iraqi border," Associated Press, 22 September 2000, in Lexis-Nexis, www.lexis-nexis.com.

22 September 2000

Iran test fires the Shahab-3 medium-range ballistic missile for the second time in two months. Iran reports that the test has no military purposes, but is instead a space launch vehicle. [Note: Contradictory reports emerged, which identified the missile as the Shahab-3D missile. Also, a report in the RFE/RL newswire, referred to the test as an engine test.]

—"US Intelligence Says Iran Poses Missile Threat," Reuters, 22 September 2000; in *Gulf News*, 22 September 2000, www.gulf-news.com.

23 September 2000

Syria successfully tests its first North Korean Scud-D ballistic missile early in the morning. The missile was fired toward northeastern Syria. Some sources say that the Israeli Defense Force's Arrow anti-ballistic-missile system could intercept the Scud-D, which has a maximum range of about 600km, a longer range than earlier Scud-B and -C models, but shorter than the new Iranian Shahab-3 and the North Korean missile on which it is based, the Nodong.

—Amir Oren, "Air Force Worried by Successful Syrian Test of Scud-D Missile," *Haaretz*, 25 September 2000, www3.haaretz.co.il.

24 September 2000

Iran's Navy and Air Force start the five-day Shahamat 79 military maneuvers involving missile vessels and missile-equipped helicopters. Military spokesman Ali Razmjoo says dozens of missile-launching vessels will take part in the maneuvers in the Persian Gulf. Also, the Meraj-79 exercises begin in the northern Persian Gulf, under the lead of Rear Admiral Husayn Dasbooshehri. According to Dasbooshehri, those exercises involve air units, missile launchers and a special task force, demonstrating Iran's most sophisticated weapons. Meanwhile, artillery and missile units of the Army's Air Force stage maneuvers around Sanandaj, Kurdistan Province, as part of the Zolfaqar-3 exercises.

—"Iran: IRGC naval forces commence Persian Gulf maneuvers 24 Sep," IRNA (Tehran), 24 September 2000; in FBIS Document IAP20000924000041, 24 September 2000; "Iran: Main phase of Zolfaqar 3 military exercise completed," IRNA (Tehran), 24 September 2000; in FBIS Document IAP20000924000049, 24 September 2000.

25 September 2000

Iranian military spokesman Ali Razmjoo says that the third phase of the Shahamat-79 (Courage-79) military maneuvers is successful. The exercises demonstrate the defensive capabilities of Iran's sophisticated surface-to-sea missiles.

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—"IRNA: Spokesman says third phase of Shahamat 79 maneuver conducted 'successfully'," IRNA (Tehran), 25 September 2000; in FBIS Document IAP20000926000071, 26 September 2000.

29 September 2000

Several Arab Gulf countries express their concern regarding the recent test of Iran's new Shahab-3 ballistic missile. These countries say that such a development opens the door for an arms race in the region. One can see the influence of the Americans in the opposition of some Arab countries to Iran's missile tests. First, the pretext of "national security" makes it legitimate for the Americans to keep forces in the area. Second, the Gulf States are misled to believe that the Iranian armament project is aimed at them. In reality, this project intends to defend Iran from any threat from the Pakistani nuclear capabilities, the possible divergence of Iran and Turkey about the roads of oil pipeline, the bitter animosity it has with Iraq, and the unstable situation in Afghanistan and other central Asian Islamic republics. Moreover, the Russian interests prevail in the area. The United States amplifies the threat of Iranian weapons programs not because they will threaten Israel but because it jeopardizes Israel's aspiration to be both the only nuclear and missile power in the region. Another reason for the U.S. attitude is to encourage the Gulf States to purchase more military equipment from the United States.

In the meantime, Arab states have withdrawn their proposal to urge Israel to open its nuclear facilities to the International Atomic Energy Agency (IAEA) because they were not able to gather enough support. This failure stands as an epitome of the negligence towards Arab countries by the international community. This negligence also results from a desire to have favorable diplomatic relations with Israel. However, the heart of the problem is that the IAEA cannot force Israel to open its nuclear facilities to the agency's inspections. Israel will not accept inspections unless other Arab states with nuclear capabilities do so.

—Mostapha Alhussaini, "Iranian Missiles? Fears of the Arabs? Inability in front of Israel?," *Assafir* (Beirut), 29 September 2000, www.assafir.com.

9 October 2000

Iran holds its first national seminar on anti-armor guided missiles. According to First Secretary Mahmud Qasemi, topics include missile technology, missile systems, as well as safety and control issues. The seminar will also include experiences learned from missile warfare during the eight-year war with Iraq, and discussions on anti-missile defense. Qasemi says that so far the Iranian military-industrial complex has developed more than five types of anti-armor missiles, possessing research, design, manufacturing, and mass production capabilities. Qasemi points out, "Today, the Islamic Republic of Iran ranks among the advanced countries possessing anti-armor guided missiles technology. We have acquired that technology under difficult conditions: during the imposed war and under the conditions when an expanded weapons and technology embargo was imposed on the country, and also when the country was going through difficult financial conditions."

—"This morning the first national-wide seminar on anti-armour guided missiles for ground battles was inaugurated," *Resalat* (Tehran), 9 October 2000, p. 2; in "Iran: Seminar on Anti-Armor guided Missiles Held," FBIS Document IAP20001018000056, 18 October 2000.

19 October 2000

Russian Security Council Secretary Sergei Ivanov says that Russia is not violating any international restrictions in its military-technical cooperation with Iran. "Russia is ready to supply Iran with defensive armaments only, defined by

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the framework agreements," says Ivanov, "and this does not upset the balance of forces in the region in any way." He emphasizes that Russia will comply with all international restrictions in nuclear nonproliferation, as well as missile technology control.

—Igor Shishkov, "Russia to continue cooperation with Iran," ITAR-TASS (Moscow), 19 October 2000; in FBIS Document CEP20001019000196, 19 October 2000.

22 October 2000

The Islamic Revolution Guards Corps (IRGC) and the "Navy of the Army" will hold joint military exercises in the Persian Gulf, Oman Sea, and Hormuz Strait for eight days starting on 29 October 2000. The military exercises, called the Vahdat-79 (Unity-79) will test the C802 "surface-to-surface." [Note: The C802 is an anti-ship missile launched from ship-to-ship, but has been modified to fire surface-to-ship as well as air-to-ship (modified version C801).] It is unlikely that the C802 is a surface-to-surface missile deployed on IRGC's Tondar vessel for test-fire. —"Persian Gulf Navy Exercises," IRNA (Tehran), 22 October 2000, www.irna.com.

23 October 2000

Iran will reportedly test a modified version of a Chinese-made anti-ship missile during naval maneuvers in the Persian Gulf beginning next week. An Iranian daily quoted Morteza Saffari, commander of the Revolution Guards' naval forces, as saying that Iran's regular Army and the elite Revolution Guards will test C802 Silkworm missiles in eight days of war games. Saffari does not specify which modifications have been made to the missiles. Iran has tried to increase the range of missiles that it purchased from China and North Korea, according to officials from Israel and the United States.

—"Iran to test modified Chinese missiles next week," The Associated Press, 23 October 2000, in Lexis-Nexis, www.lexis-nexis.com.

25 October 2000

Former Russian Prime Minister and current State Duma Deputy Viktor Chernomyrdin categorically denies rumors that he and Al Gore signed a secret agreement in 1995 that allegedly allowed Russia to sell weapons to Iran. Chernomyrdin says, "As for Iran, that is first a matter of interstate relations between Russia and Iran. Iran is our neighbor in the south, and we can never afford to sell items that could damage Russia's security."

—"Chernomyrdin Confirms Intentions to Sue George Bush, Jr.," Interfax Russian News, 25 October 2000, in Lexis Nexis, www.lexis-nexis.com.

25 October 2000

The navy and the army of the Islamic Revolution Guards Corps (IRGC) will hold a joint military exercise in the Persian Gulf, Oman Sea, and Hormuz Strait from 29 October 2000 to 5 November 2000. IRGC Navy Commander Rear Admiral Morteza Saffari says the C802 surface-to-surface missile would be deployed on the IRGC's Tondar-class boats for test firing. Saffari states that the exercise will test newly produced or upgraded military equipment. According to the *Tehran Times*, an advanced version of the C802 missile will be deployed. Originally built by China, this missile was modified by Iran to increase its range.

—"Iranian Navy to Hold Military Exercise in Persian Gulf," IRNA, 22 October 2000, www.irna.com; "Iran to Carry Out War games in Hormoz Strait," *Tehran Times* (Tehran), 23 October 2000, www.tehrantimes.com.

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29 October 2000

Iran's military announces the start of the Vahdat-79 (Unity-79) military exercises in the Persian Gulf and the Strait of Hormuz, in which the Nur surface-to-surface missile and Fajr rockets will be used.

—"Iran: Vahdat-79 Naval Exercises Said to Convey Peaceful Intentions," Vision of the Islamic Republic of Iran Network 1 (Tehran), 29 October 2000; in FBIS Document IAP20001029000013, 29 October 2000.

29 October 2000

Iranian naval forces test-fires what is described as a modified version of the Chinese YJ-1 (C802) medium-range anti-ship missile known in Iran as the "Tondar" and the previously undisclosed "Nur" surface-to-surface missile for the first time during air, land, and sea exercises in the Persian Gulf and the neighboring Gulf of Oman. The exercises, "Vahdat-79" (Unity-79), were the fourth exercises held this year. In addition, Brig. General Mohammad Golverdi confirms that an Omani delegation observes the exercises. This is seen as part of an effort to persuade the Gulf Cooperation Council states to conduct joint exercises and to sign bilateral defense agreements with Iran.

—Ed Blanche, "Iranian Navy test-fires new and modified missiles during exercises," *Jane's Defence Weekly*, 15 November 2000, p. 14.

30 October 2000

The German magazine *Der Spiegel* reports that Israel is equipping three submarines it recently received from Germany with nuclear weapons in order to respond to any possible Arab nuclear attack. Basing itself on sources close to the German company that built the submarines, the German government is "providing huge financial and technical assistance to the Israeli Navy to carry out this project." *Der Spiegel* also reports that Israel is "equipping Harpoon submarine torpedoes, whose range is 130km, with nuclear warheads. The Israeli weapon industry is also upgrading cruise missiles with a range of 350km to be able to launch them from submarines." These missile projects are expected to be finished within two years. Israel is developing a new generation of weapons capable of completely destroying the enemy. Major General Isaac Ben Israel, director of the division of the Upgrading Combat Facilities and Technical Infrastructure of the Israeli Army, says that Israeli Air Force personnel are being trained to use "Hetz" (Arrow) missile batteries to counter any Iraqi threat. He also says that the response to the Iranian Shahab-3 will come later and that it will consist of upgrading the current Arrow missile.

—"Tel Aviv equips its submarines with nuclear missiles to respond to any Arab attack," *AIQuds* (London), 30 October 2000, www.alquds.co.uk.

30 October 2000

The briefing sessions of the naval exercises, Vahdat (Unity)-79, were held this morning in the Persian Gulf and the Strait of Hormuz. During the exercises, the Defense Ministry will provide the units involved in the operations with equipment including the Nur surface-to-surface missile and Fajr rockets.

—"Vahdat-79 naval exercises to convey Iran's peaceful intentions- TV report," British Broadcasting Corporation, 31 October 2000, in Lexis-Nexis, www.lexis-nexis.com.

31 October 2000

In Tokyo, Iranian Foreign Minister Kamal Kharrazi tells Japanese Foreign Minister Yohei Kono that Iran's Shahab missiles have been developed independently and are not linked to the North Korean missile program.

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—Vladimir Solntsev, "Iranian Shehab Missiles Not Linked With Any KDPR Programme," ITAR-TASS News Agency, 31 October 2000.

Early November 2000

According to U.S. sources, Russia will deliver 700 shoulder-launched Igla long-range surface-to-air missiles to Iran within the next few days. The missiles will be delivered via train and ship under a \$1.75 billion deal signed in early November 2000. This deal violates a 1995 agreement Russia made with the United States prohibiting weapons sales to Iran. That agreement, signed by Vice President Al Gore and then-Russian Prime Minister Viktor Chermomyrdin, stipulates that Russia halt all weapons sales to Iran by 31 December 1999. At an economic conference in Brunei the week of 13 November 2000, President Clinton told Russian President Vladimir Putin of his displeasure with Russia for abrogating the agreement. On 23 November, Russian Defense Minister Igor Sergeev dismissed U.S. concerns, saying, "Moscow will itself decide who to trade with." He also said that Russia would abide by international law and not sell weapons of mass destruction.

—Orly Azulay-Katz and Eytan Amit, "Hundreds of Missiles En Route From Russia to Iran," *Yediot Aharonot* (Tel Aviv), 24 November 2000, p. 6; in "Russian Missiles Sold to Iran Might Reach Hizballah, Endanger IDF Planes," FBIS Document GMP2000112400024, 24 November 2000.

November 2000

According to a U.S. defense official, the test of the Shahab-3 MRBM is a failure because of possible engine troubles or guidance difficulties. The test is reported to occur near the city of Semnan. The test is initially announced by Iranian Defense Minister Admiral Ali Shamkhani, who describes the test as a successful testing of the "Shahab-3D" space launch vehicle.

—Andrew Koch, "Third Iranian Shahab test 'fizzile'," *Jane's Intelligence Review*, November 2000, p. 5.

1 November 2000

Iranian Foreign Minister Kamal Kharrazi tells his Japanese counterpart Yohei Kono that Iran's Shahab missile was developed domestically and has no links to North Korea's missile development program, a Japanese Foreign Ministry official says. Kharazzi is responding to a remark by Kono, who referred to a report by the Washington-based Carnegie Endowment for International Peace published earlier this year. According to the report, North Korea provided Iran with Scud-C and Shahab-3 missiles.

—"Iranian foreign minister denies Shahab missile linked to North Korea," British Broadcasting Corporation, 1 November 2000, in Lexis-Nexis, www.lexis-nexis.com.

17 November 2000

Iran flies and shoots down unmanned aerial vehicles in testing their anti-aircraft defenses during the Ashurayan military exercises in Lowshan, Gilan Province. The operations are considered a success.

—"Iran: Military Exercises Held in Gilan Province," Vision of the Islamic Republic of Iran Network (Tehran), 17 November 2000; in FBIS Document IAP20001117000054, 17 November 2000.

21 November 2000

U.S. and Chinese officials announce an agreement on missile technology exports under which Beijing will

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discontinue selling ballistic missile technology to Pakistan and Iran and publish guidelines for future export controls in this area.

—"China to discontinue Missile sales to Iran, Pakistan," United Press International, 21 November 2000, in Lexis-Nexis, www.lexis-nexis.com.

22 November 2000

In an interview with the Egyptian magazine *Al-Sawr*, Iranian Foreign Minister Kamal Kharazi says that Iran is ready to engage in discussions with the United Arab Emirates about the islands of Abu Musa, Lesser Tunbs, and Greater Tunbs. He also says that the Shahab-3 and Shahab-4 ballistic missiles are produced for self-defense purposes only and that the production of the missiles is a reaction to the weapons that Israel possesses. He also indicates that it is a goal of Iran to produce these missiles to protect the entire region.

—"Kharazi Confirms the Importance of Relations with Egypt and Denies Iran's Resolve to Acquire Nuclear Weapons. He Repeated His Country's Allegations Concerning Our Occupied Islands," *Al-Khaleej* (United Arab Emirates), 22 November 2000, www.alkhaleej.co.ae.

23 November 2000

Russia plans to withdraw from the 1995 Gore-Chernomyrdin agreement and recommence military-technical cooperation with Iran, sources in Russian power structures tell Interfax today. According to sources close to the Russian military-industrial complex, under four intergovernmental agreements signed in 1989, 1990, and 1991, Moscow was to export MiG-29 and Su-24MK planes, 877EKM project submarines, and S-200VE missile complexes to Iran, and launched licensed production of T-72S tanks and BMP-2 armored vehicles in that country. In regards to prospects for further military-technical cooperation, Interfax has learned that Iran has shown interest in buying large lots of Russian S-300 missile complexes and Igla shoulder-held missile launchers, as well as the "Morohiat MA-17" missile system.

—"Russia to resume defense industry cooperation with Iran," British Broadcasting Corporation, 23 November 2000, via Lexis-Nexis, www.lexis-nexis.com; "Russia Rejects American Threats and Decides to Resume Military Cooperation with Iran," *Al-Hayat* (London), 24 November 2000.

23 November 2000

According to "reliable sources in Moscow," Russia plans to supply weapons to Iran, in violation of agreements with the United States. Iran wants to purchase Russian-made S-300 missiles and Sukhoi-25 assault aircraft in a \$2 billion deal.

—"Russia Reportedly to Abrogate Agreements with US on Weapons Supplies to Iran," Al-Jazirah Satellite Channel Television (Doha), 23 November 2000; in FBIS Document GMP20001123000179, 23 November 2000.

25 November 2000

Iranian Defense Minister Ali Shamkhani says, "Iran has no dependence on the world in terms of the supply of ammunition and missiles of different kinds with different ranges, thanks to the blood of the martyrs of the revolution."

—"Defence Minister: Iran Not Dependent in Any Country in Supply of Light and Heavy Weapons," *Tehran Times*

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(Tehran), 25 November 2000; in "Defense Minister says Iran not dependent on any country for supply of missiles," FBIS Document IAP20001125000004, 25 November 2000.

26 November 2000

The Iranian Navy will soon have self-made surface-to-air missiles with a range of 50km, Deputy Commander of the Iranian Navy Rear Admiral Mohammad Hussein Shafii says. "Twenty-five percent of the missile is already completed," the officer tells the Islamic Republic News Agency. According to Shafii, the Navy is also manufacturing a missile launcher and a chopper destroyer. Approximately 30% of the missile launcher has been completed.

—"Iran Manufacturing Surface-to-Air Missiles: Officer," Xinhua General News Service, 26 November 2000, in Lexis-Nexis, www.lexis-nexis.com.

26 November 2000

According to Iranian Deputy Commander of the national naval forces, Rear Admiral Mohammad Husayn Shafii, Iran's naval forces will manufacture surface-to-air missiles (SAMs) with a range of 50km. He says, "twenty-five percent of the missile is complete." He also says that another project is underway to produce a missile launcher, "30% of which is complete."

—"Iran's Navy starts manufacturing ground-to-air missiles," IRNA (Tehran), 26 November 2000, www.irna.com.

26 November 2000

Iranian Defense Minister Ali Shamkhani says the defense industry will soon be producing surface-to-sea missiles with no assistance from other countries. He also says Iran's most important defense projects include the Sina missile-carrying vessel and Mowj warship. Shamkhani says Iran's ability to domestically produce missiles refutes U.S. claims to the contrary. He also notes the importance of a strong navy, saying "sea is the hotbed of future threats and opportunities for the Islamic Republic of Iran." Rear Admiral Mohammad Husayn Shafii announces Iran's Navy will produce a 50km-range surface-to-air missile, adding "25% of the missile is complete." The Navy has also completed 30% of a missile launcher.

—"Iran: Defense Minister calls for greater investment in naval industry, research," Voice of the Islamic Republic of Iran (Tehran), 26 November 2000; in FBIS Document IAP20001126000076, 26 November 2000; "Iran: Deputy Commander says Navy to Manufacture Ground-to-Air Missiles," IRNA (Tehran), 26 November 2000; in FBIS Document IAP20001126000080, 26 November 2000; "Defense Minister: Iran self-sufficient in manufacture of shore-to-sea missiles," IRNA (Tehran), 27 November 2000; in FBIS Document IAP20001127000007, 27 November 2000.

27 November 2000

According to IRNA, Iranian Defense Minister Ali Shamkhani says that Iran is able to produce shore-to-sea cruise missiles. Rear Admiral Mohammad Husayn Shafii, Deputy Commander of the Iranian Navy, states that the Navy will soon possess its own surface-to-air missiles that have a range of 50km. He also says that they are in the process of making a missile launcher.

—"Iran Capable of Building Shore-to-Sea Missiles: Official," Xinhua New Agency, 27 November 2000, in Lexis-Nexis, www.lexis-nexis.com.

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27 November 2000

The 27 November is Navy Day in Iran. The Iranian Navy begins exercises that are to last four days as part of war games in the Sea of Oman and the Strait of Hormuz. It will be using warships, missile launching vessels, and other military vehicles.

—"Iranian Navy Begins Four-Day Exercises in Gulf of Oman, Strait of Hormuz," British Broadcasting Corporation, 27 November 2000, in Lexis-Nexis, www.lexis-nexis.com.

27 November 2000

Iranian Defense Minister Ali Shamkhani declares that Iran has achieved self-sufficiency in cruise missile production. Iran also tests an anti-ship missile made by the Islamic Revolution Guards Corps (IRGC). On another level, Rear Admiral Mohammed Husayn Shafii says that Iran is able to turn a surface-to-surface missile into a surface-to-air missile with a range of 50km.

—"Achieving self-sufficiency in surface-to-surface missiles," IRNA, 27 November 2000, in Agence France Presse, 27 November 2000, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

27 November 2000

The Iranian Navy begins a four-day military exercise involving warships, missile launching vessels, submarines, and fighter planes in the Sea of Oman and the Strait of Hormuz.

—"Iranian Navy Begins Four-Day Exercises in Gulf of Oman, Strait of Hormuz," Vision of the Islamic Republic of Iran (Tehran), 27 November 2000; in FBIS Document IAP20001127000111, 27 November 2000.

28 November 2000

Iranian Defense Minister Ali Shamkhani states that Iran has achieved self-sufficiency in the production of shore-to-sea cruise missiles.

—"Minister: Iran Self-Sufficient in Building Shore-to-Sea Missile," *Tehran Times*, 28 November 2000, www.tehrantimes.com.

28 November 2000

Iran's Defense Minister Rear Admiral Ali Shamkhani says that Iran has attained self-sufficiency in manufacturing land-based anti-ship cruise missiles. He says, "Sea is the hotbed of future threats and opportunities for the Islamic Republic of Iran." Among the main defensive projects is the manufacture of different missiles in addition to electronic equipment and buoyants, Shamkhani says.

—"Minister: Iran Self-Sufficient in Building Shore-to-Sea Missile," *Tehran Times*, 28 November 2000, www.tehrantimes.com.

29 November 2000

The Clinton administration is preparing to impose additional sanctions on Russia due to Moscow's plans to renew arms supplies to Iran. After a meeting between U.S. Secretary of State Madeline Albright and Russian Foreign Minister Igor Ivanov in Vienna failed to result in any kind of breakthrough, the Russian termination of the accord is set for November 31.

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—"Russia proceeds with Iran deal after Albright bid fails," *World Tribune* (Washington, DC), 29 November 2000, www.worldtribune.com.

29 November 2000

The Iranian Navy is manufacturing a surface-to-air missile that has a range of 50km, and according to Rear-Admiral Mohammad Husayn Shafii this missile is 25% complete. Work is also being done on a missile launcher, which is 30% complete.

—"Navy to Manufacture Ground-to-Air Missiles," British Broadcasting Corporation, 29 November 2000, in Lexis-Nexis, www.lexis-nexis.com.

29 November 2000

China pledged to forego the sale of missile parts and other components to Iran and Pakistan and to abide by the guidelines of the Missile Technology Control Regime (MTCR). Foreign Ministry spokesman Sun Yuxi says, "China has no intention to assist, in any way, any country in the development of ballistic missiles that can be used to deliver nuclear weapons."

—Bryan Bender, "China pledge to stop missile sales to Pakistan and Iran," *Jane's Defence Weekly*, 29 November 2000, p. 5.

December 2000

The Islamic Revolution Guards Corps claims that the modifications to the C802 missile will increase its effective range from its current 30km to 120km.

—"Iran to test locally modified C802," *Jane's Missiles and Rockets*, December 2000, p. 2.

December 2000

The National Intelligence Council, a 15-member CIA-sponsored panel, releases a non-classified intelligence assessment entitled "Global Trends 2015." According to the document, "Iran sees its short- and medium-range missiles as deterrents, as force-multiplying weapons of war, primarily with conventional warheads, and as options for delivering biological, chemical, and eventually nuclear weapons. Iran can test an [intermediate-range ballistic missile] IRBM or land-attack cruise missile by 2004 and perhaps an [intercontinental ballistic missile] ICBM or space launch vehicle as early as 2001."

—"Global Trends 2015: A Dialogue About the Future with Nongovernmental Experts," December 2000, www.cia.gov.

December 2000

Iran says that it tested an anti-ship missile made by the Islamic Revolution Guards Corps (IRGC) during navy and air exercises in the Persian Gulf and the Sea of Oman in October.

—"Khatami Iranian Military Force Does Not Threaten Any Country," *Al Quds Al Arabi* (London), Volume 12, Issue 3605, 12 December 2000, www.alquds.co.uk. [CNS Translation]

6 December 2000

Iranian Minister of Defense and Armed Forces Logistics Vice Admiral Ali Shamkhani says the local defense industry will soon be ready to begin production of the Nur surface-to-surface missile. The missile was publicly mentioned

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for the first time during the Vahdat-79 exercise.

—"Iran ready to produce Noor missile," *Jane's Defense Weekly*, 6 December 2000, in Lexis-Nexis, www.lexis-nexis.com.

6 December 2000

In reference to Russian arms supplies to Iran, Russian Defense Minister Marshal Igor Sergeev makes it clear that Russia, a sovereign country, abides by international treaties and commitments in arms trade, in particular with Iran.

—"Violation of ABM Treaty to trigger Runaway Arm Race Russian Defense Minister," Interfax News Agency, 6 December 2000, in Lexis-Nexis, www.lexis-nexis.com.

6 December 2000

Iranian Minister of Defense and Armed Forces Logistics Vice Admiral Ali Shamkhani says that local defense industry will soon be ready to begin production of the "Nur" surface-to-surface missile. [Note: The first reference to the Nur SSM was during the Vahadat-79 (Unity-79) naval exercises in the Persian Gulf beginning on 29 October 2000. It is not clear what the specifications are for the Nur missile.]

—"Iran Ready to Produce Noor Missile," *Jane's Defence Weekly*, 6 December 2000, p. 17.

10 December 2000

Said Homayuni, a Canadian national of Iranian origin, denies accusations from the Federal Court of America that he sold Hawk missiles and spare parts for F-14 jet fighters to the Iranian Air Force. Homayuni and a Malaysian accomplice were arrested on 7 December 2000 in Bakersfield, California.

—"Iran radio: Canadian national denies selling aircraft spare parts to Iran," Voice of the Islamic Republic of Iran External Service (Tehran), 10 December 2000; in FBIS Document IAP2000121000067, 21 December 2000.

12 December 2000

After a meeting between Iranian and Chinese military officials, the two countries agree that there should be continued joint efforts in the defense industries to improve the scientific and educational cooperation in the defense field.

—"Tehran, Beijing Defense Cooperation Discussed," IRNA, 12 December 2000, www.irna.com.

13 December 2000

During a regular round of nonproliferation consultations in Tehran, Russian and Iranian officials discuss Iran's proposals on missiles and Russia's initiative for a global control system for the nonproliferation of missile technology. Both countries affirm their commitment to nonproliferation of weapons of mass destruction.

—"Iran and Russia discuss arms control," ITAR-TASS (Moscow), 13 December 2000; in FBIS Document CEP20001213000394, 13 December 2000.

22 December 2000

Israeli intelligence sources say that they do not share the CIA's assessment of Iran's missile capabilities published in "Global Trends 2015". The U.S. Central Intelligence Agency believes Iran will test launch a 2,000-2,400km-range Shahab-4 intercontinental ballistic missile sometime in 2001. However, a senior Israeli intelligence officer says, "we

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think Americans are being too harsh in their forecast." Israeli military intelligence does believe Iran plans to develop and test the Shahab-4 and even a longer-range Shahab-5. However, Israeli sources say that engine and guidance system problems still hinder Iran's 1,300km-range Shahab-3.

—Steve Rodan, "Israel Differs With CIA on Iran Missiles," *Middle East Newsline* (Jerusalem), 22 December 2000; in "Israel-CIA Disagree on Iran's Intercontinental Ballistic Missile Test in 2001," FBIS Document GMP20001222000005, 22 December 2000.

26 December 2000

Russian Defense Minister Igor Sergeyev will arrive in Tehran for a three-day visit to discuss "huge weapons contracts" with his Iranian counterparts. Iranian Defense Ministry spokesman Kayvan Khosravi says that Sergeyev will visit several military centers and attend talks with top officials. [Note: Likely refers to the Iranian Ministry of Defense and Armed Forces Logistics as Iran does not have a Ministry or Department of Defense.] Russian officials say that Sergeyev will not sign any contract with Iran during the visit; rather, the formal signing of a contract would take place when Iranian President Khatami visits Moscow in 2001. The United States has applied pressure on Russia not to sign any military or weapons contracts with Iran; Russia had pledged in 1995 not to continue weapons deliveries to Iran after the end of 1999.

—"Russian DM Visits Iran This Week on Arms," MENEWSLINE, 26 December 2000, www.menewslines.com.

26 December 2000

Islamic Revolution Guards Corps (IRGC) Commander, Brig. General Rahim Safavi, says that Iranian missiles "can cause irreparable damage to either Israel or the United States." Safavi declares, "The strong missiles of Iran are capable of imposing a very harsh blow that will be impossible to bear." He adds, however, that Iran's missiles are intended for defensive purposes. Safavi's statement comes as Iranian spokesmen reject U.S. Middle East Peace Process proposals, particularly a Palestinian concession on the refugee right of return.

—"Iran, Russia Intend to Expand Defense Ties," MENEWSLINE, 26 December 2000; www.menewslines.com.

27 December 2000

Russian Defense Minister Igor Sergeyev visits Iran's Aerospace Industries Organization, focusing on technology to produce short-range anti-tank and air-to-surface missiles, in order to understand Iran's production problems. Iran is modifying various U.S.-made missiles to increase their range and accuracy. Meanwhile Russia's main directorate for international military cooperation, Colonel General Leonid Ivashov, says that Russian-Iranian military cooperation is "all about defensive conventional weapons. The question of missile technology supplies is not even being considered." Sources close to the Russian military advance that arms sales to Iran will deal primarily with spare parts for Soviet-made and Russian-made military hardware in Iran's Army, Navy, Air Force, and Corps of the Guards of the Islamic Revolution. "Iran would like to buy large consignments of Russian S-300 missile complexes, Igla shoulder-held rocket launchers, military-transport helicopters, Su-25 attack planes and radars," say the sources. "Moscow in turn is ready to offer Teheran missiles, landing and patrol boats, diesel submarines, mine-sweepers, and other types of weapons and military equipment," they say.

—"Iran: Shamkhani says military ties with Russia in line with international rules," IRNA (Tehran), 27 December 2000; in FBIS Document IAP20001227000019, 27 December 2000; "Russia: General Ivashov wants to supply defensive conventional arms to Iran," RIA (Moscow), 27 December 2000; in FBIS Document CEP20001227000055,

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27 December 2000; "Russian Military Source Describes Planned Military Exports to Iran," Interfax (Moscow), 28 December 2000; in FBIS Document CEP20001228000052, 28 December 2000.

28 December 2000

Russian Defense Minister Igor Sergeyev clarifies plans for arms sales to Iran, saying that Russia will only sell conventional weapons, and that Russia has no plans to provide Iran with missile technology.

—"Russia: Defense Minister clarifies some aspects of cooperation with Iran," Russian TV RTR (Moscow), 28 December 2000; in FBIS Document CEP20001228000322, 28 December 2000.

28 December 2000

Iranian Defense Minister Ali Shamkhani speaks about the importance of Iran achieving self-sufficiency, particularly in missile technology. He also says Iran is working on converting the Shahab-3 to use solid fuel. Commenting on the Shahab-3, he says, "its guidance, precision, mobility and its so-called transport is a little difficult and, from an operational point of view, is a bit cumbersome. In that so-called phase, we are busy changing these kinds of missiles to missiles which use solid fuel." Shamkhani also discusses details of Russian Defense Minister Igor Sergeyev's visit to Iran, and the pending weapons trade between the two countries. Shamkhani says that they did not discuss specific details about the military hardware involved, and says that Iran and Russia are not planning on "establishing a so-called commercial arms relations." He goes on to say, "we neither have the economic potential for this nor do we have such a need in our security convergence or in our strategic needs." He does, however, stress the potential for "mutual interdependence with other countries, such as Russia, China, or the countries of the region."

—"Iran: Shamkhani on defense policy, Sergeyev visit, military ties with Russia," Vision of the Islamic Republic of Iran Network 2 (Tehran), 28 December 2000; in FBIS Document IAP20001229000027, 29 December 2000.

28 December 2000

In a meeting between Secretary of the Iranian Supreme National Security Council Hassan Rowhani and Russian Defense Minister Igor Sergeyev, the Russian minister says that Russia is "unilaterally and formally" withdrawing from the 1995 Gore-Chernomyrdin agreement, which bans military cooperation between Iran and Russia.

—"Sergeyev: Russia to forge long-term cooperation with Iran," IRNA (Tehran), 28 December 2000, www.irna.com.

29 December 2000

Iranian Defense Minister Ali Shamkhani says that Iran's missile capabilities are dependent on local hardware production and know-how, adding that the Iranian potential and capabilities are strong when compared to those of Eastern Europe countries. In reference to Shahab-4, he declares that it is Iran's natural right to pursue a non-military missile program, and that Iran has the capability to produce solid fuel, including the raw materials needed for its production.

—"Iran, Russia Agree Long-Term Military Cooperation," Reuters, via *Gulf-News* (Dubai) 29 December 2000, www.gulf-news.com.

30 December 2000

According to the Iranian press, an announcement is made in Russia that Iran informed Russian Defense Minister

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Igor Sergeev about Iran's desire to purchase the S-300 anti-missile system. Sergeev says that the two countries reached an agreement to have Iranian students trained in Russian military institutes. Sergeev describes his recent trip to Iran as very positive.

—"Iranian correspondent in Moscow: Sergeev described Iran trip as 'very positive'," Voice of the Islamic Republic of Iran Radio 1 (Tehran), 30 December 2000; in FBIS Document IAP20001230000062, 30 December 2000.

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1999

1999

Iran apparently decides to employ Russian technology for its Shahab-4 ballistic missiles, rather than acquiring North Korea's Taepodong- and - missiles and technology.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Nonproliferation Studies, November 1999, p. 33.

1999

North Korea delivers 10 tons of powdered aluminum to Syria. The shipment originates in China and is delivered to the Centre des Etudes et de Recherches Scientifiques (CERS, Scientific Studies and Research Center), the institute in charge of Syria's missile and chemical weapons programs.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Nonproliferation Studies, November 1999, p. 19.

1999

North Korea sells 20 Nodong engines to Iran. [Note: This could be the same shipment of 12 missile engines for Iran's new Shahab medium-range missiles that took place in November 1999 according to the *Washington Times*.]

—Andrew Koch and Steve Rodan, "Iran Begins Serial Production of Shahab 3," *Jane's Defence Weekly*, Vol. 36, No. 15, 10 October 2001.

January 1999

The CIA reports that Russian and Chinese firms continue to supply missile components and technology to Iran, and that Tehran hopes to use this assistance to become self-sufficient in producing medium-range ballistic missiles.

—Anthony H. Cordesman, *Iran and Nuclear Weapons*, Washington, DC: Center for Strategic and International Studies, 7 February 2000, p. 44.

3 January 1999

Keyvan Khosravi, spokesman of the Iranian Defense Ministry, denies the allegations made by the Japanese NHK channel that Iran has purchased missiles from North Korea. He adds that a country capable of producing missiles such as the Shahab-3 would not need to buy missiles.

—"Iran Denies Having Bought Missiles from North Korea," AFP, 3 January 1999, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

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13 January 1999

The U.S. government announces sanctions against NIKIET (The Scientific Research and Design Institute of Power Technology) and the D. Mendeleev University of Chemical Technology and the Moscow Aviation Institute. The sanctions focus on "all United States Government procurement from, and assistance to, these entities," states David Leavy, National Security Council Spokesman. Similar sanctions had been announced last July against seven Russian enterprises accused of selling technology to Iran. He adds that the Russian government stopped suspect deals with Iran in recent months after the July sanctions.

—David Stout, "US Imposes Sanctions on Tech Labs in Russia" *New York Times*, 13 January 1999, in Lexis-Nexis, www.lexis-nexis.com.

13 January 1999

Russian Defense Minister Igor Sergeev strongly denies allegations that Russian scientific centers have passed missile and nuclear secrets to Iran. Sergeev's comments come in response to U.S. sanctions against the Russian Mendeleev University of Chemistry and Technology, the Moscow Aviation Institute (MAI), and the Research and Design Institute of Energy Technology. "These centers could not have passed any know-how because they do not have it in full," he states. "Generally speaking, Russia monitors the nonproliferation of missile and nuclear technologies, and this monitoring is reliable." Russian Education Minister Vladimir Filippov says that connections between Iran and two of the institutions, the Russian Mendeleev Chemical Engineering University and the Moscow Aviation University, "are wholly unrelated to Iran's nuclear missile complex." Filippov does acknowledge that a professor from Mendeleev University once visited Iran on a private trip. Rector Pavel Sarkisov of the Mendeleev Chemical Technology University also denies the allegations, claiming, "decisions on selling missile know-how refer to the political sphere and have nothing to do with us." He says one Iranian postgraduate student is doing research into polymers and the synthesis of polystyrene, which is used in machine-building, construction and electrical engineering, but not in the defense industries. Rector Aleksandr Matviyenko of the MAI acknowledges that his institute does work on missile and satellite projects, but states, "we simply do not admit any foreigners to such studies." Iranian Foreign Ministry Spokesman Hamid-Reza Asefi also dismisses the accusations, saying that Iran's missile programs are completely indigenous, and that Iran does not rely on any country. Likewise, Iran's embassy in Moscow denies the claims, saying that the new allegations are the same old accusations previously denied by Iran and Russia.

—"Sergeev Denies Nuclear Technology Passed to Iran," ITAR-TASS (Moscow), 13 January 1999; in FBIS Document FTS1999011300225, 13 January 1999; "Minister Says US Claims of Missile Help to Iran Groundless," RIA (Moscow), 13 January 1999; in FBIS Document FTS19990113000843, 13 January 1999; "Russia Denies Selling Missile Information to Iran," Interfax (Moscow), 13 January 1999; in FBIS Document FTS19990113000408, 13 January 1999; "Russian Scientists on Cooperation With Iran," NTV (Moscow), 13 January 1999; in FBIS Document FTS19990114001064, 14 January 1999; "Iran Refutes US Statement on Iranian Military Capability," IRNA (Tehran), 13 January 1999; in FBIS Document FTS19990113000566, 13 January 1999; "Iran Denies Nuclear Cooperation With Russian Institutes," IRNA (Tehran), 13 January 1999; in FBIS Document FTS19990113000467, 13 January 1999.

14 January 1999

Russia reacts negatively to the U.S. sanctions imposed on three Russian institutes suspected of assisting Iran with

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missile and nuclear technology. Russian Prime Minister Yevgeny Pimakov says that the measures are "counterproductive." The foreign ministry maintains that the allegations "have no ground whatsoever" and the three institutes "are in full compliance" with Russian and international law. The D. Mendeleev University of Chemical Technology and the Moscow Aviation Institute are suspected of hosting Iranian students seeking nuclear and missile technology. Pavel Sarkisov, Dean of Mendeleev, says that work on nuclear issues is not possible at the institute, and the only enrolled Iranian student is studying polymers. Alexander Matveyenko states that none of the 28 Iranian students enrolled at his institute studies missile technology.

—David Hoffman, "Russia Denounces US Sanctions, Claims Linking Institutes, Iran Have No Grounds Whatsoever," *Washington Post*, 14 January 1999.

14 January 1999

Russian foreign ministry spokesman Vladimir Rakhmanin rejects as "unfounded" American accusations that Russia is helping Iran's missile programs.

—"The Ministry of Foreign Affairs of the Russian Federation called Washington's attempts to link US cooperation with Moscow on satellite launches with the Iranian issue "far fetched," Interfax (Moscow), 14 January 1999. [CNS translation]

14 January 1999

According to Aleksandr Zdanovich, spokesman for the Russian Federal Security Service (FSB), a probe of three research institutes—the Mendeleev Chemical-Technological Institute, the Moscow Aircraft Institute, and the Research and Development Institute of Energy Engineering—reveal no indications of cooperation with Iran's nuclear or missile programs. Zdanovich says that the FSB effectively prevents the illegal export of dual-use items. He cites Russia's success in halting the illegal transfer of components for a liquid-fueled rocket engine from Russia's Trud company to Iran. However, a member of the Russian Academy of Sciences, Aleksey Yablokov, says the United States may have valid reasons to suspect Russian organizations of providing Iran with sensitive information. Yablokov says that the Moscow Chemical Technology University "is developing a chemical component of missile fuel. This is well-known in the entire scientific world." Furthermore, he cites a case from the summer of 1998 when an Iranian spy was detained in Moscow "for receiving technical information on missile characteristics."

—"Spokesman: FSB Working to Stop Dual-Use Technology Exports," ITAR-TASS (Moscow), 14 January 1999; in FBIS Document FTS19990114000310, 14 January 1999; "Russian Ecologist Backs US Claims on Technology to Iran," Interfax (Moscow), 14 January 1999; in FBIS Document FTS19990114000228, 14 January 1999.

18 January 1999

According to Major General Aleksandr Zdanovich, head of the public relations center of the Russian Federal Security Service, Iran receives equipment for its missile programs from Europe, and many of its scientists are trained in the United States, Europe, and Canada. Zdanovich says, "in 1996 the Iranians acquired a three-coordinate coil winder from the Bolenz and Schafer Maschinenfabrik GmbH and Co. KG. 3560 Biedenkopf, which can be used, among other things, in the production of ballistic missiles and rocket motors. In addition, Iran has equipment that makes it possible to produce parts and assemblies for liquid-propellant rocket motors; electroerosion equipment from the Swiss firms Roboform, Robofill, and AGIE. It is equipped with instruments from the Japanese firms Mittutujo and Nikken, and much of the state-of-the-art software is US-produced."

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—"FSB Aide: European Firms Sold Iran Missile Technology," *Segodnya* (Moscow), 18 January 1999; in FBIS Document FTS1990118000614, 18 January 1999.

20 January 1999

The Moscow Aviation Institute (MAI) started two projects in 1995 to develop aviation engines for Iran, which could be used in short-range cruise missiles. The paper recognizes that as early as 1996, the MAI obeyed the Russian government's orders to stop the projects, pursuant with Russia's commitments to the Missile Technology Control Regime (MTCR). Though the project was cancelled, the Iranian scientists were able to do further work based on the information they received. The paper says that the MAI started its relationship with Iran in late 1994 and is currently involved in two projects to train personnel for Iran's aviation industry, including one to establish a training center in the Iranian city of Isfahan. The U.S. State Department became interested in the MAI's relationship with Iran in April 1998, when it asked the Russian export control commission to evaluate its contracts with Iran. The final report has not yet been submitted, but the commission announces that no violations of the export restrictions were discovered.

—"Value of MAI's Iran Ties Balances Cost of Sanctions," *Kommersant* (Moscow), 20 January 1999; in FBIS Document FTS1990120000719, 20 January 1999.

20 January 1999

According to an Israeli defense official, Iran delays a second test-launch of its Shahab-3 surface-to-surface missile because of operational problems. He says, however, that the Shahab-3 missile program is on-schedule and will probably be operational by 2000. He says that Iran is having trouble trying to apply sophisticated Russian technology to a simplistic missile frame that it purchased from North Korea.

—"Iran delayed missile test due to problem: Israeli," Reuters, 20 January 1999.

20 January 1999

Commenting on the United States' imposition of sanctions on three Russian entities for allegedly assisting the Iranian proliferation efforts, Iranian Foreign Ministry spokesman Hamid Reza Assefi says, "Iran has merely scientific and industrial relations with the Russian companies and institutions which have been subjected to U.S. sanctions....Iran has not and will not be interested in acquiring technology for developing nuclear and ballistic missiles from other countries...."

—"Iran blasts US sanctions on Russia," Associated Press, 20 January 1999; in "Iran Announces New, Non-Military Missile," *Disarmament Diplomacy*, Issue No. 34, Acronym Institute, www.acronym.org.

20 January 1999

Israeli Defense Minister Yitzhak Mordechai provides secret documents to the United States alleging that at least 10,000 Russian scientists are helping Iran develop missiles and nuclear, biological, and chemical weapons. The report says the Russian scientists are helping Iran develop its Shahab-3 and Shahab-4 missiles, as well as a 3,600km-range SS-400. Israel believes the missiles will be completed in 2002 and capable of carrying nuclear warheads by 2007. Details will be revealed in the next issue of the *Foreign Report*. Iran first tested the 1,300km-range Shahab-3 on 22 July 1998. An Israeli defense official said that Iran is delaying a second test because of problems applying sophisticated Russian technology to the North Korean-produced missile frame. Iran claims that

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the Shahab-3 design was based on indigenous technology.

—"Mordekhay Said to Give US Data on Russia-Iran Cooperation," *Maariv* (Tel Aviv), 20 January 1999; in FBIS Document FTS19990120000938, 20 January 1999; "Israeli Official Says Iran Missile Program 'On Schedule'," *Jerusalem Post*, 21 January 1999; in FBIS Document FTS19990121000290, 21 January 1999.

21 January 1999

Israeli Defense Minister Yitzhak Mordechai informs U.S. President Bill Clinton that Russian experts are helping Iran develop Shahab-3 and Shahab-4 ballistic missiles as well as a missile named SS-400 with a range of 3,600km. On another level, a defense official states that Iran is delaying the testing of a surface-to-surface missile (Shahab-3) because of operational problems. The official says that Iran is having problems applying Russian technology on a simple missile purchased from North Korea.

—Arieh O'Sullivan and Douglas Davis, and News Agencies, "'Foreign Report': 10,000 Russian Experts in Iran," *Jerusalem Post*, 21 January 1999, in Lexis-Nexis, www.lexis-nexis.com.

22 January 1999

Iran has been trying to develop a ballistic missile that would reach Saudi Arabia, Israel, and Turkey. It is assisted by Russia through state-supported institutes or private enterprises. Iran has spent more than \$50 million for assistance from Russian entities since the late 1980s. Kenneth Timmerman, editor of the *Iran Brief* newsletter in Washington, says he was told by some Iranians that 12 Russian institutes sent nearly 200 experts for technical instruction in Iran. Some institutes, such as the Central Aerohydrodynamic Institute (TsAGI), have stopped their assistance to avoid U.S. sanctions. TsAGI had a contract with Shahid Hemmat Industrial Group to help Iran design its missiles. It built a special wind-testing tunnel for several hundred thousand dollars.

—Steve Goldstein, Knight-Ridder Newspaper, "Russia Helping Iranians With Missiles," *Pittsburgh Post-Gazette*, 22 January 1999, in Lexis-Nexis, www.lexis-nexis.com.

22 January 1999

Russian First Deputy Prime Minister Yury Maslyukov tells a Russian television program that nuclear and missile technologies have been leaking out of Russia to Iran and other countries.

—"Maslyukov Says US Right on Iran Leaks," *Moscow Times*, 22 January 1999, in Lexis-Nexis, www.lexis-nexis.com.

23 January 1999

Leslie Morris, former technician who revealed secret details of the Tornado F3 fighter jet's radar system to Iran and Iraq, is jailed. He gave information relevant to firing guided missiles from aircrafts. From 1973 to 1995, he worked for a company that was contracted to carry out classified projects including the Foxhunter Radar System, which is used in the Tornado combat aircraft to help guide missile systems. He worked on the microwave frequency generation system for the Tornado. In May 1997, he sent a letter to the Iranian Embassy in London and another to the Jordanian Embassy in London describing how the system works.

—"Technician Jailed Over Secrets for Saddam," *Herald* (Glasgow), 23 January 1999, in Lexis-Nexis, www.lexis-nexis.com.

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30 January 1999

The Voice of the Islamic Republic of Iran announces that the Shahab-3 missile would be put on public display at Tehran's international exhibition site for the "Ten Days of Dawn" exhibition, which highlights achievements of the Islamic Revolution.

—"Iran's Shahab-3 Missile To Be Exhibited in Tehran," Voice of the Islamic Republic of Iran First Program Network (Tehran), 30 January 1999; in FBIS Document FTS19990130000823, 30 January 1999.

February 1999

George Tenet, director of the U.S. Central Intelligence Agency, testifies on Russia's technical assistance to Iran. He says, "Especially during the last six months, expertise and materiel from Russia has continued to assist the Iranian missile effort in areas ranging from training to testing to components. This assistance is continuing as we speak, and there is no doubt that it will play a crucial role in Iran's ability to develop more sophisticated and longer-range missiles."

—W. Seth Carus, "Iran and Weapons of Mass Destruction," *The American Jewish Committee*, www.ajc.org.

1 February-13 February 1999

An exhibition of the achievements of the Islamic Revolution is held at the Tehran Permanent International Fairs and Exhibitions Agenda. Among the missiles on display are the Shahab-1, Shahab-2, and Shahab-3 ballistic missiles. Also on display is the Chinese C-802 ship-to-ship cruise missile.

—Farzin Nadimi, "Report on Military Exhibition in Tehran," *Sanai-yi Havai* (Tehran), 1 February 1999, pp. 7-10; in FBIS Document FTS19990619000579, 1 February 1999.

1 February 1999

In a speech commemorating the return of the late Ayatollah Khomeyni to Iran in 1979, former Iranian President Akbar Hashemi Rafsanjani discusses Iran's self-sufficiency in missile production. He says, "today your nation can build all its own defense needs, from colt bullets to intercontinental missiles.... Everything which we realized, during the war, is really necessary for war and defense, and which is needed by the country, we are building in these same factories which we have constructed ourselves and are running ourselves." Rafsanjani also says, "When America, using satellites, sees that at our international exhibition, the Shehab-3 missile, with a range of 1,350 kilometers, is on display, it grieves but can do nothing about it."

—"Rafsanjani Speech on Khomeyni Anniversary," IRNA (Tehran), 1 February, 1999; in FBIS Document FTS1999020100310, 1 February 1999.

2 February 1999

Iranian Defense Minister Ali Shamkhani says, "The Shehab-3 missile has been manufactured without any foreign model, and innovations in the manufacture of light- and heavy-artillery pieces and heavy naval vessels are among the other achievements of Iranian engineers." Iranian Revolution Guards Corps Major General Seyyed Yahya Safavi announces in Shiraz, "we are equipped with the most advanced missile system that we produce ourselves, and we are not dependent on any foreign country."

—"Minister on Iran's Military Manufacturing Capability," Voice of the Islamic Republic of Iran (Tehran), 2 February

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1999; in FBIS Document FTS19990202001250, 2 February 1999; "Guards Commander Insists Corps Not Factional," *Nim-Negah* (Shiraz), 3 February 1999; in FBIS Document FTS19990329000593, 3 February 1999.

6 February 1999

For nine years, Mr. Jamshid Hashemi, an Iranian-born arms dealer, was used by "MI6 to help set up deals with Iran, including the purchase of silkworm missile from China.

—Guardian Service, "Iranian Arms Dealer Freed in London," *Irish Times*, 6 February 1999, in Lexis-Nexis, www.lexis-nexis.com.

7 February 1999

In a press conference for foreign and domestic reporters, Iranian Defense Minister Ali Shamkhani says Iran has begun work on engine design and testing for its Shahab-4 missile. He says the missile will be used for launching satellites, and has no military applications. Furthermore, Shamkhani said all work on the Shahab-4 will be done by Iranian experts. The Iranian defense industries now manufacture the Shahab-3 missile. Shamkhani also says that the 1,300km-range Shahab-3 will not be used against any Muslim state and poses no threat to the region. He says Iran has no plans for producing a missile with a longer range than the Shahab-3. [Note: The two stories, both from IRNA's account of the same press conference, seem to be contradictory, with Shamkhani saying Iran will not produce a missile with a longer range than the Shahab-3. Shamkhani classifies the Shahab-4 as a space launch vehicle, not as a military missile.] Shamkhani also denies reports in the Western media that an Iranian delegation had traveled to Moscow to increase nuclear and missile cooperation.

—"Shamkhani Announces Shahab-4 Space Rocket Production," IRNA (Tehran), 7 February 1999; in FBIS Document FTS19990207000166, 7 February 1999; "Shamkhani on Shahab-3, King Abdallah, Abadan Missile," IRNA (Tehran), 7 February 1999; in FBIS Document FTS19990207000374, 7 February 1999; "Shamkhani Denies Iran-Russia Discussed Missile Cooperation," Voice of the Islamic Republic of Iran (Tehran), 7 February 1999; in FBIS Document FTS19990207000549, 7 February 1999.

7 February 1999

Iranian Defense Minister Admiral Ali Shamkhani says, "Missiles and military equipment made in Iran pose no threat for the countries of this region." Shamkhani says that the Shahab-3 missile is not a threat to other countries in the region, and that due to its successful testing, there would be no reason to retest the missile in the future.

—"The Shehab-3 Missile Will Not Land on Any Islamic Country," IRNA (Tehran), 7 February 1999.

7 February 1999

Iranian Defense Minister General Ali Shamkhani says that Iran will test a civilian missile, the Shahab-4, for satellite-launching purposes. He adds that Iran has completed its deterrence capabilities through the development of the Shahab-3.

—Kianouche Dorraine, "Iran is trying to Enter the Club of Satellite Launching Countries," Agence France Presse, 7 February 1999, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

7 February 1999

Shamkhani announces that Iran's armed forces are scheduled to test a motor for the Shahab-4 missile on 9

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February 1999. He says the Shahab-4 missile has "no military use" and would not be produced on a large scale. He says the Shahab-4's motor had already been tested, but the test was unsuccessful due to a mechanical problem.
—Kianouch Dorrane, "Iran to Test Motor for New Space Rocket," *Agence France Presse*, 7 February 1999, in Lexis-Nexis, 7 February 1999, www.lexis-nexis.com.

7 February 1999

According to Moscow's ITAR-TASS news agency, Iranian Defense Minister Ali Shamkhani says Iran would test the engines for its Shahab-4 rocket on 9 February 1999. He says production of the Shahab-4 will not be large scale, and that it will have no military applications. In July 1998, Iran successfully tested its 1,300km-range Shahab-3.
—"TASS Reports Iran To Test Shahab-4 Engines 9 Feb," ITAR-TASS (Moscow), 7 February 1999; in FBIS Document FTS19990207000811, 9 February 1999.

8 February 1999

Iranian Minister of Defense and Military Logistics Ali Shamkhani holds a press conference in Tehran and says that the Shahab-3 ballistic missile "will be the last combat missile to be produced in Iran. We are not planning to develop any new missiles." This is in contradiction to his November 1998 statement that Iran was in the process of developing a new missile. The Shahab-4 missile is now reportedly designed for purely civilian use to place satellites in orbit.
—"Iran not to produce any new combat missiles," ITAR-TASS, 9 February 1999, in Lexis-Nexis, www.lexis-nexis.com.

11 February 1999

In commemoration of the Shah's fall, Iran holds an impressive military exhibition at which the Shahab-3 missile is displayed for the first time.
—Safa Haeri, "The Ayatollah's Dream Fades," *Al-Ahram Weekly* (Cairo), Issue No. 415, 4-10 February 1999, www.ahram.org.eg.

11 February 1999

Israeli Defense Minister Moshe Arens says Iran has exaggerated its missile capabilities and is experiencing problems with its missile technologies. However, Arens says that with more assistance from Russia and other countries, Iran's long-range surface-to-surface missiles could become operational. In January 1999, an Israeli official said Iran was having technical difficulties applying Russian technology to the simpler missile frame purchased from North Korea.
—"Arens Says Iranian Missile Capability 'Exaggerated'," *Qol Yisrael* (Jerusalem), 11 February 1999; in FBIS Document FTS19990211001060, 11 February 1999.

12 February 1999

Israeli Defense Minister Moshe Arens says that Iran faces problems in its missile program and makes exaggerated statements about the time its missiles would be operational.
—"Arens: Iran nuclear capability overblown," *Jerusalem Post*, 12 January 1999, in Lexis-Nexis, www.lexis-nexis.com.

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15 February 1999

Former General Commander of the Iranian Revolution Guard, Muhsin Ridhai, tells the London-based *Al-Hayat* paper in Tehran, "if Israel launched one missile against us, we will retaliate by launching ten and we have the capacity to carry out such a retaliation."

—"Iranian Veteran: Iran to Retaliate if Israel Attacks," *Al-Hayat* (London), 15 February 1999; in FBIS Document FTS19990215001303 15 February 1999.

16 February 1999

According to Western intelligence sources, Iran provides Lebanon with long-range artillery rockets that can reach Haifa in northern Israel. The Iranian defense minister publicly hints at the presence of the long-range rockets in Lebanon, claiming that Iran has strategic weapons—other than its Shahab-3 missile—to deter Israel. Iran has the 45km-range Fajr rocket, which may be a modified version of a North Korean rocket. Iran originally purchased the 43km-range M-1985 multi-barreled rocket launcher from North Korea, which is now being made in Iran.

—"Iran's Nuclear Development Reached 'Point of No Return'," *Yediot Aharonot* (Tel Aviv), 16 February 1999; in FBIS Document FTS19990216001294, 16 February 1999.

17 February 1999

Clifford Beale, a leading defense analyst and editor of *Jane's Defense Weekly*, says that Iran's new ballistic missile is more likely to be a long-range surface-to-surface missile than a satellite launcher. He adds that according to U.S. intelligence, the Shahab-4 is derived from the obsolete Soviet SS-4 ballistic missile. He says that if the missile is a SS-4, it is too small to launch a satellite. [Note: This would contradict Iran's stated intended purpose for the missile, see 7 February.]

—Times Wire Reports, "Britain Expert Questions Iran's Satellite Claim," *Los Angeles Times*, 17 February 1999, in Lexis-Nexis, www.lexis-nexis.com.

17 February 1999

Iran's next ballistic missile, the Shahab-4, is largely derived from the Soviet SS-4 Sandel medium-range ballistic missile. The SS-4, designed and built in Ukraine by NPO Yuzhnoye, has a maximum range of 2,000km and a circle of equal probability (CEP) value of 2,400km. Iran's Minister of Defense and Armed Forces Logistics, Admiral Ali Shamkhani, announces that the Shahab-4 is intended as a space launch vehicle, not for military applications. A Russian missile expert tells *Jane's* that the SS-4 design is so old that technical data could have been obtained openly from a variety of sources, even in the United States.

—Clifford Beal, "Iran's Shehab-4 is a Soviet SS-4, says US intelligence," *Jane's Defence Weekly*, 17 February 1999, in Lexis-Nexis, www.lexis-nexis.com.

26 February 1999

Russian Defense Minister Marshal Igor Sergeev strongly denies reports in the American media that 10 Russian institutes are assisting Iran with missile technologies. "It cannot be," Sergeev said. "With the existence of such tough export control in our country, it is impossible to export such technologies. We cannot agree with these accusations addressed to us," he says.

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—"Russia's Sergeyev Rejects US Iran Cooperation Reports," RIA (Moscow), 26 February 1999; in FBIS Document FTS19990226000457, 26 February 1999.

27 February 1999

Moscow's Polyus Scientific Research Institute develops laser gyroscopes and other laser equipment. In May 1998, the Iranian Organization of the Electronics Industry requested a contract with Polyus for the assembly of laser gyroscopes in Iran. The directors of Polyus did not agree to the transaction due to the potential for gyroscopes to be used in military equipment and for the Iranian scientists to gain practical knowledge. The director of the Moscow-based MOSO and Yevropalas-2000 Firms, Iranian citizen Ali Mazidi, is under investigation by the Russian Federal Security Service.

—"U.S. Claims on Iran Arms Projects Refuted," *Nezavisimaya Gazeta* (Moscow), 27 February 1999; in FBIS Document FTS19990308000140, 27 February 1999.

28 February 1999

Chairman of Iran's Expediency Council and former President Akbar Hashemi Rafsanjani discusses Iran's missile programs. He states that Iran has built all of their missiles domestically and has successively improved the ranges of the missiles. "Naturally we began with a missile with a range capability of just 50km, and we now have several generations of missiles with different range capabilities: 50km, 100km, 200km, 300km, 500km. We have now reached a radius of action of 1,350km." [Note: The 1,350km missile Rafsanjani refers to is likely the Shahab-3.] Rafsanjani emphasizes, "we built all these missiles ourselves, starting from scratch. We did use Soviet-made Iraqi missiles with which we were shelled by Iraq during the war. Some dropped without exploding; we collected them and were able to reproduce some of their components." In answer to allegations of Russian cooperation, Rafsanjani states, "I can give a specific example for people who continue to say that the Russians are providing assistance in making these missiles. Special mixtures of explosives are needed for these missiles. We buy them abroad, and not in the East but in the West, because it is much easier to buy this material on Western markets."

—"Rafsanjani Denies Russian Missile Help," NTV (Moscow), 28 February 1999; in FBIS Document FTS19990228000736, 28 February 1999.

March 1999

An unconfirmed report suggests that North Korea has assisted with an Iranian development program, possibly known as Shahab-5, based on the design of the Taepodong-1 missile.

—"Iran," *Jane's Defence Weekly*, 10 March 1999, in Lexis-Nexis, www.lexis-nexis.com.

2 March 1999

According to the South Korean Yonhap News Agency, Iran purchases North Korean Scud-B missiles using counterfeit currency. In its 26 February 1999 issue, the German magazine *Der Spiegel* reported that a Swiss company sold six printing machines to Iran between 1973 and 1984, which were used to make the fake currency.

—"Der Spiegel: Iran Bought DPRK Arms With Counterfeit Money," *Chosun Ilbo*, (Seoul), 2 March 1999; in FBIS Document FTS19990302000702, 2 March 1999.

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4 March 1999

Daniel Malloy, president of International Helicopter, Inc. (New Jersey), admits to having shipped 100 Hawk missile batteries and other military aircraft parts to Iran.

—"Aviation Company President Admits to Shipping Jet Parts to Iran," *Ottawa Citizen*, 4 March 1999, in Lexis-Nexis, www.lexis-nexis.com.

4 March 1999

Daniel Malloy is indicted on charges that he ordered 20 batteries for AIM-54 Phoenix air-to-air missiles from a Missouri manufacturer and was planning to ship them to businessman Joseph T. P. Balakrishna Menon, owner of Heli-World Aviation, Ltd., based in Singapore, who would in turn send them to Iran. [Note: The number of batteries varies from entry to entry, see other 4 March entries.]

—"Man Admits Trying to Sell Missile Parts to Iran," *New York Times* (New York), 4 March 1999, in Lexis-Nexis, www.lexis-nexis.com.

4 March 1999

The United States wants to restrict the unrestricted cross-border trade in arms products with Canada. The United States claims that Canada's lax policies about exports of U.S.-made equipment make such equipment more easily available to countries such as Iran. During the past two years, Canadians have been caught trying to ship U.S.-made missile components and military equipment to Iran. Last May, two Iranian-born Canadian citizens were arrested in Vancouver on allegations that they were trying to buy guidance equipment for Hawk missiles. According to the U.S. Justice Department, the components were to be shipped to Iran via Canada.

—David Pugliese, "Arms Dealers Put Canadian Jobs at Risk: US Calls Canada A Smuggler's Pipeline, threatens Military Trade Restrictions," *Ottawa Citizen*, 4 March 1999, in Lexis-Nexis, www.lexis-nexis.com.

8 March 1999

According to a U.S. intelligence report, Iranian President Mohammed Khatami orders the production of 15 Shahab-3 missiles, which will be deployed in underground bunkers near Khorramabad.

—"Shahab-4 Motor Test," *Iran Brief*, 8 March 1999, pp. 4-5.

12 March 1999

According to a joint assessment by the U.S. Central Intelligence Agency and Israeli intelligence reports, Russia continues to provide Iran with sensitive technical information for the development of ballistic missiles and non-conventional weapons. "We are approaching the red line," a senior security source says. "Action must be taken to stop the transfer of security information to Iran and Iraq. We will not be able to prevent the acquisition of non-conventional weapons if we don't stop this activity now."

—"Israeli-US Reports Note Russian Aid to Iran, Iraq, Syria," *Maariv* (Tel Aviv), 12 March 1999; in FBIS Document FTS19990312000642, 12 March 1999.

14 March 1999

Russian Prime Minister Yevgeniy Primakov asks for proof that 10 Russian companies are assisting Iran with nuclear and missile programs, as alleged by a *Newsweek* correspondent. Primakov states, "We are cooperating with the

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United States in that sphere and have permanent channels to exchange confidential information."

—"Primakov Calls for Proof of Nuclear Assistance to Iran," ITAR-TASS (Moscow), 14 March 1999; in FBIS Document FTS19990314000567, 14 March 1999.

18-24 March 1999

The U.S. and Israeli pressure on China and Russia falls short of stopping the Iranian missile and nuclear programs. This suggests that the Iranian programs are beyond the stage of relying on outside support.

—Abdel-Azim Hammad, "Preemptive Diplomacy," *Al Ahram Weekly* (Cairo), 18-24 March 1999, Issue No. 421, www.ahram.org.eg.

19 March 1999

Iran claims that Israel owes \$5 billion for contracts it made that were never completed or filled. The issue is discussed by a panel in Geneva. *Haaretz* outlines the three major deals that were struck and went wrong: (1) oil given to Israel by Iran for which it wasn't reimbursed; (2) "the Soltam mortar factory project for which Iran paid and received nothing in return; (3) and a large sum that was paid to Israel for the establishment of a factory to manufacture Jericho-2 surface-to-surface missiles, the supply of a few components for the missiles and the joint development of the Jericho-3 at a later stage."

—Ronen Bergman, "5 billion Reasons to Talk to Iran," *Haaretz* (Tel Aviv), 19 March 1999; in "Israel's Outstanding Debt to Iran Viewed," FBIS Document FTS19990319001273, 19 March 1999.

19 March 1999

Missile-tests are planned for this week in the Gulf of Oman at a spot close to the Strait of Hormuz, off the Iranian port of Jask. The Defense Space and Missile Activity Center, known as "Defsmac," said earlier this month that the Iranian Air Force was set to fire two new air-to-surface test missiles of a new anti-ship missile called the Project Fajr.

—Bill Gertz and Rowan Scarborough, "Missile Watch," *Washington Times*, 19 March 1999.

22 March 1999

Russian Prime Minister Yevgeniy Primakov and Israeli Prime Minister Benjamin Netanyahu agree to establish a joint committee to oversee the transfer of non-conventional weapons technology from Russia to Iran. The committee is to be headed by the Israeli and Russian foreign ministries. However, Israeli sources indicate that despite the committee, Russian military assistance to Iran would continue. In Jerusalem's *Qol Yisrael*, Netanyahu refutes media reports that Iran has a missile capable of reaching Israel. However, during an interview with a Moscow television reporter, Netanyahu indicates the opposite. In response to a statement that Russia's technological cooperation with Iran is a barrier to stronger Russian-Israeli relations, Netanyahu says, "I think that this is a problem which should worry all of us, both Russia and Israel, since Iran has ballistic missiles, which are capable of reaching Moscow moreover with nuclear warheads, as you understand, this is not only Israel's problem. It is a problem of all those who are located in the radius of these missiles." Netanyahu goes on to say, "they [Iran] have made progress in the production of missiles. However, they still have to cover a certain distance so that these missiles can become operational...I am convinced that only through cooperation and on the basis of understanding will we be able to find common ways to resolve this problem with the Russian government."

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—"Committee to Oversee Russian Technology Transfer to Iran," *Qol Yisrael* (Jerusalem), 22 March 1999; in FBIS Document FTS19990322001172, 22 March 1999; "Netanyahu—Iran Has No Missile Reaching Israel," *Qol Yisrael* (Jerusalem), 22 March 1999; in FBIS Document FTS19990322000560, 22 March 1999; "Israeli Premier on Russia-Iran Cooperation," Russian Public Television First Channel Network (Moscow), 22 March 1999; in FBIS Document FTS19990322001695, 22 March 1999.

23 March 1999

Israel and Russia agree on a mechanism to control the transfer of weapon of mass destruction technologies to Iran. Benjamin Netanyahu says that "the issue of non-conventional weapons technological transfer is of cardinal importance to us and...Primakov is now committed to taking care of it."

—Danna Harman, "Israel, Russia Agree to 'mechanism' on Technology Transfer to Iran," *Jerusalem Post*, 23 March 1999, in Lexis-Nexis, www.lexis-nexis.com.

2 April 1999

Senior U.S. officials say that North Korea has shipped "missiles, missile technology, and parts produced by its advanced ballistic program" to "countries such as Iran and Pakistan" and that North Korea earns about \$100 million annually from missile sales.

—"Missile Exports Earn Pyongyang \$770 Million a Year, Report Says," *South China Morning Post*, 3 April 1999, www.scmp.com.

3 April 1999

A French company, Microturbo, SA is thought to be providing Iran with missile components that were used in the construction of C-802 missiles. The United States believes that Iran has 150 anti-ship cruise C-802s, most of them bought from China, but some made locally as copies of the French-provided TRI-60 engines. France is supposed to have delivered 50 Microturbo engines in 1987, 50 in 1995 and 50 in 1996 to China, who reverse-engineered the engine to put them on the C-802. Iranians used the Hong Kong-based firm Jetpower Industrial Ltd. as a front to purchase the engine from both Chinese and Microturbo. The French company had deals with Iran whereby it provided power generators. Its Chairman, Cocheteaux, says that the generators are "very different from engines used to propel missiles" and are not useful in building missile engines. He adds that "Microturbo SA never assisted Iran in any way or on any missile."

—John Mintz, "Tracking Arms: A Study in Smoke, Ambiguity Clouds French Role in China-Iran Deal," *Washington Post*, 3 April 1999, in Lexis-Nexis, www.lexis-nexis.com.

5 April 1999

Israeli Foreign Minister Ariel Sharon is in favor of having direct contact with Russia regarding the transfer of ballistic missile technology to Iran. Sharon and Israeli Prime Minister Benjamin Netanyahu discussed the matter in Moscow during a March 1999 visit. Sharon feels the United States is not taking a strong enough role in preventing the cooperation between Russia and Iran, and therefore maintains that Israel should speak directly with Russia.

—"Sharon Favors Direct Contact With Russia on Missiles," *Haaretz* (Tel Aviv), 5 April 1999; in FBIS Document FTS19990405000553, 5 April 1999.

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7 April 1999

China Precision Machinery Import-Export Corp. is believed to have computer equipment that might have helped it develop anti-ship missiles that it subsequently sold to Iran. Iranian radar system and nuclear reactors seem to benefit from China connections to U.S. exports, as many products used in nuclear and missile work have been licensed to academies, aircraft industries, and institutes.

—Michael S. Leyveld, "US Sold \$15 billion of Tech Goods to China," *Journal of Commerce*, 7 April 1999, in Lexis-Nexis, www.lexis-nexis.com.

7 April 1999

Russia's export control commission discusses U.S. allegations against ten Russian organizations of illegal cooperation with Iran. The commission notes that an investigation into these organizations reveals violations of customs legislations by the Moso and Yevropalas-2000 firms. Moso, founded by an Iranian and two Tajikistanis, acquired a consignment of stainless steel in Spain, which was seized by suspicious authorities in Azerbaijan in May 1998 after discovering falsified customs documents. According to the United States, this steel was destined for Iran's missile programs. The investigation also reveals that Yevropalas-2000 helped process the order. Both companies are considered "fictitious" according to the Kommersant report. The commission has additional questions for one or two more of the listed organizations, but the others are not suspected of having broken the export control restrictions. [Note: Refer to the entry for 27 February 1999 for more details on these organizations.]

—"Export Commission Views Technology 'Leak' to Iran," *Kommersant* (Moscow), 8 April 1999; in FBIS Document FTS19990412000845, 8 April 1999.

12 April 1999

During a meeting with Russian Foreign Minister Igor Ivanov, Israeli Foreign Minister Ariel Sharon offers to increase military and technological cooperation with Russia in exchange for tightened control of technology transfer to Iran's missile and nuclear programs. Meanwhile, Israeli Defense Minister Moshe Arens tells the Knesset Foreign Affairs and Defense Committee, "We know today that Russian technological information regarding nuclear capability and ballistic missiles has for months been passed from Russia to Iran. I believe that we must do what we can, in addition to the efforts by the U.S., to prevent this transfer of technology to Iran." According to a senior defense official, Iran is set on developing long-range surface-to-surface missiles, as well as acquiring biological and chemical weapons and achieving nuclear capability. He said that Iran would be unable to achieve these goals without Russian assistance, and that there are no indications this aid is stopping.

—"Further on Sharon's Russia Talks, Iranian Procurement," *Haaretz* (Tel Aviv), 13 April 1999; in FBIS Document FTS19990413001053, 13 April 1999.

13 April 1999

Israeli Foreign Minister Ariel Sharon offers more military technology cooperation to Russia on the condition that it tries to stop its weapons technology exports to Iran. A senior intelligence officer states that Iran is developing a long-range surface-to-surface missile equipped with biological and chemical warheads, and it is also set on developing nuclear weapons. He adds that Russian assistance is imperative to these endeavors.

—Danna Harman and Liat Collins, "Sharon Offers Russia Increased Technological Cooperation," *Jerusalem Post*, 13 April 1999, in Lexis-Nexis, www.lexis-nexis.com.

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14 April 1999

Iran's Ministry of Defense and Armed Forces Logistics spokesman, Keyvan Khosravi, states that the Iranian-made advanced anti-aircraft missile Sayyad-1 has been successfully test-fired.

—"Iran Radio Commentary Defends Test of Sayyad-1 Missile," Voice of the Islamic Republic of Iran (Tehran), 15 April 1999; in FBIS Document FTS19990415000920, 15 February 1999.

14 April 1999

According to a spokesman for the Iranian Ministry of Defense and Armed Forces Logistics, Iran successfully tests its Sayyad-1 surface-to-air missile. The missile, named for assassinated commander Lt-Gen. Ali Sayyad-Shirazi, successfully destroys a mock target in the air. The spokesman says that the missile was fully designed and manufactured by the Aerospace Industries Organization, a subsidiary of the Ministry of Defense and Armed Forces Logistics. He says that the Sayyad-1 will be a major component of Iran's medium- and long-range air defense missiles. [Note: Lt-Gen. Sayyad-Shirazi was deputy commander in chief of the Iranian armed forces, and was allegedly assassinated by the Iranian opposition group Mojahedin-e Khalq (MKO) based in Iraq.]

—"Iran 'Successfully' Test Fires Surface-to-Air Missile," IRIB Television First Program (Tehran), 14 April 1999; in FBIS Document FTS19990414000484, 14 April 1999.

14 April 1999

Khosravi says the missile was produced entirely by the aerospace industries organization, affiliated to the defense and armed forces logistics ministry. Khosravi states that manufacture of the missile would meet a part of Iran's air defense needs for the medium-and long-range surface-to-air missiles.

—"Iran Successfully Tests Sayyad-1 Missile," IRNA (Tehran), 14 April 1999, www.irna.com.

14 April 1999

Diplomatic sources quoted by the Internet Conservative News Service (ICNS) say that Iranian defense ministry officials acknowledge the Sayyad-1 missile is of Chinese design, but was manufactured at least partially in Iran. ICNS also reports that Chinese Aviation Industry Minister Zha Yuli is on an official visit to the "strategic Iranian town of Qeshm in Bushehr province" at the time the missile is test-fired and that the Chinese ambassador to Iran, Wang Shijie, accompanies him on the trip. A number of factories used for military as well as civilian purposes are located on Qeshm Island.

—"Iran tests new AD missile," *Iran Brief*, 3 May 1999, p. 8.

14 April 1999

The Iranian armed forces carry out a successful test of a surface-to-air missile. A spokesman of the Iranian Ministry of Defense reports, "the missile was able to hit its target at an appropriate altitude." This missile is dubbed Sayad-1.

—"Teheran announced a successful test of a surface-to-air missile," Agence France Presse, 14 April 1999, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

15 April 1999

Tehran's Voice of the Islamic Republic of Iran broadcasts, "...With the manufacture of this modern surface-to-air

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missile by the Iranian designers and specialists at the Aerospace Industries Organization affiliated to the Defense and Armed Forces Logistics Ministry of the Islamic Republic of Iran, another step has been taken to reinforce Iran's defense might....Iran's defense might is in fact a speed bump on the way of the aggressive and expansionist policies of the Zionist regime, and the test-firing of the Sayyad-1 surface-to-air missile is a display of the will and might of the armed forces of the Islamic Republic of Iran to stand firm against the true enemies of Islam and the Islamic Republic of Iran."

—"Iran Radio Commentary Defends Test of Sayyad-1 Missile," Voice of the Islamic Republic of Iran (Tehran), 15 April 1999; in FBIS Document FTS19990415000920, 15 April 1999.

28 April 1999

Iran's Hesa firm is developing an improved version of its Ababil-2 (Swallow) unmanned aerial vehicle (UAV). Hesa hopes to increase the three-hour endurance of the UAV. The Ababil-2 can carry a small camera and cruise at 370km/hour at an altitude of 3.3km.

—"Iran Tests Unmanned Air Vehicle," *Flight International*, 28 April-4 May 1999, p. 16.

29 April 1999

Iranian Defense Minister Ali Shamkhani says that Iran has "a considerable number" of deployed Shahab-3 missiles that can be launched at any time. He says that Iran will "continue to produce them as the situation demands." Shamkhani denies reports that the 1,300km-range Shahab-3 is based on the 1,000km-range North Korean Nodong-1, and says that Iran's defense industries developed and manufactured the Shahab-3 indigenously. He also dismisses reports that Iran is planning to develop an intercontinental ballistic missile, saying, "We do not need missiles that can fly longer distance than Shehab-3." Iran claims its Shahab-4 is to be used only as a space launch vehicle with no military function.

—"Iranian Defense Minister Admits Deployment of Shahab-3," *Yomiuri Shimbun* (Tokyo), 29 April 1999; in FBIS Document FTS19990430000054, 29 April 1999.

3 May 1999

China says it would not sell missiles with nuclear warheads to Iran.

—Batsheva Tsur, "China Vows Not To Sell Nukes To Iran," *Jerusalem Post*, 3 May 1999, in Lexis-Nexis, www.lexis-nexis.com.

5 May 1999

President Clinton's decision to impose sanctions on nine Russian entities because of their role in Iran's missile program "was a planned rather than a spontaneous decision," according to a report on Russian military cooperation with Iran. At the time the nine entities were chosen, Vice President Al Gore was traveling to Russia prior to Iran's testing of its Shahab-3 missile. The list was agreed upon after the examination of a report from Russia's export controls committee. On the same day, Nikolay Kovalev, the director of Russia's Federal Security Service, was in Israel defending the companies on the U.S. sanctions list. Immediately following Iran's test of the Shahab-3, President Clinton toned down his accusations against Russia. This may have been due to the recognition by most analysts that the origin of the Shahab-3 was apparently North Korean rather than Russian. The report says that Russia has nothing to do with Iran's missile program at the governmental level.

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—Ivan Safranchuk, ed. by Dmitriy Yevstafyev, "Scientific Notes No. 8: The Nuclear and Missile Programs of Iran and Russian Security—The Framework of Russian-Iranian Collaboration," *Nauchnyye Zapiski* (Moscow), 5 May 1999, vol. 8, pp. 1-36; in "Russia, Iran Nuclear Program Cooperation," FBIS Document FTS19990701001333, 1 July 1999.

7 May 1999

Bob Galluci, a special envoy appointed by President Clinton to work for the containment of missile and nuclear technology transfer, discusses Russian cooperation with Iran's missile and nuclear programs. He says that Iran will likely have an operational launch of the Shahab-3 missile either this year or next. He notes that although the July 1998 test was technically not an operational launch, it was close. Regardless of Iran's progress on the Shahab-3, he says that efforts must continue to halt Russian assistance for this and other missile projects, including the longer-range Shahab-4. "The bigger the missile range, the greater would be the deployment of launching pads in Iranian territory. This is why it is important for us to keep our disruption efforts. I believe that countries that wish to attain missiles and nuclear capability will, eventually, attain their goal. Our only hope is that slowing down the process is worth the effort, while at the same time efforts are made to encourage changes in Iranian and regional leadership," he says. According to Tel Aviv's *Maariv*, the Shahab-3 has a range of 1,300km. Galluci also discusses the role of Russian officials, saying that some are willing to work with the United States on halting the technology transfer to Iran. He says that Yuriy Koptiv, director of the Russian space agency, "is very interested in cooperation with us. He would like to see the problem go away." Galluci said that other officials, however, do not acknowledge the problem, "Are there Russians who know the policy and violate it? Yes. I heard this all over Russia and most publicly: Doing business with Iran in a way that promotes the Iranian missile program is not the official Russian policy. Some people do the contrary to official policy. This is why we are taking steps against companies in the commercial sector." Galluci says that the United States is working with Russia to help them better control exports and develop stronger rules and regulations. Upon Galluci's recommendation, President Clinton imposed sanctions on ten Russian companies for missile cooperation with Iran, and on two other companies for assisting Iran's nuclear program. Galluci says that theoretically, Iran could deploy the Shahab-3 with a nuclear warhead within a year, but that this is unlikely due to Iran's lack of a sufficient amount of fissile material.

—"Former US Envoy on Missile Threat," *Maariv* (Tel Aviv), 7 May 1999; in FBIS Document FTS19990519000774, 7 May 1999.

26 May 1999

China is said to have transferred missile technology to Iran.

—"Findings of Cox Reports" *Irish Times*, 26 May 1999, in Lexis-Nexis, www.lexis-nexis.com.

3 June 1999

According to classified U.S. government documents, President Jiang Zemin promised President Clinton in late 1996 that China would halt shipments of missiles to Iran, yet sales of parts for the weapon known as the C-802 missile continued through late 1997. Subsequently, Iran has developed the capability to produce the missiles in a plant near Tehran. Both China and Iran had signed contracts for approximately 400 of the missiles, about 150 of which were delivered. The last "confirmed" delivery of a complete missile, the documents reveal, came in February of 1997. The middleman between Iran and China for the missile deal was arms dealer named Sarkis Soghanlian, formerly convicted in the United States of selling technology to Iraq. But when China conceded to U.S. demands to

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stop selling the weapons, Iranian officials went in search of engines and other parts to build the missiles itself. According to NSA communication intercepts, Iran turned to Jetpower Industrial Ltd. (Hong Kong) in July 1997 to buy the engines from France and then ship them to Iran. The French engines being used were from a corporation called Microturbo. In early 1998, French officials told U.S. diplomats that its export inspectors opened Microturbo crates bound for Iran and confirmed that they contained generators. Microturbo chairman Cochetoux said the generators are "very different from engines used to propel missiles." In late August 1997, Iranian military officials discussed efforts by Monzer al-Kassar, a Syrian arms dealer, to obtain missile parts for Iran, according to NSA intercepts. Iran can use patrol boats and frigates to launch missiles from the Gulf. According to the documents, Iran can fire the C-802s from mobile launchers, which use support vans for power, radar, and missile-direction, and has also modified several jet fighters to launch the missiles.

—Stephen Green, "Iranian missiles put US Navy in harm's way in Persian Gulf," 3 June 1999, Copley News Service, in Lexis-Nexis, www.lexis-nexis.com; John Mintz, "Ambiguity Clouds French Role in China-Iran Deal," *Washington Post*, 3 April 1999, www.washingtonpost.com.

3-9 June 1999

Iran and North Korea assist Syria in its efforts to develop missile and warhead production capabilities.

—Galal Nassar, "Bolstering Syrian-Russian Ties," *Al-Ahram Weekly*, (Cairo), Issue No. 432, 3-9 June 1999, www.ahram.org.eg.

4 June 1999

Using the Chinese-supplied C-802, Iran is now able to attack ships in the Persian Gulf. The range of these missiles is 25km and can reach an altitude of 65km if Iran obtains an over-the-horizon-radar system. China can use patrol boats and frigates for a sea-launched base and mobile launchers for a surface-based launch.

—Steven Green, "Missile Bought From China Gives Iran Capability to Hit Navy Ships in the Gulf," *San Diego Union Tribune*, 4 June 1999, in Lexis-Nexis, www.lexis-nexis.com.

9 June 1999

Martin Indyk, head of the Middle East Bureau at the State Department, says that Iran is developing missiles and weapons of mass destruction.

—"Arms Race In Mideast Predicted," *Atlanta Journal and Constitution*, 26 May 1999, in Lexis-Nexis, www.lexis-nexis.com.

10 June 1999

Iran launches Scud-B missiles on the National Liberation Army's camp in Ashraf, Iraq. An official spokesman for Iraq says that Iran fires three missiles at the camp, and also cites the United Nations Security Council for "stripping Iraq of its defense capabilities, which enable it to protect its security and sovereignty against the aggression threatening it." Sanabarq Zahedi, chairman of the Judges Council at the National Resistance of Iran, says that the missiles do not cause any injuries to the Iranian Liberation Army, but some Iraqi civilians are injured near the Ashraf camp. In response to Iran denying responsibility for the attack, Zahedi says, "I think that this denial is ridiculous because Iran is the only party that owns Scud-e missiles." [Note: "Scud-e" is likely a mistranslation, and should read "Scud-B."] Zahedi says that three missiles fall on the Ashraf camp, and the attack violates all

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international resolutions, including Resolution 598 that calls for the end of the war between Iran and Iraq. According to "reliable sources," Iran "will probably launch more attacks on MKO [Mujahideen-e Khalq], avenging its assassination of Brigadier General Ali Sayad Shirazi, deputy commander in chief of the Iranian Armed Forces." MKO Spokesman Farid Suleiman says that Iran launches a fourth missile from Kermanshahan in western Iran, but it explodes in the air. In statements to the Iraqi News Agency, a speaker for Iraq's National Assembly warns Iran against launching more attacks. Citing unnamed media reports, the *Tehran Times* acknowledges the MKO claims that several Scuds hit their base, and quotes "an informed source" as saying, "the Iraqi government had been informed of the attack in advance." Several days after the attacks, the MKO calls on the international community to condemn the attacks, saying that Iran's development of missiles and weapons of mass destruction "will pose a threat to the region as a whole." The MKO says that the decision to launch Scuds on the Ashraf base "was made in a session of the Iranian National Security Council that was run by President Mohammad Khatami and attended by Hasan Moqaddam, commander of the missiles unit in the Revolutionary Guard." Mohammad Muhdithin, chairman of external relations for the "National Resistance Council in Iran," says that Iran is seeking missiles with a 3,000km range, and has spent over \$1.5 billion on its missile programs over the past ten years.

—"Iran-e Azad Reports Missile Attack Against MKO Base," *Iran-e Azad* (Internet), 10 June 1999; in FBIS Document FTS19990610001993, 10 June 1999; "Iraqi Spokesman Warns Iran Over 'Stupid' Acts," Iraqi News Agency (Baghdad), 11 June 1999; in FBIS Document FTS19990611000485, 11 June 1999; "Opposition: Iran Denial of MKO Base Strike 'Ridiculous'," Al-Jazirah Space Channel Television (Doha, Qatar), 11 June 1999; in FBIS Document FTS19990612000191, 11 June 1999; "More Iranian Attacks on MKO Expected 'Avenging' Shirazi," *Al-Hayat* (London) 12 June, 1999; in FBIS Document FTS19990612000117, 12 June 1999; "National Assembly Warns Iran of Launching 'More' Attacks," Republic of Iraq Radio Network (Baghdad), 13 June 1999; in FBIS Document FTS19990613000197, 13 June 1999; "Iran: Iraq Warned of Missile Attack on MKO," *Tehran Times* (Tehran), 15 June 1999; in FBIS Document FTS19990615000681, 15 June 1999; "MKO Warns of Iranian Missile 'Threat'," *Al-Hayat* (London), 17 June 1999; in FBIS Document FTS19990617000590, 17 June 1999.

11 June 1999

Iraq says that Iran fires three long-range ground-to-ground missiles at an Iranian exiled opposition group, Mujahideen Khalq, based in Iraq.

—"Iranian Missiles Fired, Iraq Says," *Buffalo News*, 11 June 1999, in Lexis-Nexis, www.lexis-nexis.com.

11 June 1999

Iraq accuses Iran of firing three long-range missiles into a military base of the People's Mujahideen [Mujahideen-e Khalq Organization (MKO)] in Iraq. A spokesman for the opposition group says that several Scud-B missiles hit the group's Ashraf base, 110km northeast of Baghdad, near the border with Iran.

—"Baghdad accuses Iran of firing missiles into Iraq," Agence France-Presse (Baghdad), 11 June 1999.

11 June 1999

The Mujahideen-e Khalq (MKO) claims that Iran fires four Scud-B missiles on their base in Iraq.

—"Iran-Iraq Opposition," Agence France Presse, 11 June 1999, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

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12 June 1999

Iran launches surface-to-surface missiles on an Iranian opposition base in Iraq. Farid Soleimani, a guerilla spokesman, says that two missiles, Scud-Bs, hit the camp and a third one hits the village of Sheik Shuneif, while a fourth missile explodes in the air.

—"Iran is Accused of Missile Strikes on Opposition Base in Iraq," *St Louis Post Dispatch*, 12 June 1999, in Lexis-Nexis, www.lexis-nexis.com.

14 June 1999

The Iraqi parliament condemns the Iranian missile launch against an exiled Iranian opposition group inside Iraq. Iran also fires three long-range missiles on the camp of Ashraf used by Mujahedin-e Khalq.

—Patrick Cockburn, "Iranian Jews Demanded Fair Trail for 13 Accused of Spying," *Independent* (London), 14 June 1999, in Lexis-Nexis, www.lexis-nexis.com.

20 June 1999

Iranian President Mohammed Khatami asks British officials to approach Israeli officials with confidence-building measures to improve Iranian-Israeli relations. The British sources say that Khatami's suggestions include a regional agreement that would ban a pre-emptive surface-to-surface missile attack against other Middle Eastern countries that sign the agreement. Khatami also suggests a bilateral agreement with Israel to disarm long-range ballistic missiles with non-conventional warheads, to be followed by an agreement that development of long-range missiles would be strictly for launching satellites, and would have no military applications. According to *Haaretz*, British sources feel the Iranians are "acting in good faith," and maintain that the Iranian military build-up is not targeted against Israel, but against other regional threats including Iraq, Afghanistan, and Pakistan. Israeli sources, however, are wary of the proposal, saying, "Khatami is less than totally informed when it comes to security affairs. The country's defense and security establishments are controlled by bodies not totally under his command, and his ability to have the final word on these matters is questionable at best."

—"UK Sources—Iran Seeking 'Secret Dialogue' With Israel," *Haaretz* (Tel Aviv), 20 June 1999; in FBIS Document FTS19990620000317, 20 June 1999.

21 June 1999

President Mohammed Khatami of Iran is seeking arms control agreements in the Middle East, whereby countries possessing surface-to-surface missiles would not launch pre-emptive missile attack on the signatory member-states. Iran is also seeking a bilateral agreement with Israel concerning the disarmament of long-range ballistic missiles carrying non-conventional warheads.

—Mark Huband, "Iran Moves to Open Dialogue With Israel," *Financial Times* (London), 21 June 1999, in Lexis-Nexis, www.lexis-nexis.com.

25 June 1999

Senior academic associate of Russia's Ministry of Foreign Affairs, Radzhab Sattarovich Safarov, analyzes Iran's Shahab-3 ballistic missile. In an article from Moscow's *Nezavisimoye Voyennoye Obozreniye*, he says that Iran is intent on developing its missile capabilities, and that its leaders "have learned to prepare for the worst." Regarding alleged Russian cooperation with Iran, he says that the United States is concerned about aid involving personnel

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training, control systems, software, computer hardware, special steels, graphite, and other materials. He says the Shahab-3 can carry a one-ton warhead, and is capable of reaching as far as Egypt, Israel, some NATO countries, all of Central Asia and the Persian Gulf countries, southern Russia, and parts of China and India.

—"Iran's Ballistic Missile test Eyed," *Nezavisimoye Voyennoye Obozreniye*, (Moscow), 25 June 1999; in FBIS Document FTS19990707001674, 25 June 1999.

30 June 1999

The Islamic Republic of Iran Air Force recently unveiled two new laser-guided air-to-surface missiles, which were built under Project ASSR-67, at Tactical Air Base 1 in Mehrabad, Iran. The Sattar-1 reportedly has a 20km range, and the Sattar-2, a 30km range. The two missiles are apparently for use by Iranian F-4E and F-5E fighter aircraft.

—Homa Farmehr, "Iran's Air-Power Projects Revealed," *Jane's Defence Weekly*, 30 June 1999, p. 18.

July 1999

On 2 September 1998 a joint statement by the presidents of Russia and the United States arranged for further collaboration in the fields of export control and nonproliferation. As a result of this statement, joint expert groups meet to discuss legal and practical export control issues. The author observes that the joint project is enabling practical cooperation between Russian and U.S. agencies. Zvedre believes that continuing cooperation in establishing international nonproliferation and export control regulations is in the long-term interest of Russia and the United States.

—Yevgeniy Zvedre, "Russian-American Dialogue on Nonproliferation: the Iran Factor and Cooperation on Export Controls," *Yadernyy Kontrol*, No.3, May-June 2000, pp. 4-7.

July 1999

Two new laser guided air-to-surface missiles built under Project ASSR-67 are unveiled at a recent Islamic Republic of Iran Air Force display at Tactical Air Base 1 at Mehrabad. The Sattar-1, which outwardly resembles a combination of HAWK/Phoenix missiles, is claimed to have a range of 20km. The Sattar-2, which is said to have a completely indigenous design, is equipped with a Paveway-type search sensor and has a range of 30km. These two missiles are intended for use by Iran's F-4E Phantoms and F-5E Tiger Is.

—Homa Farmehr, "Iranian Sea Cobras Rebuilt: Helos and Missiles Developed," *Jane's Defence Upgrades*, 30 July 1999, in Lexis-Nexis, www.lexis-nexis.com.

13 July 1999

Iran opens a consulate in Hong Kong. This raises suspicions of arms smuggling, due to Iran's record of using Hong Kong as a conduit for smuggling weapons and weapon components. Missile guidance components were smuggled through Hong Kong in 1992 to the Iranian Air Force and companies run by the military.

—Glenn Schloss, "Consulate for Iran Raises Arms Concern," *South China Morning Post*, 13 July 1999, in Lexis-Nexis, www.lexis-nexis.com.

14 July 1999

Kenneth R. Timmerman, president of the Middle East Data Project Inc., recently testifies before the U.S. House Science Subcommittee on Space and Aeronautics that Russian aerospace entities, including the Russian Space

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Agency, were directly assisting Iran in the design of a ballistic missile called "Kawsar" (Kosar), which he reports as having a range of 4,250km.

—Audrey Hudson, "Analyst Fears US Helps Iran Develop Missile Via Moscow," *Washington Times*, 14 July 1999, www.washtimes.com.

14 July 1999

According to Kenneth R. Timmerman, president of the Middle East Data Project Inc., Iran's new ballistic missile appears to be developed around the Russian RD-216 liquid-fueled rocket engine, which the Soviet Union first used in the SS-5 intermediate-range ballistic missile. The new missile comes as a follow-up to the Iranian Shahab-3 and Shahab-4 ballistic missiles. House Science Committee Chairman F. James Sensenbrenner Jr., says, "If the information on the Kosar [*sic*] missile is true, Iran's progress in developing a missile capable of reaching the United States represents a sea change in the threat facing the US mainland."

—F. James Sensenbrenner, "Hearing Reveals first detailed findings of Iranian Missile," *Federal Document Clearing House*, 16 July 1999; in SIPA Gulf 2000.

18 July 1999

According to Representative James Sensenbrenner, Jr., it is imperative that the U.S. Congress pass a law to penalize Russia for its assistance to Iranian missile program. In a Congress testimony, Kenneth Timmerman says the Iranian missile "Kosar," which is a multi-staged ballistic missile, seems to be based on the old Soviet SS-5 intermediate-range ballistic missile. This missile follows the Shahab-3 and Shahab-4, and is capable of reaching the Middle East and Europe.

—Frank A. Aukofer and Craig Gilbert, "Iranian missile a threat to U.S., Sensenbrenner warns," *Milwaukee Journal Sentinel*, 18 July 1999, in Lexis-Nexis, www.lexis-nexis.com.

18 July 1999

The *Houston Chronicle* reports that with Russia's help, Iran is preparing to test a medium-range multi-stage missile with a range of perhaps 4240km.

—"Nuclear Threat is Reason to watch upheaval half World Away," *Houston Chronicle*, 18 July 1999, in Lexis-Nexis, www.lexis-nexis.com.

19 July 1999

Qods Air Industries, a company affiliated with the Iranian Ministry of Defense and Armed Forces Logistics, is scheduled to demonstrate its newest unmanned aerial vehicle (UAV) and drones on 20 July 1999. The Saeqeh-1 (Thunder) and Saeqeh-2 are to be used as targets for air defense training. The Muhajer-2 (Traveler), Muhajer-3, and Muhajer-4 are UAVs designed for patrol and reconnaissance missions.

—"Iran Exhibits Advanced Aircraft and Drones," IRIB (Tehran), 19 July 1999.

19 July 1999

According to Hassan Tallayee, managing director of Iran's aviation industries, Iran successfully tests dozens of locally produced unmanned planes, with a flying radius of 1500km at an altitude of 11,000 feet. The planes are equipped for surveillance missions and electronic warfare. He says the Saeqeh-1 (Thunder-1) and Saeqeh-2 are

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ready for mass production.

—"Aviation Official Lauds Merits of Unmanned Planes," IRNA (Tehran), 19 July 1999; in FBIS Document FTS19990719001791, 19 July 1999.

22 July 1999

The Iranian Project Ya-Zahra succeeds in producing a reverse-engineered version of the French Crotale surface-to-air missile (SAM). Iran also has reverse-engineered British Aerospace (Bae) Rapier SAMs. Iranian missile engineers successfully tested eight of these after a complete re-build and upgrade.

—Homa Farmehr, "Anti-aircraft capability is Iran's highest priority," *Jane's Defence Weekly*, 21 July 1999.

23 July 1999

U.S. State Department Spokesman James Rubin expresses concern over the transfer of missiles and missile technology from North Korea to Iran, Pakistan, and other countries. "We will be vigilant in ensuring that we do what we can to prevent the spread of weapons of mass destruction and their delivery vehicles," he states. Iranian television notes the U.S. Central Intelligence Agency report that describes Iran's attempt to acquire weapons of mass destruction as posing "a serious threat to America." The report indicates that Iran is seeking self-sufficiency in its Shahab-3 and Shahab-4 missiles, as well as trying to acquire nuclear weapons.

—"US Expresses Concern Over Possible DPRK Missile Transfers," *Yonhap* (Seoul), 23 July 1999; in FBIS Document FTS19990722001932, 23 July 1999; "Iran TV: CIA Believes Iran 'Serious Threat' to US," IRIB Television First Program Network (Tehran), 24 July 1999; in FBIS Document FTS19990724000705, 24 July 1999.

26 July 1999

Officials from Russia and Iran's foreign ministries discuss nonproliferation issues in Moscow. The Russian foreign ministry issued a press statement saying, "The firm resolve to promote the aims of nuclear and missile nonproliferation was confirmed at the meeting. Both sides again stated their support for the initiative to create a nuclear-weapon-free zone in the Near East." The Russian-Iranian working group for export control meets to discuss the further development of cooperation on export regulations. The press statement says, "the results of the consultations confirmed the sides' mutual interest in expanding cooperation in the spheres of disarmament, nonproliferation, and export control."

—"Russia, Iran Hold Nuclear Nonproliferation Talks," ITAR-TASS (Moscow), 27 July 1999; in FBIS Document FTS19990727000371, 27 July 1999.

27 July 1999

A senior Israeli military intelligence officer tells the Knesset Foreign Affairs and Defense Committee that Iran is developing a 3000km-range missile, in addition to its 1300km-range Shahab-3. Israeli Defense Forces Chief of General Staff Lt.-Gen. Shaul Mofaz also tells the committee that these missiles and Iran's non-conventional capabilities pose a definite threat to Israel, and that Israel must build a response of its own.

—"Mufaz Sees Need for Response to New Iranian Missile," *Jerusalem Post*, 28 July 1999; in FBIS Document FTS19990728001225, 28 July 1999.

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30 July 1999

According to a report in Seoul's *Sisa Journal* on the history of North Korea's missile programs, in late 1985, Iran and North Korea agreed to mutually assist each other with ballistic missile technology. In exchange for priority purchasing rights for North Korea's modified Scud-B missiles, Iran would help fund North Korea's missile programs. North Korea modified the Russian-made Scud-B, extending its range by 20-40km. Starting in 1986, North Korea produced between 4 and 12 modified Scud-B missiles each month, and delivered approximately 100 of the missiles to Iran between 1987 and February 1988. Iran used these missiles against Iraq during the Iran-Iraq War. In the autumn of 1990, Iran signed a deal with North Korea to purchase modified Scud-C missiles, which have a range of 600km, capable of carrying a 700kg warhead.

—"History of DPRK Missile Development Eyed," *Sisa Journal* (Seoul), 30 July 1999; in FBIS Document FTS19990805001385, 30 July 1999.

3 August 1999

Israeli Prime Minister Ehud Barak presses the Russian leaders to exert more control over the transfer of technology to Iran and Iraq.

—Micheal Wines, "Russians Pressed by Barak on Technology to Iran and Iraq," *New York Times*, 3 August 1999, in Lexis-Nexis, www.lexis-nexis.com.

17 August 1999

According to Iranian Foreign Minister Kamal Kharazi, Iran is not receiving missile technology nor equipment from North Korea. "We don't have any relationship with North Korea, so there is no need to worry," Kharazi tells Japanese Foreign Minister Masahiko Komura.

—"Kyodo: Iran Denies Using DPRK Missile Technology," *Kyodo* (Tokyo), 18 August 1999; in FBIS Document FTS19990817001664, 18 August 1999.

17 August 1999

According to Japanese officials, during a meeting with Japanese Foreign Minister Masahiko Komura, Iranian Foreign Minister Kamal Kharrazi denies reports that Iran is using North Korean missile technology.

—"Iran Denies Using North Korean Missile Technology," *Kyodo* (Tokyo), 18 August 1999, home.kyodo.co.jp.

19 August 1999

According to the commander of the Iranian Air Force, Brig-Gen. Habib Baqai, surface-to-air missiles will be deployed during the Haydar-e Karrar military exercises around the province of East Azarbaijan.

—"Paper Reports Start of Iranian Air Force Exercises," *Keyhan* (Tehran), 19 August 1999; in FBIS Document FTS19990819001131, 19 August 1999.

19 August 1999

China is reported to have signed a contract worth \$11 million to upgrade Iranian anti-ship cruise missiles. The contract will focus on Chinese-supplied short-range, anti-ship cruise missiles known as FL-10s. The Chinese will modify the missiles so that they can be launched from Iran attack helicopters and fast patrol boats.

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—"China Reportedly to Upgrade Iran's Anti-ship Cruise Missiles," *Seattle Times*, 19 August 1999, in Lexis-Nexis, www.lexis-nexis.com.

19 August 1999

China signs an \$11 million deal to improve Iran's anti-ship missiles. According to U.S. intelligence reports, the deal involves transfers of technology to upgrade Iran's FL-10 anti-ship cruise missile. The missiles will be modified in order to be fired from Iranian attack helicopters and fast patrol boats.

—Bill Gertz, "China Agrees to Deal with Iran on Missiles," *Washington Times*, 19 August 1999, p. 1.

20 August 1999

China denies a *Washington Times* report that it signed an \$11 million deal to upgrade Iran's anti-ship cruise missile technology. China's Foreign Ministry issues a statement calling the report "groundless." The report alleges that the deal would allow Iran's short-range FL-10 cruise missiles to be fired from attack helicopters and patrol boats.

Chinese ambassador to the United States Li Zhaoxing says, "I can tell you with all certainty that China has never done anything contrary to its international commitments [or] in violation of international norms." U.S. officials disagree on whether the deal violates verbal assurances from Beijing to Washington not to sell cruise missiles or technology to Iran.

—"AFP: PRC Dismisses Reports of Iran Missile Deal," AFP (Hong Kong), 20 August. 1999; in FBIS Document FTS19990820000296, 20 August 1999.

30 August 1999

London's *Al-Wasat* paper details Iran's missile program in a report on missile proliferation in the Middle East. According to the report, Iran first acquired Scud-B missiles from Libya during the war with Iraq in the mid-1980s. In 1987, Iran began producing these missiles domestically, with technical assistance from North Korea. In 1991, Iran started producing the North Korean-modified Scud-C, with a range of 550km. The Scud-B and Scud-C missiles are known in Iran as the Shahab-1 and Shahab-2, respectively. Iran also received assistance from China in manufacturing the 400km M-11 and the 800km M-9 missiles, known in Iran as the Zelzal-1 and Zelzal-2, respectively. With North Korean assistance, Iran is able to start production of the Shahab-3 missile, which is believed to be a version of North Korea's Nodong-1. According to the report, the Shahab-3 has a range between 1,300 and 1,500km, carrying a 750kg warhead. Iran is also working on developing the Shahab-4, believed to have a range of 3,600km with a 1,000kg warhead, or 2,400km with a 2,000kg warhead. The report says that the Shahab-4 is "probably" a version of the old Soviet SS-4 Sundial missile, obtained with Russian assistance. The report also suspects Iran of developing the Shahab-5, an intercontinental ballistic missile (ICBM) with a range of up to 6,000km, "probably" based on North Korea's Nodong-1. Iran is suspected of manufacturing a space launch version of the Shahab-5 to launch its Zahra-1 satellite within the next three years. The report provides specific details of Iran's missile capacity, saying that Iran has 1,500 missiles, including 30 Shahab-3 missiles (1,300km-range); 170 Shahab-2 (Scud-C) missiles (550km-range), some armed with chemical and possibly biological weapons; 250 Shahab-1 (Scud-B) missiles (300km-range), some armed with chemical and possibly biological weapons; 260 Zelzal (M-7) missiles (150km-range) armed with conventional warheads; 250 Nazeat missiles armed with conventional warheads; 200 Shahin missiles (120km-range) armed with conventional warheads; 200 Iqab missiles (100km-range) armed with conventional warheads; and 150 Frog-7 (Luna) missiles (70km-range) armed with conventional

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warheads.

—"Mideast Missile Race Detailed," *Al-Wasat* (London), 30 August 1999; in FBIS Document FTS19990903000290, 30 August 1999.

30 August 1999

Iran Air Industry Organization tests the first mini-jet produced in Iran. The Tulu-4 (Rising or Dawn) engine is suitable for unmanned aerial vehicles (UAVs) and will lead to the production of the largest jet engines in Iran.

—"First Mini-Jet Engine made in Iran," IRNA (Tehran), 30 August 1999, www.irna.com.

Late 1999

The further development of the Shahab-3 and the Shahab-4 missile programs causes alarm among Iran's neighbors and the United States. The Shahab-4 missile will use a variant of the RD-216 liquid-propellant rocket motor originally developed for the Russian SS-5 Skean missile. There are reports that the Shahab-4 will be test-launched within the early months of 2000 at the Shahroud test center. In late 1999, Minister of Defense and Military Logistics Ali Shamkhani notes that there are unspecified problems with the Shahab-4 propulsion unit and states that one test-firing had been conducted but had not been a success because of a "mechanical problem." [Note: The article by Ed Blanche in *Jane's Missiles & Rockets* suggests that according to "US sources," the Shahab-4 project has been code-named "Kosar." There appears to be a significant degree of confusion regarding the Shahab-4 missile—in some locations, the Shahab-4 appears as an independent missile endeavor from the Kosar, and in other areas, Kosar appears as the intercontinental ballistic missile (ICBM) in development by Iran in addition to the Shahab-5 and Shahab-6. Efforts to clarify this by contacting the journalist in question are being pursued.]

—Ed Blanche, "Iran launches four new missile programmes," *Jane's Missiles and Rockets*, 1 December 1999, p. 12.

September 1999

Iran's Islamic Revolution Guard Command exhibits the Zelzal missile, which it claims is "now in mass production." The Zelzal allegedly took four-and-a-half years to develop, and is said to be capable of carrying a 500kg warhead up to 900km. The missile exhibited, however, is a rocket on a truck-mounted launch rail, which likely has a range of 150-200km.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 40.

4 September 1999

Iran will soon be self-sufficient in manufacturing missiles. German customs intelligence states that Iran is making Scud-D missiles with a 300km range. It also notes Iran's desire to make a long-range, solid-fueled missile. Iran turned down an offer of Scud-Ds from North Korea in order to produce its own. According to the magazine *Flight International*, with the help of North Korea and China, Iran has the capability of making parts of the Scud DB [*sic*]. Speculations that Iran may purchase Nodong-1 missiles from North Korea are also stated in the magazine. The Nodong-1 missile has a 1,000km range and has been tested by North Korea. Iran is also researching the possibilities of making a cruise missile utilizing Chinese technology from the Silkworm missile.

—Staff Colonel Yaqub Aslan, "World Strategic Rockets and Missiles: Iran's Surface to Surface Missiles," *Saff*

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(Tehran), No. 229, 22 May- 21 June 1999; in "Saff on Iran's Surface-to-Surface Missiles," FBIS Document FTS19990904000330, 4 September 1999.

5 September 1999

A short video airs on North Korean Central Television showing details of the first stage of the Taepodong missile engine. The video reveals a single engine that looks very much like the engines for Iran's Shahab-3 and Pakistan's Ghauri missiles. The video lends credence to analysis by the United States that the missile programs of these three countries have common ties.

—"Video Shows TaepoDong Engine Resembles Ghauri, Shahab-3," *Mainichi Shimbun* (Tokyo), 11 September 1999; in FBIS Document FTS19990912000879, 11 September 1999.

10 September 1999

A United States intelligence report estimates that Iran could test intercontinental ballistic missiles (ICBMs) by 2010. The report is similar to one projected by the intelligence community in 1998. Keyvan Khosravi, a spokesman for the Iranian military, refutes the assessment, saying the report is based on "unfounded assumptions and conjecture." He says that Iran's defense policy is based on deterrence and that Iran poses no threat to non-hostile nations.

—"US Warns of Missile Threat by DPRK, Iran, Iraq," *Korea Times* (Seoul), 10 September 1999; in FBIS Document FTS19990910000654; "Iran: Defense Ministry Refutes CIA Report on Missiles," IRNA (Tehran), 11 September 1999; in FBIS Document FTS19990911000303, 11 September 1999.

10 September 1999

Iran will be able to test an intercontinental ballistic missile (ICBM) capable of delivering a non-nuclear payload to the U.S. in the next 10 years. However, in just more than 5 years, Iran will be able to launch an ICBM with a nuclear warhead to most of the U.S. mainland.

—Walter Pincus, "Iran, Iraq Could Join Missile Threat to US, Report May Bolster Calls for Defense System," *Washington Post*, 10 September 1999, in Lexis-Nexis, www.lexis-nexis.com.

13 September 1999

U.S. Department of State Spokesman James Rubin says that bilateral talks held in Berlin between the United States and North Korea had resulted in a pledge by North Korea to refrain from testing a long-range ballistic missile. Rubin notes that the agreement stipulates "North Korea will refrain from testing any long-range missiles for the duration of negotiations that are aimed at improving relations between the United States and North Korea." Rubin says that the agreement is not a formal treaty, but that it is a positive step towards a permanent solution to problems on the Korean peninsula.

—James P. Rubin, Daily Press Briefing, U.S. Department of State, www.state.gov, 13 September 1999; *Donga Ilbo* (Seoul), 3 May 2001, in "ROK Daily Sees DPRK Decision To Freeze Missile launch as Gesture to US," FBIS Document ID KPP20010503000123; "North Korea, Iran and Iraq Could Develop ICBMs" *Jane's Missiles and Rockets*, October 1999, Vol. 3, No. 10, in Lexis-Nexis Academic Universe, www.lexis-nexis.com

15 September 1999

According to Professor Kim Chol-Hwan of the Korea National Defense University, North Korea has exported 160

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modified Scud-B and 42 modified Scud-C missiles to Iran in recent years. Professor Kim, speaking at a symposium on international security in Seoul, states that North Korea has exported a total of 490 modified Scud missiles to the Middle East. The modified Scud-B has a range of 320-340km, while the modified Scud-C has a range of 550km. —"ROK Military Professor on NK Scud Exports," *Yonhap* (Seoul), 15 September 1999; in FBIS Document FTS19990915001765, 15 September 1999.

15 September 1999

According to an unnamed Israeli source, Iran is assisting Syria in the development of a 500km-range surface-to-surface missile derived from the Scud-C. It is also reported that Iran's Shahab-3 missile is in a "very advanced" developmental stage and that the "Kawsar" intercontinental ballistic missile (ICBM) is being developed with Russian assistance.

—Arieh O'Sullivan, "Syrian Super Scud Ready Soon: Source," *Jerusalem Post*, 15 September 1999, www.jpost.co.il.

22 September 1999

Iran displays its domestically produced Zelzal (Earthquake) surface-to-surface missile during a ceremony to mark the start of the Holy Defense Week in Tehran. The Islamic Revolution Guards Corps built the missile over four-and-a-half years, without any foreign assistance. The Shahab-1, -2, and -3 missiles are also on display at the ceremony. —"Iran: Missile Named 'Earthquake' Displayed at Parade," IRNA (Tehran), 22 September 1999; in FBIS Document FTS19990922000168, 22 September 1999; "Reopener--Zelzal, Shahab Missiles at Tehran Parade," IRNA (Tehran), 22 September 1999; in FBIS Document FTS19990922000750, 22 September 1999.

22 September 1999

Iranian Navy Commander Admiral Abbas Mohtaj says that Iran would test its Fajr-Darya surface-to-sea missile during the Ettehad (Unity) military maneuvers in the Sea of Oman, between the Hormuz Strait and the southern part of Gwatar Gulf, between 25 September and 2 October 1999.

—"Iran: Navy to Test Anti-Ship Missile in Gulf Exercise," IRNA (Tehran), 22 September 1999; in FBIS Document FTS19990922000275, 22 September 1999.

22 September 1999

The Islamic Revolution Guards Corps (IRGC) displays its Zelzal (Earthquake) missile for the first time during a parade commemorating the anniversary of the beginning of the 1980-1988 Iran-Iraq War. Though there appears to be some confusion as to the Zelzal's capabilities, according to Iranian defense officials, this program was initiated in early 1995 and there have been at least three variants produced: the 1, 2, and 3.

—"IRGC to Put on Display Zelzal Surface-to-Surface Missile," IRNA (Tehran), 19 September 1999, www.irna.com; Ed Blanche, "Iran Launches Four New Missile Programmes," *Jane's Missiles and Rockets*, 1 December 1999, p. 12.

22 September 1999

The Islamic Revolution Guards Corps (IRGC) announces that the Zelzal missile is now in mass production.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), pp. 39-40, www.csis.org.

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22 September 1999

Iranian Navy Commander Admiral Abbas Mohtaj says that the force will launch Ettehad (Unity) maneuvers in the Sea of Oman between the Hormuz Strait and the Southern Part of the Persian Gulf between 25 September and 2 October. The "Fajr-Darya" (Sea Aurora) surface-to-sea missile is to be tested during the military exercises. Though it is not clear whether the Fajr-Darya will be tested after the parade in Tehran, it is the first time that the missile is to be put on public display. It is also unclear whether the Fajr-Darya is a new version of the Fajr-4 missile.

—"Naval Exercises Planned in Sea of Oman Starting 25 September," IRNA (Tehran), 22 September 1999, in Lexis Nexis, www.lexis-nexis.com; Ed Blanche, "Iran Launches Four New Missile Programmes," *Jane's Missiles and Rockets*, 1 December 1999, p. 12.

22 September 1999

Iran shows its surface-to-surface Zelzal system during a military parade in Tehran. Parade organizer Brig. General Gholam Husayn Gheibparvar says the Islamic Revolution Guards Corps (IRGC) developed the rocket over a four-and-one-half-year period and that the Zelzal SSM is now in mass production. Though no technical details are disclosed, the Zelzal SSM is believed to be a variant of the Zelzal-2 system, which was offered for export in 1996. Some analysts believe the Zelzal SSM can carry a 500kg warhead, including nuclear or biological weapons, for a range of 900km. Some reports in early 1997, however, said an Iranian project called Zelzal involved a two-stage missile with a range of 1,000km-1,500km. The truck-mounted missile on display appears to be a rocket on a launch rail about one-third longer than its own length and with a likely range of 150km-200km.

—Ed Blanche, "Iran shows off new hardware," *Jane's Defence Weekly*, 29 September 1999, in Lexis-Nexis, www.lexis-nexis.com.

28 September 1999

A ceremony held in Iran marks the start of 25 projects overseen by the Iranian Ministry of Defense and Armed Forces Logistics, including plans to produce laser-guided Tondar-1, Towsan-1, and Super Dragon anti-tank missiles, and the Misaq-1 SSM.

—"Iran: President Khatami Hails Defense Capabilities," Voice of the Islamic Republic of Iran (Tehran), 28 September 1999; in FBIS Document FTS19990928000781, 28 September 1999.

28 September 1999

Iranian President Mohammad Khatami inaugurates 25 defense, industrial, and development projects of the Ministry of Defense and Armed Forces Logistics, including several missile projects. Khatami says that the most important projects are the laser-guided Tondar-1 and Towsan-1 anti-heavy armor missiles, the Super Dragon anti-semi-heavy armor missile and the Misaq-1 anti-air missile. These missiles are all being designed and mass-produced by the Aerospace Industries Organization. According to the head of Iran's Armed Forces Research and Center for Self-Sufficiency, Brigadier General Olfati, the Iranian Army has successfully completed its research project on radar-guided missiles and will soon upgrade the F-14 fighter plane with air-to-surface missile capabilities. Olfati also describes other projects underway, including the manufacture of long-range air-to-surface missiles, and the construction of missile boats and destroyers.

—"Iran: President Khatami Hails Defense Capabilities," Voice of the Islamic Republic of Iran First Program Network (Tehran), 28 September 1999; in FBIS Document FTS19990928000781, 28 September 1999; "Iran: Army to

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Manufacture Helicopters," IRNA (Tehran), 29 September 1999; in FBIS Document FTS19990929001095, 29 September 1999; "Iran: Exhibition of Army's Innovations Opens in Tehran," Voice of the Islamic Republic of Iran First Program Network (Tehran), 1 October 1999; in FBIS Document FTS19991001000334, 1 October 1999.

30 September 1999

Britain plays an increasingly active role in forging new ideas in arms control and nonproliferation between Iran and Israel, especially since the resumption of diplomatic ties with Iran. The British foreign office denies reports by the Israeli *Haaretz* newspaper that during a meeting between British and Israeli officials, the British officials presented a package of confidence-building measures that had come from Iranian sources. According to the newspaper, these measures include a pledge not to use long-range ballistic missiles with nuclear warheads.

—Michael Evans, "London Acts as a Broker for Middle East," *Times* (London), 30 September 1999, in Lexis-Nexis, www.lexis-nexis.com.

30 September 1999

In a dinner organized by the Washington Institute, Mr. Kamal Kharazmi, Iranian Foreign Minister, states that Iran would not be the first nation to use ballistic missiles in the Middle East.

—Barbara Slavin, "Iranian Confirms US Request for Assistance in Probe," *USA Today*, 30 September 1999, in Lexis-Nexis, www.lexis-nexis.com.

October 1999

According to the *Washington Times*, North Korea sells 12 missile engines to Iran. The engines are believed to be for "Iran's new Shehab medium-range missiles."

—Bill Gertz, "China, N. Korea Hit With Sanctions," *Washington Times*, 28 June 2001, p. 1; Bill Gertz, "'Critical' N. Korean Missile Parts Seen Aiding Iran's Program," *Washington Times*, 10 February 2000, p. A3.

5 October 1999

The Zelzal-1, Tondar, SAM-6 system, and the Shahab-3 are displayed in Freedom Square, Tehran. A parade also takes place in which Zelzal, Nazeat (Struggle), Sattar (Shield), and Yasir missiles are displayed.

—"Big Parade of the Armed Forces with Advanced Weapons Constructed in Iran," *Kayhan* (Iran), 23 September 1999, neda.net.

6 October 1999

In his testimony, Kenneth Timmerman, a professional staff member working on nonproliferation issues in Congress, says that the name of Strobe Talbott should be written on the Iranian Shahab-3 missile because of the consistent refusal of Mr. Talbott to confront the Russians. He also adds that the Kosar missile project would not have existed had Mr. Talbott taken a firm position towards the Russians.

—Kenneth R Timmerman, "The Russian Missiles We could Have Stopped," Testimony by Kenneth R. Timmerman before the House of International Relations Committee Hearing on US Policy Towards Russia: Warning and Dissent, Washington, DC, 6 October 1999; in www.iran.org.

14 October 1999

According to an Armenian businessman, Iran is trading weapons with Chechen rebels in return for equipment to

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develop its missile programs. The unnamed source says that intermediaries from Armenia and Belarus facilitate the transfer of equipment for Iran's Shahab-3 missile from companies in Russia and Armenia. The equipment, which is banned under U.S. export restrictions to Iran, is said to include machines for bending and coiling metals, electronic machines for lathing metals, and substances for manufacturing liquid fuels. The source says that the Iranian Defense Ministry and the intermediaries began this relationship in late 1998. The official believed to be in charge of procurements for Iran's missile project introduces himself as a representative of the Iranian industrial group "Shigh" (as transliterated).

—"Armenian Says Iran Traded Arms for Missile Equipment," *Al-Sharq al-Awsat* (London), 15 October 1999; in FBIS Document FTS19991015000335, 15 October 1999.

25 October 1999

According to intelligence sources in the West and Middle East, Russian companies are smuggling supplies for Iran's missiles and non-conventional weapons via the Caspian Sea. The sources believe that an agreement between the Russian Transport Ministry and Mahmud Hojati-Najafabadi, Iran's Minister of Roads and Transport, was signed in August 1999. The intelligence sources say that a Russian shipping company with branches in Europe transports the banned equipment from European ports to Russian ports on the Caspian Sea. Russian and Iranian shipping companies then transport the equipment to Iran. The main smuggling routes are believed to be between the Russian ports of Astrakhan and Olya to the Iranian ports of Bandar-e Anzali and Bandar Nowshahr. Other ports in use include Lagan in Russia and Banda Naka and Amirabad in Iran. Iran is also believed to be cooperating with India on missile programs, and is suspected of supplying navigation and guidance systems for India's long-range missiles as part of a deal to improve each country's missile capabilities. The Russian foreign ministry denies the allegations, saying, "cooperation between Russia and Iran is being actively expanded but it's absolutely transparent and 100% legitimate."

—"Russia Uses Caspian For Missile Run," *Times* (London), 25 October 1999; in FBIS Document FTS19991025000714, 25 October 1999; "Russia Denies Shipping Missile Parts to Iran," *Interfax* (Moscow), 25 October 1999; in FBIS Document FTS19991025000558, 25 October 1999.

25 October 1999

Russian and Iranian companies are believed to smuggle prohibited missile components through the Caspian. In fact, the Caspian Sea is believed to be used for the transportation of prohibited parts emanating from Europe. Western intelligence points to the signature of an agreement between Russian Transport ministry and Hojati-Najafabadi, Iran's minister of transportation. According to intelligence sources suspect use of the route from the Russian ports of Astrakhan and Olya to the Iranian ports of Bandar-e Anzali and Bandar Nowshahr. Other ports might also be used, such as Lagan in Russia and Banda Naka and Amirabad in Iran.

Also reported is Austria's detainment of a Russian vessel traveling to Iran and transporting material used in ballistic missile warhead coating. Iran is believed to have exchanged expertise with India concerning the development of surface-to-surface missiles. Iran is suspected of having provided India with navigation and guidance systems for long-range missiles.

—Michael Evans, "Russia Uses Caspian For Missile Run," *Times* (London), 25 October 1999, in Lexis-Nexis, www.lexis-nexis.com.

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November 1999

North Korea supplies a dozen medium-range ballistic missile engines to Iran, which indicates that Pyongyang has not curbed its transfers of missile know-how and equipment, according to a *Washington Times* report. [Note: See October entry for sales.]

—"N. Korea sells Iran medium-range missile engines," *Japan Economic Newswire*, 9 February 2000, in Lexis-Nexis, www.lexis-nexis.com.

November 1999

U.S. spy satellites detected what appeared to be a shipment of 12 missile engines being loaded onto an Iranian cargo plane near Pyongyang, North Korea. U.S. and Israeli analysts believe that one of the engines was later used successfully in a February 2000 test of Iran's Shahab-3 missile. [Note: See October entry for sales.]

—Michael Dobbs, "A Story of Iran's Quest for Power: A Scientist Details The Role of Russia," *Washington Post*, 13 January 2002, in Lexis-Nexis, www.lexis-nexis.com.

2 November 1999

At a news conference during a visit to Washington by Saudi Arabia's Defense Minister Prince Sultan Bin Abd Al-Aziz Al Saud, U.S. Defense Secretary William Cohen says that cooperative defense initiatives between the United States and its Middle East allies will involve shared early warning, active and passive defenses to deal with chemical and biological weapons [CBW], and ways to deal with the consequences of CBW use in the region. One of the main drives behind Cohen's initiative is Iran's ambitious short- and medium-range ballistic missile programs. Amin Tarzi, a Middle East specialist at the Monterey Institute of International Studies, says that while support for the United States is keenest in Kuwait, the overall regional response to the U.S. initiative is at best lukewarm. Jacquelyn Davis and Charles Perry, analysts at the Institute of Foreign Policy Analysis, Inc., believe that much of the security planning of the Gulf Cooperation Council (GCC) nations, depending on the specifics of each nation's geo-strategic situation, revolves around preventing the flexing of muscles by Iran and Iraq. The Dubai crown prince and the defense minister of the United Arab Emirates (UAE), Gen. Sheikh Mohammed bin Rashid Al Maktoum, says that neither Iran nor Iraq is a threat to the Persian Gulf region. Regional analysts, however, suggest that senior officials in Abu Dhabi see Iran as a potentially destabilizing element in the region and remain interested in pursuing a missile defense capability. One unidentified UAE military official says that a purely defensive capability will not provide sufficient deterrent. He suggests that a mix of defensive and offensive capabilities would prove more effective. He also adds that the United States is not willing to sell certain types of offensive weapons, such as long-range air-launched strike weapons.

—Douglas Barrie and Gopal Ratnam, "GCC Lacks Consensus on Regional Missile Shield," *Defense News*, 10 January 2000, p. 4.

November 3 1999

The Iranian opposition group, Mujahideen-i-Khalq Organization (MKO), accuses Iran of firing Scud ballistic missiles at its bases north of Basra, Iraq. This is the 80th attack by Iran against Iranian resistance on Iraqi territory since 1993.

—"Mojahedin-e Khalq Says Camps in Iraq Attacked 2 Nov," Al-Jazirah Space Channel Television (Doha); in FBIS Document FTS19991103000938, 3 November 1999.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



3 November 1999

Iranian Foreign Ministry spokesman Hamid Reza-Asefi denies that Iran fires missiles at the base and says that no missile is fired from Iranian soil to Iraq.

—"Mojahedin-e Khalq Says Camps in Iraq Attacked 2 Nov," Agence France-Presse, 4 November 1999; in FBIS Document FTS19991104000432, 4 November 1999.

3 November 1999

According to an AFP report, the Mojahideen-e Khalq (MKO) terrorist group says Iran attacks one of their bases in Iraq with a missile. Iranian Foreign Ministry spokesman Hamid Reza Asefi denies the allegations, and says that the matter is related to Iraqi internal affairs and Iran is not involved. The MKO vows revenge against Tehran for the attack, which kills five MKO members and one Iraqi soldier, in addition to leaving 54 wounded. The base hit is at Habib, 45km from the southern Iraqi city of Basra, and only 35km from the Iranian border. [Note: See previous entry.]

—"Iran Denies Attack on MKO Base in Iraq," IRIB Television Fourth Program Network (Tehran), 3 November 1999; in FBIS Document FTS19991103001589, 3 November 1999; "AFP Iran Opposition Vow Revenge for Missile Attack," AFP (Paris), 4 November 1999; in FBIS Document FTS19991104000432, 4 November 1999.

3 November 1999

Russian Prime Minister Vladimir Putin makes it clear to Ehud Barak that his country is opposed to proliferation of non-conventional weapons.

—Danna Harman, "Russian Prime Minister Vladimir Putin: It Would Be 'Stupid' for Russia to Give Iran Nuclear Technology," *Jerusalem Post*, 3 November 1999, in Lexis-Nexis, www.lexis-nexis.com.

3 November 1999

The Islamic Revolution Guards Corps (IRGC) holds air exercises in a desert in central Iran and plans to test-fire a new locally manufactured anti-aircraft missile. The exercises begin near Qom, south of Tehran, and are scheduled to end on 10 November (the first day of Guards Corps week) with "final testing" of the Sayyad-1 anti-aircraft missile.

—"Iran Revolutionary Guards to Test New Missile," Reuters, 3 November 1999; "Iran: Anti-Aircraft Missile to be Test Fired on 10th November," BBC Worldwide Monitoring, 9 November 1999.

5 November 1999

According to unnamed intelligence reports, Iran is providing Chechen rebels with shoulder-held surface-to-air missiles and anti-tank guided weapons. Two senior Chechen rebels representing the Chechen warlord Khattab allegedly visited Iran in mid-October and met with senior members of Iran's Revolution Guards. They allegedly asked for SAM-7 anti-aircraft missiles and advanced anti-tank guided missiles from Iran's military industry. The weapons are expected to be delivered to the Chechens via Armenia and Georgia, then by cargo ship across the Caspian Sea via Dagestan.

—"UK Daily: Iran Supplying Chechen Rebels With Missiles," *Times* (London), 5 November 1999; in FBIS Document FTS19991105000514, 5 November 1999.

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5 November 1999

Intelligence reports say that Iran is providing the Chechen rebels with shoulder-held surface-to-air missiles and anti-tank guided weapons. Two Chechen leaders, including Khattab, visited Iran about three weeks ago. They are believed to have asked the Islamic Revolution Guards Corps (IRGC) for SAM-7 anti-aircraft missiles and advanced anti-tank missiles manufactured by the Iranian military industry.

—Giles Whittell and Michael Evans, "Chechen Flees as Iran Builds Rebel Strength," *Times* (London), 5 November 1999, in Lexis-Nexis, www.lexis-nexis.com.

9 November 1999

The Mujahideen-i-Khalq (MKO) accuses Iran of launching Scud missiles against its Habib base 45km north of Basra, Iraq. Iranian Foreign Ministry spokesman Hamid Riza Asefi denies the accusations and says that Iran has not executed any military operations on Iraqi soil.

—"The Khalq Freedom Fighters Threatened Tehran After Dozens of Its Fighters Were Killed and Injured by a Scud Rocket That Blasted One of its Bases in Al-Basra—Iran Denies Responsibility and Alludes to the Possibility that Saddam Hussein's Oppositionists Could be Behind the Attack," *Al-Sharq Al-Awsat* (London), 11 November 1999, www.asharqalawsat.com.

10 November 1999

The United Nations General Assembly unanimously approves Iran's proposed resolution on missile weaponry after weeks of deliberations. Iran's permanent representative to the UN, Hadi Nejad-Husseinian, tells the Islamic Republic News Agency that the issue of missile weaponry has never been discussed within the context of resolution at the United Nations. The resolution differentiates between the deployment of missile weapons as conventional arms and as weapons of mass destruction. Furthermore, the resolution asserts that the issue should be dealt with broadly, while taking into consideration security concerns of the world's countries collectively. Russia, China, and the non-aligned countries unanimously support the resolution while the Americans state that it is too early to include the missile topic in the agenda of the United Nations.

—"UN Approves Iran's Resolution on Missile Weaponry," IRNA (Tehran), 10 November 1999; in FBIS Document FTS19991110000379, 10 November 1999.

10 November 1999

The Islamic Revolution Guards Corps announces that the Sayyad-1 anti-aircraft missile will be tested south of Tehran today, the first day of Guards Corps week.

—"Iran to Test Fire Sayyad-1 Antiaircraft Missile 10 Nov.," Voice of the Islamic Republic of Iran (Tehran), 9 November 1999; in FBIS Document FTS19991109000888, 9 November 1999.

10 November 1999

The Clinton administration announces that U.S. sanctions imposed on ten Russian organizations for aiding Iranian nuclear and missile programs will be renewed for an additional year.

—"To the Congress of the United States," White House, Office of the Press Secretary, 10 November 1999.

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14 November 1999

Major General Yahya Rahim-Safavi, Commander of the Islamic Revolution Guards Corps (IRGC), says that Iran is a major ballistic missile power. He says that the IRGC is equipped with missile boards that can fire missiles to a range of 100km and is fully capable of defending Iran against foreign threats.

—"Iran Boast Missile Prowess," *Middle East Newsline*, 14 November 1999, www.menewslines.com.

22 November 1999

Alleged sales of Scud ballistic missile from Iran to the Democratic Republic of the Congo (DRC) have surfaced. However, an unnamed U.S. official says that the United States has no information to back up the allegation. Unidentified sources state that Iranian military officers are in the DRC capital of Kinshasa as part of a delegation of technicians working to assemble the missile systems.

—Bill Gertz, "Iran Sold Scud Missiles to Congolese," *Washington Times*, 22 November 1999, www.washingtontimes.com.

22 November 1999

U.S. intelligence agents detect Scud-B and Scud -C missile systems in the Democratic Republic of Congo. The assembly of these missiles coincides with visits of Iranian military officials to Kinshasa.

—"Iran Denies Having Sold Scud Missiles to The Democratic Republic of Congo," *Washington Times*, 22 November 1999, in Agence France Presse, 24 November 1999, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

23 November 1999

Information Minister Didier Mumengi of the Democratic Republic of Congo denies reports that his government purchased Scud missiles from Iran. Likewise, a spokesman for the Iranian Embassy in Pretoria categorically denies the allegations.

—"DRC Government Denies Purchasing Scud Missiles From Iran," *Radio-Television Congolaise Radio* (Kinshasa), 23 November 1999; in FBIS Document FTS19991123001871, 23 November 1999; "Iran Denies Selling Scud Missiles to DR Congo," *Tehran Times*, 27 November 1999; in FBIS Document FTS19991127000268, 27 November 1999.

23 November 1999

The Clinton administration says that it is investigating a report claiming that Iran sold Scud missiles to the Democratic Republic of Congo. The *Washington Times* reports that CIA agents detected the presence of the Iranian version of Scud-B in the Democratic Republic of Congo. Iranian officials are believed to have flown to the Democratic Republic of Congo as part of a delegation of technicians to help assemble the missile systems.

—"Missile Sale Report to be Investigated," *Milwaukee Journal Sentinel*, 23 November 1999, in Lexis-Nexis, www.lexis-nexis.com; Toby Harnden, "International: Scud Missiles 'Sold by Iran' to Aid Congo in Civil War," *Daily Telegraph* (London), 23 November 1999, in Lexis-Nexis, www.lexis-nexis.com.

24 November 1999

A spokesman for the Iranian embassy in Pretoria, South Africa denies that Iran sold Scud missiles to the Democratic Republic of Congo.

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—"Iran Denies Having Sold Scud Missiles to The Democratic Republic of Congo," Agence France Presse, 24 November 1999, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

26 November 1999

A truck carrying four missiles explodes in an Iranian opposition camp in Iraq. Initially, the missiles are supposed to be fired at the camp but one of them explodes and tears up the truck. Iran denies any link to this operation.

—"Iranian Dissident Camp in Iraq Is Attacked," *New York Times*, 26 November 1999, in Lexis-Nexis, www.lexis-nexis.com.

1 December 1999

According to Iran's state-run television and other sources, Iran recently inaugurated four new missile programs: a surface-to-air missile called Misaq, two laser-guided heavy anti-armor systems called Tondar and Tosan (Fury), and a medium-weight anti-armor system called Super Dragon. Iran is also reportedly developing an anti-tank, wire-guided Nafez missile and the I-Raad, an improvement on the Raad anti-tank missile. The programs are conducted under the supervision of the Islamic Revolution Guards Corps (IRGC) and are developed by the Defense Industries Organization. Iran's expanding defense industries appear to have mastered the techniques of reverse engineering. It is likely that the Super Dragon is based upon the U.S.-designed short-range anti-tank missile that the Iranian military acquired before the Islamic Revolution. The Sayyad-1 is understood to be a reverse-engineered SA-2 "Guideline" which was test fired in April 1999. IRNA quoted a defense ministry official as saying that the "whole process, from design to manufacture, was carried out at the Defence Ministry's Aerospace Industries Organization...The Sayyad-1 missile...meets the major part of the needs of our air-defense network for medium- and long-range weapons." Iran has also reverse-engineered a version of the French Crotale surface-to-air missile (SAM) and the BAe Rapier SAM, and the Raad anti-tank missile is understood to be based upon the AT-3b Sagger 9M14M Russian system. Nothing is known about the Misaq SAM project, except that it is likely to involve reverse-engineering and an existing system that is adapted to fit IRGC requirements.

—Ed Blanche, "Iran Launches Four New Missile Programs," *Jane's Missiles & Rockets*, 1 December 1999.

6 December 1999

Former Israeli Prime Minister Shimon Peres says that the weapons delivered by the United States in the Iran-Contra deal included anti-tank missiles. These weapons were provided to Iran in exchange for Iran's cooperation in the release of U.S. hostages held in Lebanon by pro-Iranian Shiites.

—"Peres Spills Iran-Contra Beans," *Gazette* (Montreal), 6 December 1999, in Lexis-Nexis, www.lexis-nexis.com.

7 December 1999

Iranian Defense Minister Ali Shamkhani inaugurates the mass production of the Towsan-1 guided anti-armor missile, saying, "The Islamic Republic of Iran is quite self-sufficient in manufacturing anti-armor missiles, in terms of the type of missile, its range and, so to speak, the strength of warheads." The Towsan-1 will be used by the army and navy for tactical operations.

—"Shamkhani: Iran Self-Sufficient in Antitank Missiles," IRIB Television First Program Network (Tehran), 7 December 1999; in FBIS Document FTS19991207001831, 7 December 1999.

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7 December 1999

Iranian Defense Minister Ali Shamkhani says that Iran has started the production of the anti-tank missile "Toussan-1," with a range of 4,000 meters. He adds that these missiles would upgrade the anti-armor defense capabilities of Iran. Ahmad Vahid, general-director of the armed forces aerospace industry, says that these missiles can be used during night fighting, and they can destroy targets as far as 2,500 meters.

—"Beginning of anti-tank missile modern production in Iran," IRNA 7 December 1999, in Agence France Presse, 7 December 1999, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

12 December 1999

A diplomatic source says that North Korea intends to export its Taepodong-1 (Paektusan-1) for about \$6 million each, and that the first client will probably be Iran. According to the report, North Korea has about 10 Paektusan-1 missiles in its inventory.

—Yonhap News Agency, 12 December 1999, in "DPRK Said To Plan To Export Daepo Dong Missile to Iran," FBIS Document ID FTS19991211000932; North Korea Seeks Ballistic Missile Exports: Report," Agence France Presse, 12 December 1999, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Cho Ho Yŏn, "Puk Taepodong Missile Iran Such'ul Kyehoik, 1Kidang 6paengmanbul'e," *Kyunghyang Shinmun*, 13 December 1999, p. 2, in KINDS, www.kinds.or.kr.

13 December 1999

Iranian Brigadier-General Javanmard says that the Army's aviation service (havanirouz) successfully manufactures missile launchers mounted on "meymand" helicopters.

—"Iran: Imam's 'Self-Sufficiency' Vision Aids Army," *Tehran Times*, 13 December 1999; in FBIS Document FTS19991213001883, 13 December 1999.

13 December 1999

According to South Korean sources, North Korea intends to sell Taepodong ballistic missiles to Iran for \$6 million each.

—"North Korea Sells Tehran Long-Range Missiles," *Al-Zaman* (London), 13 December 1999, p. 1.

20 December 1999

Daniel A. Malloy, former president of International Helicopter Inc., of Northvale, NJ is sentenced to 28 months in jail in federal prison and \$750,000 after pleading guilty to shipping missile and military aircraft parts to Iran. He is also ordered to forfeit the \$1.88 million he earned from the deal. Malloy ordered 20 missiles from Eagle-Picher Technologies Inc., of Joplin, Missouri, by telling an employee that the company batteries would be shipped to London or Singapore. He also admits that in 1997, he shipped missile and aircraft parts to Singapore without licenses from the State Department and was aware of the fact that these parts would end up in Iran. The 1997 shipment included parts of Pratt & Whitney jet engines used in Grumman Fighters and 100 Hawk surface-to-surface missiles.

—Jack Lucentini, "Exporter Trading With Iran Fined, Sentenced," *Journal of Commerce*, 20 December 1999, in Lexis-Nexis, www.lexis-nexis.com.

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21 December 1999

Naval missile launchers are less costly to maintain, repair, service, and operate than submarines, according to studies conducted by Iranian military planners. However, non-quantitative factors tip the scale in favor of submarine acquisition. For example, submarines are less vulnerable to the regional enemy's combat ability to hit and destroy, and submarines can easily submerge and hide themselves from harm's way when necessary.

—Rear Admiral Ashkbus Daneh-Kar, "Operational Doctrine of the Navy of the Islamic Republic of Iran," *Saff* (Tehran), Issue No. 235, 21 December 1999, pp. 32-35.

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1998

Early 1998

China sends about 1,000 tons of specialty steel to Iran.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 35.

1998

The U.S. Congress passes the Iranian Missile Proliferation Sanctions Act, though President Clinton vetoes it.

—Gerald M. Steinberg, *Arms Control and Non-Proliferation Developments in the Middle East: 1998-99* (Ramat Gan, Israel: Begin-Sadat Center for Strategic Studies, September 2000), p. 18.

1998

Iran most likely has more than 60 North Korean Scud-Cs. Other sources indicate the number at 100, or even 170. The North Korean Scud-C has a range of 500km. Iran also reportedly tests a sea-launched ballistic missile.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), pp. 36, 41.

1998

The International Institute for Strategic Studies reports that Iran has more than 400 surface-to-surface missiles, including about 25 CSS-8 launchers with 200 missiles, and about 10 Scud launchers with 210 Scud-B and Scud-C missiles. Iran reportedly tests a short-range surface-to-surface missile from a barge in the Caspian Sea. This test may indicate that Iran plans to launch missiles from merchant ships, thereby allowing it to threaten Israel or the United States with its Scud missiles.

—W. Seth Carus, "Iran and Weapons of Mass Destruction," Cited 3 July 2000, www.ajc.org.

1998

Austria intercepts a Russian vessel traveling to Iran with material to coat ballistic missile warheads.

—"Russia Uses Caspian For Missile Run," *Times* (London), 25 October 1999; in FBIS Document FTS19991025000, 25 October 1999.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



1998

Iran reportedly carries out the test of a sea-launched ballistic missile (SLBM).

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), pp. 39-40, www.csis.org.

1998

China provides Iran's medium-range missile program with test equipment. They also report that the Shahab-3 and Shahab-4 are derived from North Korea's new Nodong missile. [Note: This report contradicts other claims that the Shahab-4 is based on Russian designs.]

—Bill Gertz, "Russia Conspiring with Iran on Missiles," *Washington Times*, 23 February 1998, pp. 1-4.

1998

Under pressure from the United States and Israel, the Moscow Aviation Institute (MAI) began discouraging its scientists from traveling to Iran and eventually stopped Iranian students from studying at the institute. To circumvent the restrictions, Vadim Vorobei, now head of the faculty of engine production at MAI, and several other missile experts created a private business to continue their work with the Iranian Ministry of Energy. The United States claims that Iran's Ministry of Energy is used for missile procurement activities. Vorobei claims to have ended his work with Iran in the summer of 2000, after being issued an ultimatum from MAI.

—Michael Dobbs, "Collapse of Soviet Union Proved boon to Iranian Missile Program," *Washington Post*, 13 January 2002, via Lexis-Nexis, www.lexis-nexis.com.

January 1998

Yuri Koptev, head of the Russian space agency, says that 11 of the 13 cases of illicit technology transfer to Iran raised by the United States have nothing to do with weapons of mass destruction. The other two cases involve suspected dual-use items, both of which were stopped by the Russian government. Russia is investigating one of those two cases. An Israeli intelligence report accuses Koptev of involvement in the transfers.

—Stuart D. Goldman, Kenneth Katzman, Robert D. Shuey, and Carl E. Behrens, "Russian Missile Technology and Nuclear Reactor Transfers to Iran," *CRS Report for Congress*, 29 July 1998, p. 9.

7 January 1998

Alireza Jafarzadeh, a member of the National Council of Resistance of Iran, states that Iran has spent \$1.2 billion trying to develop the Shahab missile, including \$300 million in the last year. He also states, "Presently, dozens of North Koreans and Chinese missile experts are stationed at the Hemat complex. Russians were helping Iran with thermodynamic problems and wind-tunnel tests but North Korean involvement is substantial."

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 41.

16 January 1998

The United States receives concrete promises by the Russian government to stop Russian companies and scientists from assisting Iran's ballistic missile program. Some Israeli officials and the American Israel Public Affairs Committee believe that Iran is within months of having the ability to manufacture a missile called the Shahab-3

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(which is based on the North Korean Nodong missile), capable of carrying a one-ton warhead about 850 miles. Iran has made a series of engine tests on the missile, and a first test-flight could come later this year or early next year. Iran also gets help on its missile program from China, North Korea, "and other countries," American officials say. —Steven Erlanger, "U.S Gets Russia's Firm Vow To Halt Missile Aid to Iran," *New York Times*, 16 January 1998, in Lexis-Nexis, www.lexis-nexis.com.

18 January 1998

Vice President Al Gore urges Russian Prime Minister Viktor Chernomyrdin to help contain Iran's missile development.

—"Gore Urges Russia to Halt Involvement in Iran's Arms Program," *Sun* (Baltimore), 18 January 1998, p. 2A, in Lexis-Nexis, www.lexis-nexis.com.

18 January 1998

Israel and the United States receive information revealing Iran's plans to develop a long range missile capable of hitting any target in the United States. Iran's missile efforts focus on acquiring technical information and equipment, especially from Russia. Previous assessments indicate that Iran is focusing on developing a 1,200km-range missile. The intercontinental missile would have a range three times greater. Israeli Labor Knesset Member Hagay Merom notes the congruity between Israeli and U.S. assessments. "The Americans realize now that the Iranian threat is not only aimed at Israel's cities but is a U.S. and worldwide problem. This is the reason behind a series of very urgent steps taken up by Washington in a bid to block any additional transfer of Russian know-how and equipment to Tehran," he states.

—Hayim Shibi, *Yediot Aharonot* (Tel Aviv), 7 January 1998, p. 8; in "Iran Developing Long-Range Missiles Capable of Hitting U.S." FBIS Document FTS19980107000792, 7 January 1998.

18 January 1998

The Iranian government will soon begin production of the 1,400km-range (875 miles) Zelzal missile, capable of carrying a one-ton warhead. The Zelzal was also known as the Shahab-2 and Shahab-3 at different stages in its development, and is modeled after the Scud-E. [Note: The Zelzal is a different missile from the Shahab.] The missiles are currently equipped with conventional warheads, but Tehran reportedly seeks chemical warhead capability. Guards Corps Brigadier Manteqi of the missile section of the Department of Defense Industries, based at Hemmat Industrial Complex outside Tehran, leads the missile project. More than 400 personnel work on the project, including dozens of Korean and Chinese experts. Iran reportedly spends \$1.2 billion on this missile project, and sends more than 350 missile personnel to receive training in North Korea.

—"Mullahs' regime about to mass produce long-range missiles," *Iran-e-Azad*, 9 January 1998; in "Opposition: Tehran to Begin Long Range Missile Production," FBIS Document FTS19980112001179, 12 January 1998. [Note: *Iran-e-Azad* is the website of the Mujahideen-e Khalq (MKO) opposition group, which is violently opposed to the current Iranian government.]

18 January 1998

The threat posed by Iran to Israel increases due to Iran's acquisition of conventionally armed, long-range, surface-to-surface missiles and its attempts to acquire non-conventional arms.

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—Amir Rappaport, "Intelligence Branch Assesses Iranian Threat Growing," *Yediot Aharonot* (Tel Aviv), 4 January 1998; in FBIS Document FBIS-NES-98-004, 4 January 1998.

18 January 1998

Iran introduces an entirely "new" air-to-air missile on its F-14A Tomcat aircraft. The missile is a modified HAWK surface-to-air missile (SAM).

—"Iran modifies HAWK for air-to-air role," *Jane's Defence Upgrades*, 5 January 1998, in Lexis-Nexis, www.lexis-nexis.com.

18 January 1998

The United States continues to pressure Russia to halt proliferation to Iran. "Iran is taking advantage of Russia's economic woes and large reservoir of defense technology and scientific talent to accelerate development of an indigenous ballistic missile capability," states Stephen R. Sestanovich, the State Department's senior specialist on the former Soviet republics. As Iran is believed to be rapidly approaching missile self-sufficiency, Russian assistance to Iran's ballistic missile program is one of the most sensitive issues in the U.S.-Russia relationship and a source of anxiety in Israel.

—Thomas W. Lippman, "U.S. Keeps After Russia to Halt Flow of Missile Technology to Iran," *Washington Post*, 18 January 1998, in Lexis-Nexis, www.lexis-nexis.com.

18 January 1998

British intelligence uncovers a trail from England through Europe to Iran of materials intended to help Iranian missile and nuclear weapons production. Steel used for missile castings and centrifuges is acquired disguised as other items. An export-controls case in Britain against an Iranian businessman is linked to a company in Dusseldorf, which is known to be a front for the Defense Industries Organization of Iran.

—Nicholas Rufford, "Britain at The Centre of Iran Bomb Web," *Sunday Times* (London), 18 January 1998, in Lexis-Nexis, www.lexis-nexis.com.

19 January 1998

A two-year investigation by Britain's MI-5 intelligence agency and its European counterparts uncovers a sophisticated supply network from Britain through Germany and Austria to its final destination in Iran. British customs officials report that Iran was planning to use Britain as a "conduit for acquiring high-strength steel of a quality used in missile casing and centrifuges for weapons-grade uranium."

—Douglas Davis, "Iran Using Britain as Center of its Weapons Network," *Jewish Telegraph Agency*, 19 January 1998, www.jta.org.

19 January 1998

Chinese Defense Minister Gen. Chi Haotian reassures U.S. Secretary of Defense William Cohen that China will not export anti-ship cruise missiles or nuclear technology to Iran.

—"China Told Not to Deal with Iran Cohen Warns Beijing of Risks in Arms Sales," *Cincinnati Post*, 19 January 1998.

20 January 1998

China has stopped sales of anti-ship cruise missiles to Iran. Chinese President Jiang Zemin and Foreign Minister

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Qian Qichen had earlier promised President Clinton and Secretary of State Madeleine Albright to cut off the sales. Cohen seems to be assured that the sales to Iran are now stopped after his meeting with China's Defense Minister Chi Haotian.

—Rone Tempest, "China Vows Missile Sales to Iran Have Been Halted; Asia: U.S. Defense Chief Uses Beijing Visit to Clear Up 'Ambiguities' Over Previous Assurances that Arms Shipments Would End. White House Says Weapons Deals Endangered American Ships in Persian Gulf," *Los Angeles Times*, 20 January 1998, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

21 January 1998

Chinese President Jiang Zemin tells Defense Secretary William Cohen that the sale and transfer of anti-ship cruise missiles to Iran has ended, including those that Iran and China already have a contract for.

—Tom Korski, "Iran Missile Deals Over, US Envoy Assured," *South China Morning Post*, 21 January 1998, p. 8, in Lexis-Nexis, www.lexis-nexis.com.

21 January 1998

The Baltic State Technical University in St. Petersburg is receiving payment from an Iranian official identified as M. Akhlagi, head of Iran's "Sanam" College. The first payment, intelligence officials allege, is for the first installment for the Persepolis joint missile education center. "Sanam" [likely Semnan] is also called the "Sanam" Industries Group, Department 140 and the Missile Industries Group, which is in charge of Iran's solid-fueled missile program. The group is part of Iran's Defense Industries Organization, the government procurement agency. "Sanam" was reportedly set up as part of a February 1997 agreement between the Baltic Technical University and Shahid Bagheri Industrial Group, also part of Department 140. Both organizations jointly created the center known as Persepolis as part of an agreement concluded in 1996.

—Bill Gertz, "Russia Conspiring with Iran on Missiles," *Washington Times*, 23 February 1998, pp. 1-4.

27 January 1998

Israeli Prime Minister Benjamin Netanyahu states that Iran is posing an existential threat to the State of Israel because its missiles have the capability of reaching Israel. Netanyahu also states that Israel is prepared in case diplomatic efforts to halt Iran are unsuccessful. According to Knesset member Ephraim Sneh, the Iranian missiles would be ready in a year.

—Batsheva Tsur, "PM: Iran Poses Most Serious Threat Since 1948," *Jerusalem Post*, 27 January 1998, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

28 January 1998

The Iranian foreign ministry issues a statement calling Israeli claims that "Iran is seeking to acquire weapons of mass destruction and long-range missiles" just a ploy to divert attention from its own nuclear program. Israeli Prime Minister Benjamin Netanyahu says that Israel is preparing "other measures to prevent Iran from acquiring long-range missiles or weapons of mass destruction in case diplomatic efforts fail."

—"Iran Dismisses Israeli Claims As Ploy to Cover Own Nuclear Program," Agence France-Presse, 28 January 1998.

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30 January 1998

After Prime Minister Viktor Chernomyrdin signs the decree "On Stepping Up Export Controls for Dual Purpose Goods and Services Relating to Mass Destruction Weapons and Delivery Vehicles for Them," a decision is made today to stop any SANAM operations in Russia.

—Konstantin Eggert, "'Meteor' for the Ayatollahs. Iran Needs Ballistic Missiles in Order To Become a World Power," *Izvestiya* (Moscow), 22 October 1998, p. 5; in "Part II of Iran's Missile Program Article," FBIS Document FTS19981022001488, 22 October 1998.

February 1998

According to Russia's Defense Ministry, Iran is interested in purchasing high-speed ships capable of carrying anti-ship missiles from Russia. Iran also wishes to extend its military cooperation with Russia from land- and sea-based systems to outer space systems. The two countries have reportedly started discussions on developing in Russia a dual-use communication satellite for Iran. During upcoming meetings in Moscow between the Iranian and Russian foreign ministries, Iran is expected to discuss purchasing Yakhont anti-ship missiles.

—Yuriy Chubchenko, "Russia Will Help Iran Look Down on Neighbors," *Kommersant Daily* (Moscow), 26 February 1998, p. 5; in "Russia Building Ties With Iran to Restore Clout in Caspian," FBIS Document FTS19980226000588, 26 February 1998; "Russia Seeking to Develop Arms Sales, Nuclear Power in Iran," Russian Public Television First Channel Network (Moscow), 25 February 1998.

10 February 1998

Russia's scientists are selling their expertise to other countries. Last year, officials arrested people involved in three different incidents for trying to sell military equipment and knowledge to Iran. Parts for missile systems and information on missile engine and jet production were some of the materials for sale. The Russian Federal Security Service states that it is more difficult to keep the scientists from leaving or from sharing their expertise than to hinder the movement of material.

—Judith Matloff, "Danger from Russia's Scientists: Selling Weapons Know-How," *Christian Science Monitor*, 10 February 1998, p. 8, in Lexis-Nexis, www.lexis-nexis.com.

20 February 1998

Iran displays a variety of missiles and related equipment at its 10th annual air industry exhibition at the First Hunter Air base in the Mehrabad region. The exhibition highlights the Iranian Air Force's technological achievements, including the Sattar-1 and Sattar-2 (Project Asr 69) laser guided air-to-surface missiles. The Sattar-1 has a range of 15 to 20km, and is based on the propellant system of the surface-to-air Hawk missiles. The Sattar-2 is an improved version, and is equipped with a balanced guide mechanism. The missiles are fired from F-4 and F-5 fighter-bombers. The exhibition also features systems for the installation of Chinese air-to-air, heat-seeking PL-7 missiles, with a special mounting placement manufactured by China. Rapier and Hawk surface-to-air missile systems and short-range surface-to-surface Zelzal-2 ballistic missiles are also on display. The Zelzal has a range equal to that of the Scud-B, and is equipped with small throttling engines to increase precision.

—Farzin Nadimi, "Reporting on the Tenth Ten Days of Dawn Air Force Exhibition," *Sanaye-ye Havai* (Tehran), 20 February 1998, pp. 2-4; in "Article Describes Iranian Air Show Exhibits," FBIS Document FTS19980505001581, 5 May 1998.

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23 February 1998

Russia's Federal Security Service (FSB) is cooperating with the Iranian intelligence service to coordinate exchanges under a joint Russian-Iranian missile research program. U.S. intelligence officials report that in the coming weeks, three Russian missile experts are expected to arrive in Tehran to teach subjects ranging from guidance systems to firing circuitry and the pyrotechnics of explosive systems.

—Bill Gertz, "Russia Conspiring with Iran on Missiles," *Washington Times*, 23 February 1998, pp. 1-4.

27 February 1998

The U.S. House of Representatives approves an amendment to the Iran Missile Proliferation Sanctions Act to guarantee that foreigners selling missile technology to Iran and helping the United States do not get sanctioned. Representative Benjamin Gilman (Republican, New York), who sponsored a bill that would stop aid and exports to countries involved in Iran's missile program, is asked to revise it. Clinton will most likely veto the bill. The bill would affect the Russian Space Agency because it is said to have helped Iran build a missile. It became clear to the intelligence community, however, that this bill would threaten their work with foreign agencies regarding the issue of Iran's missiles, so Gilman was asked to amend it.

—Michael S. Lelyveld, "When Trade Meets Foreign Policy: A Collision on Iran Missile Sales Over Iran Arms Sales," *Journal of Commerce*, 27 February 1998, p. 1A, in Lexis-Nexis, www.lexis-nexis.com.

March 1998

The Gore-Chernomyrdin commission speaks about Russia's relations with Iran, and Russia agrees to form a committee that would monitor technology exports.

—Ivan Safranchuk, ed. by Dmitriy Yevstafeyev, "Scientific Notes No. 8: The Nuclear and Missile Programs of Iran and Russian Security — The Framework of Russian-Iranian Collaboration," *Nauchnyye Zapiski* (Moscow), 5 May 1999, vol. 8, pp. 1-36; in "Russia, Iran Nuclear Program Cooperation," FBIS Document FTS19990701001333, 1 July 1999.

March 1998

Azerbaijan's customs authority intercepts a 22-ton shipment of ballistic missile parts on its way to Iran. The parts are of Russian origin and are said to have been sent by MOSSO, a private Russian firm. Russia reportedly investigated the seizure and made several arrests of Tajikistani nationals. Vice President Al Gore asks Russian Prime Minister-designate Kiryenko about the affair. Kiryenko confronts the head of the Russian Space Agency Yuri Koptev, who denies that MOSSO had transferred any material to Iran. [Note: See entries for 25,26 March.]

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 32.

March 1998

In March 1998, Mazidi allegedly had three Tajikistanis purchase stainless steel from Moscow Metallosnabzheniye OAO (Public Joint-Stock Company) and illegally export it to Iran under the guise of galvanized sheet steel.

—"U.S. Claims on Iran Arms Projects Refuted," *Nezavisimaya Gazeta* (Moscow), 27 February 1999; in FBIS Document FTS19990308000140, 27 February 1999.

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March 1998

Twenty-two tons of missile-quality stainless steel used in Scud missile fuel tanks are shipped from Russia to Iran. A "routine border check" at the Azeri-Iranian border uncovers the shipment, which is then stopped. Russia and Iran also announce that they are cooperating in the development of a "civilian" Iranian satellite to be used for communications and imaging. [Note: See entries for 25,26 March.]

—Gerald M. Steinberg, *Arms Control and Non-Proliferation Developments in the Middle East: 1998-99* (Ramat Gan, Israel: Begin-Sadat Center for Strategic Studies, September 2000), p. 17.

1 March 1998

The responsibility for the missile industry in Iran lies with its Defense Industry Organization (DIO) or Sasaja. Within this structure, there is Department 140, the Sanam Industrial Group, which is the main body that coordinates the research centers and production facilities. Under this department, there is the Department 140/14, the Shahid Bagheri Industrial Group, which is in charge of solid-fueled missile development; Department 140/15, the Shahid Bagheri Industrial Group in charge of liquid-fueled missile development; Department 140/16, which plans the "manufacture of instrumentation/creation of control and guidance systems"; and Department 140/31, the Parchin Missile-Industrial Group.

Together with the Education and Research Institute (also known as the Scientific-Research Group), the DIO Departments are crucial players in Iran's missile procurement. Department 148/3, parts of the Mechanical Industrial Group, Department 142, 154, and 158, the Ministry of Defense Special Industrial Groups (MIDSPCIG), the University of Scientific and Defense Technologies (USDT, Department 149/d), the civilian Iranian Research Organization for Science and Technology (IROST), and the Shiraz and Mazandaran Universities are also involved in missile procurement. "The Mechanical Systems Production Group supplied components for domestic NUR [free-flight rockets] and, according to some assessments, its participation in the future production of a launcher is planned." Departments 140 (Sanam), 140/14, 140/15, and 140/16 are located in the Tehran area. Department 140/31 and 140/4 are associated with Parchin and are located 30km southwest of Tehran, where the DIO has its chemical industry. That location seems to be the main producer of the Oghab and Nazeat missiles. Another compound under construction seems to be connected to missile production and is located close to Isfahan. The Kuh-e-Barjamali facility received its name in conjunction with missile manufacturing; the Gostaresh Scientific Research Center, located northeast of Tehran, is involved in researching the building of missiles.

North Korea and China, especially the NORINCO military industrial complex, China's Northern Industrial Corporation, and the Chinese Precision Machinebuilding Import-Export Corporation (CPMIEC), are the main organizations helping Iran in its missile procurement. A broad network helps Iran obtain materials and technology from around the world, such as milling machines, lathes, and ball bearings. It is assumed that Iran's military importing is not centrally controlled. The DIO has the authority and has contacts in the exporting countries. The Instrumentation Factories Plant (IFP), also known as Mojtabe Santy Ajzae Dahgigh in Farsi or as Department 140/16, has contacts all over the world. The imported cargo is delivered to a place close to the Parchin Army, where a site for guidance and control systems production is being built, 50km east of Tehran. This site is north of the Asiatic Highway, close to the Shargfabad community, and is built symmetrically to the Parchin military installation. In order to get the imports to their proper site, any mode of transportation is used. To be able to

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import the material, Iran misleads and falsifies customs information or brings the material through another country before bringing it to Iran. The Shahid Hemat Industrial Group (SHIG) and the Samak Industrial Group are acquiring weapons and materials for Iran. "Inasmuch as SHIG is participating in this, it can be assumed that the new missile is being equipped with a liquid-propellant motor." The article lists all the departments that are part of Iran's Department of Free-Flight Rockets and Guided Missiles. It further lists the places for research and development and production and testing sites.

Iran is in the process of making the Modjaher-II, which is for reconnaissance purposes, and the Savejeh unmanned airborne vehicle. Also under production are the CSA-1 (HQ-2) based on the Chinese surface-to-air missile SA-2; the CSS-8 (B610 or 8610), also based on the Chinese SA-2, and the SA-2 and SA-5 surface-to-air missiles.

—"Mikhail Kirillin: Several U.S. Firms Engaged in Developing Missile Equipment Have Links with Iranians," *Yadernyy Kontrol Dossier* in *Yadernyy Kontrol* (Moscow), March-April 1998, No. 2, Vol. 38, pp. 37-43; in "Iran's Missile Industry, U.S. Missile Development Firms with Iranian Links," FBIS Document FTS19980605000876, 5 June 1998.

1 March 1998

An officer in the Russian Federal Security Service (FSB), offers statements regarding Iran's missiles and Russia's relations with Iran. He states that it is the job of the FSB to end all efforts of private and public enterprises of Iran from gaining access to military information, especially to technology to make dual-use items. Several attempts by the Iranian Industrial Group Sanam have been intercepted and stopped within the last year.

—"Mikhail Kirillin: Several U.S. Firms Engaged in Developing Missile Equipment Have Links with Iranians," *Yadernyy Kontrol* (Moscow), March-April 1998, No. 2, Vol. 38, pp. 37-43; in "Iran's Missile Industry, U.S. Missile Development Firms with Iranian Links"; in FBIS Document FTS19980605000876, 5 June 1998.

3 March 1998

Israel's Industry and Trade Minister Natan Sharansky asks Russian officials to aid in stopping Iran's missile program. He states that he would like Russia to abstain from involvement in the program and to keep its citizens from being involved as well. The head of the Russian Space Agency admits that some Russian companies had wanted to sell military material to Iran, but that the government had stopped them. However, Russia still has a contract with Iran to build a nuclear power plant. In a meeting with Al Gore, Sharansky expresses his hope that Gore, in an upcoming meeting with Russia's Prime Minister Viktor Chernomyrdin, would stress Russia's need to suppress helping Iran's nuclear and missile ambitions.

—Adam Tanner, "Sharansky Asks Russia to Help Halt Iran's Missile Program," *Jerusalem Post*, 3 March 1998, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

4 March 1998

According to Customs Officials in New York, Daniel Malloy, the owner and president of International Helicopter, a New Jersey company, wants to buy batteries that power AIM-54 air-to-air missiles and ship them to Iran via Singapore. These missiles are only carried on F-14As, which the United States sold to Iran before the hostage crisis in 1979. Malloy had ordered twenty of the batteries made by Eagle-Picher of Joplin, Missouri. He has been arrested by Customs officials and charged with violation of the Arms Export Control Act and the International Emergency Economic Powers Act.

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—William K. Rashbaum, "N.J. Man Busted in Iran Arms Biz," *Daily News* (New York), 4 March 1998, p. 20, in Lexis-Nexis, www.lexis-nexis.com.

5 March 1998

Parviz Lavi, an Iranian who had been living in the United States for many years, is arrested and will be charged with violating arms export agreements, conspiracy, and money laundering. He helped in the F-14 deal between the United States and Iran before the hostage crisis in 1979 and now runs Omega Industries, an arms company with offices in Long Island, Los Angeles, and Rotterdam, the Netherlands. Six years ago, Lavi was put under surveillance after it was suspected that he was shipping parts to Iran. Officials set up an operation in Norfolk because the Oceana Naval Air Station has the most F-14 Tomcats in the United States. Lavi has been going there for the parts. Government cooperators sold him 500 metal blades for the TF-30 engines on the F-14s manufactured by Pratt & Whitney of United Technologies in North Haven, Connecticut, which are essential in keeping the F-14s functioning. While Lavi is trying to ship these items to the Netherlands, customs agents arrest him, and with the help of Dutch officials, the network that Lavi was operating in order to ship the prohibited parts to Iran will be uncovered. Daniel Malloy of New Jersey, who was trying to sell batteries for the Phoenix missiles that are carried by the Tomcat fighters, is arrested the same day.

—Anthony DePalma, "L.I. Man is Seized in Scheme to Smuggle Jet Parts to Iran," *New York Times*, 5 March 1998, p. B6, in Lexis-Nexis, www.lexis-nexis.com.

9 March 1998

The United States urges Russia to cut down its support to the Iranian missile program by offering a more lucrative space satellite launch business. Yuri N. Koptev, director of the Russian Space agency says, "The increase of the quota is an important and necessary issue for us." American experts are expecting Iran to fly-test a missile based on North Korean and Russian technologies.

—Michael R. Gordon, "US Is Pressing Moscow on Iran and Missile Aid," *New York Times*, 9 March 1998, in Lexis-Nexis, www.lexis-nexis.com.

9 March 1998

U.S. Air Force Lt. General Lester L. Lyles, director of the Ballistic Missile Defense Organization (BMDO) asks the U.S. House Appropriations Committee to allocate \$50 million to test the U.S. Patriot Advanced Capability (PAC-3) system and Navy Lower-Tier theater missile defense systems against a surrogate Iranian Shahab-3.

—"A Wakeup Call from Iran," *Aviation Week & Space Technology*, 9 March 1998, p. 21.

9 March 1998

An official from the Chungshan Institute of Science and Technology (CIST) reported that Iran is interested in purchasing Taiwan's Sky Sword-1 surface-to-surface missile (SSM). The official said that Taiwan would not sell the missile to Iran.

—Lu Chao-long, "No Sky Sword Missile Sales to Iran," *Chung-Kuo Shih Pao* (Taipei), 9 March 1998; in FBIS Document FBIS-CHI-98-069, 10 March 1998.

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9 March 1998

A spokesman for the Russian Foreign Ministry states that military and technological cooperation exists between Russia and Iran, but accusations of Russia's alleged assistance with Iran's missile programs are false.

—"Moscow Acknowledges Military Cooperation with Iran," ITAR-TASS (Moscow), 16 March 1998; in FBIS Document FTS19980316001646, 16 March 1998.

18 March 1998

The U.S. offers a secret deal to China in an effort to control China's missile exports to Iran and other countries. The secret offer, obtained by the *Washington Times*, explains that, "in essence, we would include expanded commercial and scientific cooperation with China if China meets conditions for joining the Missile Technology Control Regime and controls its exports to Iran, Pakistan...." The deal is offered to the State Science and Technology Commission of China (recently renamed the Ministry of Science and Technology), which concluded a 10-year agreement with Iran in 1990 to share military technology. The U.S. State Department denies that the United States is offering China access to U.S. missile technology.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 37.

23 March 1998

Russian intelligence agents have for the past several years recruited scientists from Russian institutes and weapons factories to help Iran develop ballistic missiles. The Russian government insists that the cooperation is not official policy, and that Russia does not violate commitments to the Missile Technology Control Regime (MTCR).

—Daniel Williams, "Russian Spy Agency Linked to Iran; Service Reportedly Recruited Missile Scientists to Work for Tehran," *Washington Post*, 23 March 1998, p. A14, in Lexis-Nexis, www.lexis-nexis.com.

23 March 1998

The U.S. Senate passes a bill that calls for sanctions on any "foreign entity" that helps Iran develop its missile program. Russia, however, seems to be the target of the bill.

—"Senate OKs Russian Sanctions; Overwhelming Vote Decries Missile Technology Assistance to Iran," *Houston Chronicle*, 23 May 1998, p. A31, in Lexis-Nexis, www.lexis-nexis.com.

23 March 1998

Russian intelligence services recruit Russian missile scientists to teach Iranians how to build missiles that can have a range of 1,200 miles. However, the scientists themselves negotiate their contracts with the Iranian authorities.

—"Russian Missile Scientists Recruited to Teach in Iran" *Milwaukee Journal Sentinel*, 23 March 1998, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

25 March 1998

The Russian Intelligence Service (SVR) says that "it is stupid for them to offer nuclear weapons and delivery vehicles to countries with uncontrollable regimes," and that it is not in Russia's best interest to help Iran and other countries "build up their military might." According to officials, only one or two cases of arms control violations had been uncovered; thus the paper states, "Americans cannot actually boast so far that they caught Russian

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specialists red-handed working illegally for the defense sectors of countries such as Iran, North Korea, Iraq, or Libya."

—Aleksandr Korzun, "Virtual Missilemen and Secret Intelligence Agents," *Novyye Izvestiya*, (Moscow), 25 March 1998, p. 3; in "Arming Iran Said 'Stupid,' 'Disadvantageous,'" FBIS Document FTS19980325000968, 25 March 1998.

25 March 1998

A shipment of stainless steel from Moscow Metallosnabzheniye OAO (Public Joint-Stock Company) being illegally exported to Iran under the guise of galvanized sheet steel is seized in Azerbaijan, en route from Moscow to Iran. The steel was later determined to be 08Kh189N10T quality, rather than the indicated 12Kh21N5T. The Baltic State Technical University imeni D. F. Ustinov (BGTU) in St. Petersburg ran a joint Iranian-Russian training center involving missile equipment between July 1996 and June 1998.

—"U.S. Claims on Iran Arms Projects Refuted," *Nezavisimaya Gazeta* (Moscow), 27 February 1999; in FBIS Document FTS19990308000140, 27 February 1999.

26 March 1998

According to the Azerbaijani National Security Ministry, customs officers in that country detain an illegal shipment of supplies to produce liquid-fueled missiles, bound for Iran. The cargo includes stainless steel bars weighing 21.7 tons and is smuggled by Russia's Europalas-2000 company. According to an investigation by the Russian Federal Security Service (FSB), three foreigners are detained for illegally smuggling the alloyed steel out of Russia to Iran via Azerbaijan. The steel can be used in some weapons delivery systems. The FSB emphasizes that Russia is in compliance with its obligations under the Missile Technology Control Regime (MTCR) and is not assisting Iran with their missile programs.

—"Azeri Customs Seize Iran-Bound Missile Materials," Interfax (Moscow), 22 April 1998; in FBIS Document FTS19980422000588, 22 April 1998; Dmitriy Borisov, "Vesti" newscast, Russian Television Network (Moscow), 7 April 1998; in "Further on Foiled Attempt To Smuggle Steel to Iran," FBIS Document FTS19980408001111, 8 April 1998.

27 March 1998

U.S. Department of Defense officials make the first public statements about Iran's Shahab missiles when Air Force Lt. General Lester L. Lyles says that Iran's Shahab-3 would have a range of approximately 1,200km and the Shahab-4s would have an approximate range of 2,000km.

—Bill Gertz, "DoD Confirms Details on Iranian Missiles," *Washington Times*, 27 March 1998, p. 6.

April 1998

Iran announces that it has successfully tested the Sayyad-1 surface-to-air missile, which was named after Lt. General Ali Sayyad Shirazi, who was assassinated days earlier by Iranian opposition followers in front of his house in Tehran.

—UPI, "Iran to complete missile testing," ExciteNews.com, 2 November 1998, news.excite.com.

7 April 1998

Russian Federal Security Service (FSB) officials report that they prevented a "recent attempt to smuggle 22 tons of

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alloyed steel to Iran via Azerbaijan." [Note: See entries for 25,26 March.]

—David Makovksy, "Israel Wants Congress to Act on Russian Arms," *Haaretz* (Tel Aviv), 9 April 1998, www3.haaretz.co.il.

7 April 1998

Robert Galluci, U.S. envoy, holds meetings with Israeli leaders. They have been concerned that Iran, with support from Russia, is about to finish developing a missile engine and will be able to produce a prototype by 1999. The Israelis believe that after the completion of the engine, the Iranians would be able to finish the missile themselves and test towards the end of 1999.

—Steve Rodan, "US Envoy Here to Discuss Teheran Threat. Iran Missile Said Near Completion," *Jerusalem Post*, 8 April 1998, in Lexis-Nexis, www.lexis-nexis.com.

8 April 1998

The Russian Federal Security Service (FSB) is hiring missile scientists to teach Iranians missile technology. The contracts were discussed in Iran to eliminate any links of the Russian government and FSB to these contracts. Upon invitation of Iranian students in Russia, these missile experts traveled to Iran and held meetings in secret facilities near Tehran. The Russian experts were offered two-year contracts with salaries of \$1,000/month.

—Daniel Williams, *Washington Post*, www.washingtonpost.com, 23 March 1998; *Washington Times*, 8 April 1998, p. 15; *Nonproliferation Review*, Vol. 6, No. 2, James Martin Center of Nonproliferation Studies, Fall 1998, p. 170.

14 April 1998

Israel Prime Minister Benjamin Netanyahu says that the Russian transfer of missile technology to Iran hampers the development of Russian-Israeli relations. Russia says that Iran had attempted to acquire missile technology but these attempts failed.

—"Netanyahu: Moscow Aid To Iran Could Hurt Ties," *Jerusalem Post*, 14 April 1998, in Lexis-Nexis www.lexis-nexis.com.

15 April 1998

The Iranian Embassy in Moscow issues a statement to the press saying that Iran has not, does not, and will not seek access to Russian missile technologies. The embassy denies allegations in some Russian media that Tehran has made several attempts, at times by illegal methods, to acquire such technologies.

—"Interfax: Iran Denies Seeking Russian Missile Technology," Interfax (Moscow), 15 April 1998; in FBIS Document FTS19980415001480, 15 April 1998.

15 April 1998

Kazakh Foreign Minister Qasymzhomart Kemeluly Toqayev refutes a report in the *Jerusalem Post* that Kazakhstan may have supplied four nuclear warheads to Iran.

—"Kazakhstan Denies Israeli Daily Report of Iran Warhead Sale," Interfax (Moscow), 15 April 1998; in FBIS Document FTS19980415000908, 15 April 1998.

15 April 1998

An official in the FSB, the Russian Intelligence Services, states that Russia arrested three individuals trying to

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smuggle, through Azerbaijan, 21.7 tons of an alloy used in missile production. [Note: See entries for 25,26 March.]
—"Three Foreigner Accused of Illegal Trade With Iran," Agence France Presse, 15 April 1998, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

16 April 1998

The U.S. State Department declares 20 Russian agencies and research facilities ineligible for millions of dollars in U.S. assistance because they were involved in providing Iran with missile technology. Among these institutions are TsAGI, Russia's Central Aerodynamic Institute, Baltic State Technical University, and Moscow Aviation Institute.
—Peter Eisler, "Russian Agencies Denied Aid 20 May Have Helped Iran with Missiles," *USA Today*, 16 April 1998, in Lexis-Nexis, www.lexis-nexis.com.

22 April 1998

An Israel Defense Forces Senior Intelligence Officer tells the Knesset Foreign Affairs and Defense Committee that Iran would complete the prototype of a ground-to-ground missile by 2000.
—Liat Collins, "Iran Will Have Longer Range Missile by 2000-IDF," *Jerusalem Post*, 22 April 1998, in Lexis-Nexis, www.lexis-nexis.com.

23 April 1998

According to CIA reports, Russian officials support and actively assist Iran's production of the Shahab-3 ballistic missile. Previous American assessments conclude that only private entities in Russia were assisting Iran's missile programs. Israeli and U.S. intelligence reports indicate that the Russian government supported the recent smuggling to Iran of special steel used for making missiles. [Note: See entries for 25, 26 March.]
—Ban Kaspit and Yoav Limor, *Maariv* (Tel Aviv), 23 April 1998, p. 9; in "IDF Worried by Egyptian Military Buildup, Iranian Missiles," FBIS Document FTS19980425000206, 25 April 1998.

24 April 1998

Tel Aviv's *Yediot Aharonot* publishes satellite photographs from 1997 revealing a missile base in western Iran. The base is highly camouflaged, located near the Zimkan River in the mountains in Bakhtaran District. This is the only location in Iran from which the Shahab-3 can reach any part of Israel, as well as parts of Turkey and Saudi Arabia. The photos reveal that the base is nearing completion, which indicates that the Shahab-3 could soon be deployed. Construction on the base began prior to 1994. The missiles will apparently be hidden in underground bunkers and deployed on mobile launchers to be launched within minutes if needed. North Korea allegedly assisted Iran with camouflaging the site so it cannot be seen from the air. The photos reveal the infrastructure is not fully ready, but the site can house the missiles and launchers once they are available.

The article also discusses details of Iran's missile programs of 1994, when Iran and North Korea were working on the Nodong missile. Dissatisfied with the Nodong's reliability and precision, Iran sought Russian assistance to obtain high-grade alloys to improve the strength of the missile while maintaining its light weight. Iran also obtained from Russia special metal foils to protect the missile's navigation system, a wind tunnel and other equipment to test the missile, technology to enable the warhead to withstand high speeds, and technology to create asymmetrical warheads that are more capable of evading antimissile defense systems. U.S. intelligence

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documents state that Iran's Shahid Amat Industrial Group (Shahid Hemat, SHIG) signed numerous contracts with Russian space firms to receive technical aid in designing the Shahab-3. A Russian missile engine manufacturer provided Iran with equipment to improve the Shahab-3 engine by increasing the pressure and temperature in the combustion chamber. The engine, consequently, was enabled to carry the missile farther without using more fuel. The report also states that 350 Iranians studied flight theory at missile research and development centers in Moscow. U.S. sources also reveal that the Russian firm Polyus, which deals mostly with developing missile guidance systems, is assisting Iran's missile programs.

—Harold Howe, *Yediot Aharonot* (Tel Aviv), 24 April 1998, pp. 2-3; in "Details of Missile Base in Western Iran," FBIS Document FTS19980424001174, 24 April 1998.

25 April 1998

A truck loaded with 22 tons of stainless steel that can be used for missile construction is intercepted on its way to Tehran. American officials warn Russian intelligence that a shipment of alloy that is used to make tanks for Scud missiles is about to leave Russia towards Iran. Azeri customs officials stop the truck. The transporting company carrying out the shipment is named Moso. [Note: article most likely refers to 25 March seizure.]

—Michael R Gordon and Eric Schmitt, "Iran Nearly Got a Missile Alloy From Russians," *New York Times*, 25 April 1998, in Lexis-Nexis, www.lexis-nexis.com.

26 April 1998

Rep. Curt Weldon, a leading U.S. Congressman, says that Iran is less than a year away from building and deploying a medium-range ballistic missile. He adds that Russia violated the 1987 Missile Technology Control Regime (MTCR) seven times during the last six years.

—Steve Rodan, "US Congressman: Iran's Israel's range Rockets Nearly Ready," *Jerusalem Post*, 26 April 1998, in Lexis-Nexis, www.lexis-nexis.com.

28 April 1998

A spokesman for Iran's Foreign Ministry, Mahmud Mohammadi, says that the seizure of 22 tons of steel alloy at the Azerbaijan border is in no way connected to any military or civilian agencies of Iran. The Iranian government is currently investigating the incident, and believes a private company ordered the shipment. [Note: See entry for 26 March 1998.]

—"Iran Denies Military Linked to Steel Seized at Azeri Border," IRNA (Tehran), 28 April 1998; in FBIS Document FTS19980428001156, 28 April 1998.

May 1998

Bates Gill of the Monterey Institute of International Studies says the media most likely confused the M-11 missile with the M-7 missile when reporting about the transfer plans between China and Iran. China has assisted by building a "ballistic missile plant and test range east of Tehran, and may also be involved in producing solid-fuel rockets at Iran's Semnan facility." China also gave Iran guidance technology and precision machine tools for their ballistic missiles.

China is supposedly helping Iran make a 200km-range version of the Mushak-160, called the Mushak-200, that has a payload of 500kg. The two countries are also working on a short-range ballistic missile called the NP-110. It is

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solid fueled with 105km range. Iran's Zelzal-3 solid-fueled missile with a 1000-1500km range will use "gyroscopes, other advanced guidance system technology, solid fuel technology and computerized machine tools" imported from China.

—Bates Gill, "Chinese Arms Exports to Iran," *MERIA Journal*, Vol. 2, No. 2, May 1998, 8 June 2001, www.biu.ac.il.

May 1998

Chinese Premier Zhu Rongji assures Israeli Prime Minister Benjamin Netanyahu that China would not sell nuclear nor missile technology to Iran or other countries that might transfer it to Iran. This conflicts with Israel's *Haaretz* report in the same month that claimed China is providing Iran with 1,000 tons of a special steel alloy used in the construction of ballistic missiles.

—H. Asher Bolande, "Israeli Minister Urges Jiang to Stop Arms Exports to Iran," Agence France-Presse (Hong Kong), 2 September 1998; in "Israeli Minister Urges Jiang to Stop Arms Exports to Iran," FBIS Document FTS19980902000635, 2 September 1998.

1 May 1998

Iran attempts to develop liquid- and solid-fueled missiles using foreign components and technologies. Russia has been accused of providing such equipment to Iran, but the journal believes Moscow is in compliance with its obligations under the Missile Technology Control Regime (MTCR).

—Petr Litavrin, *Yadernyy Knotrol* (Moscow), 1 May 1998, pp. 5-10; in "Problems of Missile Proliferation in Asia," FBIS Document FTS199808260000002, 26 August 1998.

4 May 1998

United Arab Emirates (UAE) authorities have recently cracked down on several technology shipments headed to Iran through the UAE. According to U.S. officials, the UAE has blocked shipments, which included advanced computers, dual-use chemicals, GPS systems, missile guidance components, and machine tools.

—"Shipments Blocked in UAE, Japan," *Iran Brief*, 4 May 1998, p. 4.

8 May 1998

Russian intelligence chief Nikolai Kovale accuses the United States of conducting covert sting operations aimed at identifying Russian enterprises and organizations supplying missile and nuclear technology to Iran. Kovale makes these accusations at a meeting with a group lead by U.S. National Security Advisor Samuel Berger. Berger's group presents new evidence of continuing Russian-Iranian cooperation regarding missiles. The point of the discussion is that positive results on the Russian side would help President Clinton sustain a veto of a bill seeking to impose sanctions on Russian enterprises and organizations willing to sell technology to Iran. The Russian intelligence chief criticizes the United States for not allowing the CIA and FBI to be more transparent with their information on Russian-Iranian missile technology. It seems that Russia had failed to stop a shipment from Nigrafit of carbon or graphite material that was bound for Iran and detained in Austria. Russia had recently announced the secession of all missile training being done at the Baltic State Technical Institute with Sanam, an institute used by Iran as part of its current missile program.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 33.

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14 May 1998

Iranian arms dealer Reza Akrami and an unidentified associate are arrested in Vancouver, Canada, for attempting to smuggle "sophisticated military parts" to Iran. [Note: See 16 May entry.]

—Anthony DePalma and Lowell Bergman, "US Arms Embargo on Iran has Loophole: Canada," *New York Times*, 14 May 1998.

15 May 1998

Reza Akrami is arrested in Vancouver this week, now facing charges of conspiring to smuggle American-made jets and military parts to Iran, including electronics to guide anti-aircraft missiles. A large portion of the American-made weapons and parts that Iran buys illicitly move through Canada, taking advantage of regulatory loopholes and the Canadian government's decision not to support the American embargo.

—Anthony DePalma with Lowell Bergman, "Sneaking U.S. Jets to Iran: The Canadian Route," *New York Times*, 15 May 1998, in Lexis-Nexis, www.lexis-nexis.com.

15 May 1998

Russian Ambassador Mikhail Bogdanov reports that his government has given Israel evidence refuting accusations by Jerusalem and Washington that Russia allows the transfer of missile and nuclear weapons technology to Iran. The evidence is a direct response which addresses in detail a list of companies that the IDF intelligence chief Maj.-Gen Moshe Yaalon said were providing missile technology to Iran. Bogdanov suggests that Russia's ties with Iran are being unfairly singled out and distorted.

—Steve Rodan, "Russian envoy: My government has proved it's not helping Iran," *Jerusalem Post*, 15 May 1998, in Lexis-Nexis, www.lexis-nexis.com.

16 May 1998

Reza Akrami and Mosheen Lesan, two Iranians arrested in Canada, put up their bail for release. The U.S. wants to extradite them because they were trying to buy klystron tubes which Jeffrey Cole, Assistant U.S. Attorney, says "help operate the radar of the Hawk ground-to-air missile system."

—"U.S. Seeking Extradition of 2 Iranians," *San Francisco Chronicle*, 16 May 1998, p. A17, in Lexis-Nexis, www.lexis-nexis.com.

17 May 1998

Two Iranian men arrested last week on charges of conspiring to smuggle American-made weapons and military parts are released on bail despite the efforts of Michael Owens, a crown prosecutor representing American interests. Mr. Owens says the two men produced a list of items that the Iranian government wanted to buy, including hydraulic parts for fighter planes and computers that were to be bought in the name of Iranian universities, but whose real destinations were nuclear plants in Iran.

—Anthony DePalma, "Canada Sets Bail for Iranians Held in Weapons Smuggling," *New York Times*, 16 May 1998, in Lexis-Nexis, www.lexis-nexis.com.

20 May 1998

The Changgwang Sinyong Corporation (also known as the North Korea Mining Development Trading

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Corporation/Bureau) is the organization responsible for supplying Iran with DPRK missile technologies, components, and Hwasong-6 missiles during the mid-1990s.

—Joseph Bermudez, "A Silent Partner," *Jane's Defense Weekly*, 20 May 1998.

21 May 1998

After attending a meeting in Moscow, Israeli Minister of Trade and Industry Natan Sharansky says "there is no evidence that the Russian government is supplying Iran with such missile technology." Sharansky also states, "that unless Russia prevents Russian firms from aiding Iranian military programs, Israel will seek the adoption of sanctions against those companies by the US Congress." Sharansky met with Russian Security Council Secretary Andrei Kokoshin earlier this month to discuss leakage of Russian technology to Iran. A few days later, Sharansky met with former Russian Prime Minister Sergey Kiriyenko and urged Israel's demands that Russia stop all missile technology transfers to Iran. He also stated that Israeli intelligence will be monitoring Russian measures used to check technology transfers. Sharansky met with Kokoshin again, along with his senior aide, Grigory Raputa, in August. Also on the trip was General Nikolai Kovaloyov, head of the Russian security services (since removed). Raputa visited Israel in the past to discuss the Iranian missile issue. During that meeting, Kokoshin was told "that two of the seven Russian enterprises investigated by Moscow last month for transferring missile technology to Iran are still involved in supplying that country with weapons knowledge." Sharansky states, "there is no doubt that in the last months Russians made a number of steps to combat the problem. Nevertheless, we will be satisfied not by the steps that are taken but by the results in the field. We believe that in a year, if the assistance from the companies of Russia and all other countries will not stop, [Iran] can have its own missile."

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 50.

21-27 May 1998

Serguey Yasterjhembsky, press secretary for the Russian Presidency, says that Russia, "had not and will not" export ballistic and missiles technology to Iran.

—Safa Haeri, "The G8 Agenda," *Al Ahram Weekly* (Cairo), 21-27 May 1998, Issue No. 378, www.ahram.org.eg.

21 May 1998

Israel's Industry and Trade Minister Natan Sharansky meets with Russian Prime Minister Sergey Kiriyenko. Sharansky emphasizes Israel's demand that all missile technology transfers to Iran from Russia must cease. Kiriyenko says Russia would not take any action in the Middle East that would affect Israel's security.

—Ada Kohen, "Sharansky-Russian Aid to Iran Must Stop within Weeks," *Maariv* (Tel Aviv), 22 May 1998; in FBIS Document FBIS-TAC-98-142, 22 May 1998.

22 May 1998

The U.S. Senate approves the Iran Missile Proliferation Sanctions Act.

—"Senate Approves Sanctions Law," *Jamestown Monitor*, 26 May 1998.

23 May 1998

The Senate votes overwhelmingly to impose sanctions on Russian entities accused of exporting missile technology

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to Iran. A Senate Republican source says the bill would levy sanctions against any foreign entity that provides support for Iran's efforts to develop ballistic missiles, although the Russian entities are the primary targets of the legislation.

—"Senate OKs Russian sanctions; Overwhelming vote decries missile technology assistance to Iran," *Houston Chronicle*, 23 May 1998, in Lexis-Nexis, www.lexis-nexis.com.

24 May 1998

Iranian Brigadier General Mohammad Ali Jaafari says that Iran has produced various surface-to-surface missiles with a range between 50 to 150 kilometers.

—"On the eve of 24 May the Guards Corps Ground Forces Commander Announced: The 'Towsan' [Mustang] rapid reaction tank was produced by the Guards Corps," *Iran* (Tehran), 24 May 1998, p. 3; in "Towsan Rapid Reaction Tank Produced by Guards Corps" FBIS Document FTS19980602000710, 2 June 1998.

26 May 1998

Israeli Prime Minister Benjamin Netanyahu receives a pledge from China that it would withhold nuclear and ballistic missile technology from Iran.

—Rena Miller, "Israeli Source on Netanyahu Meetings," *Agence France-Presse* (Beijing), 26 May 1998; in FBIS Document FBIS-CHI-98-146, 26 May 1998.

28 May 1998

According to U.S. officials, China has transferred about 1,000 tons of specialty steel to Iran within the last six weeks. Officials report that the steel could be used for Iran's missile program.

—David Makovsky, "Missiles feared as China sends steel to Tehran," *Haaretz* (Tel Aviv), 29 May 1998.

June 1998

The MAZ 543 transporter-erector launcher vehicle, which the Soviet Union used for the SS-1, is seen in Iran. However, the Iranians use other Russian launch vehicles and several different German Mercedes-Benz Vehicles for their unguided rockets. These vehicles can also be modified to carry the "Scud-B" or "Scud-C" ballistic missiles. It is difficult to guess how many "Scud-B/C" transporter-erector launchers (TEs) are available to the Iranians, but considering their engineering skills, it is likely that around 100 TEs could be made available in a relatively small amount of time.

—Duncan Lennox, "Iran's ballistic missile projects: uncovering the evidence," *Jane's Intelligence Review*, June 1998, p. 25.

June 1998

The Iranian National Council of Resistance (NCR) reports that Iran has successfully test-fired the Shahab-3 intermediate-range ballistic missile (IRBM). The NCR states that the Shahab-3 is moving into the production stage. U.S. intelligence estimates that the Shahab-3 has a range of 800km, making it a medium-range ballistic missile (MRBM) rather than an IRBM (defined as having a range of 1,400km). Commander of the Islamic Revolution Guards Corps (IRGC) Mohsen Rezai reports, "Iran has not been able to produce intercontinental ranges but has

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completed the production process for its short- and long-range missiles."

—"Iran's Shahab-3 IRBM 'Ready for Production'," *Jane's Missiles & Rockets*, June 1998, p. 4.

6 June 1998

According to "informed sources," all Iranian ambassadors working in the former Soviet Union have specific orders to recruit missile experts in Iran, regardless of the cost. The specialists must be capable of developing and modernizing intermediate-range missiles. Most likely, Iran wishes to modernize their Scud missiles by increasing their range by 300 kilometers and developing new engines and airframes.

—Andrey Apostolov, "Iran Hurriedly Hunts For Specialists in Missile Technologies. Particularly in Former USSR," *Russkiy Telegraph* (Moscow), 6 June 1998, p. 12; in "Iran Using FSU as Recruiting Ground for Missile Experts," FBIS Document FTS19980609000346, 9 June 1998.

11 June 1998

The Russian Federal Security Service (FSB) releases a list of foreign companies believed to be involved in developing weapons of mass destruction and delivery systems. The Iranian company Sanam is noted as having "tried to obtain data on the latest Russian development work in missile, space, aviation, nuclear and laser technologies and vigorously established contacts with people in the defense industry." Sanam's operations in Russia were terminated in January 1998. Likewise, Sanam's practice of sending Iranian students to study at the Baltic State Technical University has been suspended.

—"FSB Adds to List of Companies Involved in Weapons Programs," *Interfax* (Moscow), 11 June 1998; in FBIS Document FTS19980612000415, 12 June 1998.

16 June 1998

U.S. intelligence sources believe that Iran is trying to purchase telemetry equipment for missile testing from China's Great Wall Industries. Great Wall Industries is reportedly negotiating to sell an "entire telemetry infrastructure" for Iran's Shahab-3 and Shahab-4 missile programs. Russia recently informed the United States that Chinese and North Korean officials were spotted in Iran for a missile-test.

—Bill Gertz, "China Assists Iran, Libya on Missiles," *Washington Times*, 16 June 1998, p. 1.

16 June 1998

U.S. intelligence believes that China is cooperating with Iran in missile technology. Iran tried to purchase telemetry equipment for missile testing from China's Great Wall Industries. Russian authorities also informed the United States that Chinese and North Korean missile experts were spotted at the missile testing facilities in Iran. China is said to be assisting Iran develop the 110km-range NP-110 (this likely will be the Fateh-110 missile).

—Bill Gertz, *Washington Times*, 16 June 1998, p. 1; in *Nonproliferation Review*, Vol. 6, No. 1, Center of Nonproliferation Studies, Fall 1998, p. 170.

17 June 1998

North Korea admits that it is selling missiles to other countries because it needs foreign currency. Officials state that they have known for a long time that North Korea was providing Iran and Syria with Scud missiles. North Korea's Korean Central News Agency notes that they will "continue developing, testing and deploying missiles."

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Pyongyang's missile program is based on Scud technology provided by the former Soviet Union or Egypt, American officials say.

—"N. Korea Admits Missile Sales, Vows to Continue," *Baltimore Sun*, 17 June 1998, p. 12A, in Lexis-Nexis, www.lexis-nexis.com.

17 June 1998

U.S. intelligence reports state that China is sending missile technology to Iran and Libya. China and Iran had been negotiating about telemetry equipment, which is necessary for missile testing. The intelligence reports show that both China and Russia have been involved in Iran's ambition to produce two medium-range ballistic missile systems. Israeli intelligence had already discovered last year that China's Great Wall Industries and Iran were speaking about a sale of telemetry equipment for the Shahab-3 and Shahab-4 missiles. These weapons are based on North Korea's Nodong missile, which has a 620-mile range.

—Tom Rhodes, "China 'helping Libya and Iran to Build Missiles'," *Times* (London), 17 June 1998, in Lexis-Nexis, www.lexis-nexis.com.

17 June 1998

China is assisting Iran and Libya with missile technology despite claims that Beijing has improved its record on weapons proliferation, according to U.S. intelligence reports. Reports show that last summer, Iran held discussions with China about the acquisition of telemetry equipment, a vital component for missile-testing. Chinese experts are also believed to have been working with Libyan technicians to help create missiles for Colonel Qaddafi. The data provide fresh evidence that China, as well as Russia, is playing a key role in Iran's drive to build two medium-range ballistic missile systems.

—Tom Rhodes, "China helping Libya and Iran to build missiles," *Times* (Washington, DC), 17 June 1998, in Lexis-Nexis, www.lexis-nexis.com.

22 June 1998

Israeli Defense Minister Yitzhak Mordechai says Iran is continuing to advance its Shahab-3 and Shahab-4 missile programs with intensive assistance from Russia. Mordechai said that Israel had information that Iran was keeping up the production rate of its missiles.

—Gideon Alon, "Syria, Iran 'stocking up arms'," *Haaretz* (Tel Aviv), 23 June 1998.

22 June 1998

The Russian Ministry of General and Vocational Education stops the teaching of Iranian students at the Ustinov Military Mechanics (Voenmekh) State Technical University at Baltiysk. Furthermore, any contact between Voenmekh and Iran's Sanam industrial group will also be terminated, as Sanam has been connected with violating Russia's export control requirements regarding missile technologies. The decision is in accordance with Russia's decree "on strengthening control over the export of dual purpose goods and services related to weapons of mass destruction and missile means of their delivery."

—Anna Bakina, ITAR-TASS (Moscow), 22 June 1998; in "Russia to Stop Military Technical Training for Iranians," FBIS Document FTS19980623000281, 23 June 1998.

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23 June 1998

According to Israeli Defense Minister Yitzhak Mordechai, Iran continues to advance its missile programs to manufacture the 1,300km-range Shahab-3 and the 2,000km-range Shahab-4. Referring to the recent nuclear tests by India and Pakistan, Mordechai said, "what happened in India and in Pakistan can only accelerate Iran's desire to have strategic stability."

—Gidon Alon, *Haaretz* (Tel Aviv), 23 June 1998, p. 2; in "Mordekhay - Iran 'Keeping Up' Missile Production Rate," FBIS Document FTS19980623000758, 23 June 1998.

July 1998

There are nine Russian companies and organizations that U.S. President Clinton contemplates sanctioning for supplying military material to Iran. Glavkosmos is the "commercial intermediary for the RKA (Russia's Space Agency) in international projects." The Baltic State University supposedly trains Iranian students in missile technology. The INOR Scientific Production Center supposedly sold "620kg of alloy, blanks of high-strength steel, and three types of foil 0.2 and 0.4mm" thick. Yevropalas-2000, MOSO Company is said to have been shipping steel to Iran via Cyprus. Grafit NII provided Iran with graphite composite materials. Polyus NII is said to have provided Iran with laser gyroscopes. The gyroscopes produced by the company are made for passenger airplanes; using them on ballistic missiles would take a lot of effort and money, if such a use were at all possible. There were I-42-1S gyroscope deliveries from Polyus to Iran in 1995-1997. [Note: See 16 July entry.]

—Aleksey Rey, "The Iranian Affair: The Enterprises and Organizations Suspected of Deliveries of Missile Technologies to Iran," *The Doklady PIR-Tsentra Series*, No. 7, (Moscow), PIR-Center, 15 September 1998; in Ivan Safranchuk, ed. by Dmitriy Yevstafyev, "Scientific Notes No. 8: The Nuclear and Missile Programs of Iran and Russian Security — The Framework of Russian-Iranian Collaboration," *Nauchnyye Zapiski* (Moscow), 5 May 1999, vol. 8, pp. 1-36; in "Russia, Iran Nuclear Program Cooperation," FBIS Document FTS19990701001333, 1 July 1999.

July 1998

A high-level report issued by the U.S. government's Rumsfeld Commission concludes that the threat from Iran is increasing and that "Russia poses a threat to the U.S. as a major exporter of enabling technologies, including ballistic missile technologies, to countries hostile to the United States."

—Gerald M. Steinberg, *Arms Control and Non-Proliferation Developments in the Middle East: 1998-99* (Ramat Gan, Israel: Begin-Sadat Center for Strategic Studies, September 2000), p. 17.

1 July 1998

Major General Aleksandr Zdanovich, chief of the Russian Federal Security Service (FSB) Public Relations Center, denies that Russia violated any export control laws in the recent smuggling case of steel alloy from Russia to Iran via Azerbaijan. [Note: See entry for 26 March 1998.] "Expert examination showed that there was no basis for the accusation of illegal export of dual-purpose goods. The metal was sheets of stainless steel of the grade 08X 18H 10T, which is used everywhere for household needs. No special export license was needed for this consignment," Zdanovich states. He also maintains that the main perpetrator is an Iranian citizen, and that the FSB is active in halting the illicit transfer of missile technology. "This is just one instance of monitoring work by the security organs to prevent the spread of missile technology," he says.

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—Anatoliy Yelizarov, "We Do Not Trade in Missiles in Circumvention of the Law...", *Rossiyskaya Gazeta* (Moscow), 1 July 1998, p. 8; in "FSB Aide Denies Dual-Use Export Charges," FBIS Document FTS19980701001010, 1 July 1998.

5 July 1998

The United States and Israel are the strongest opponents of Russia's arms deals with Iran and other countries. Russia is supposedly supplying missile technology to India, Iran, and Iraq. They are also building a nuclear plant in Iran. The reason for the arms sales is Russia's dire need for money. It feels that the United States is fostering double standards and thinks it should be allowed to sell to anyone. The Russian government has stopped a sale of long-range missile technology to Iran.

—Leslie Shepherd, "Russia Continues to Sell Arms Despite U.S., Israeli; Protests," *Buffalo News*, 5 July 1998, p. 2A, in Lexis-Nexis, www.lexis-nexis.com.

13 July 1998

Director of the Russian Federation Federal Security Service (FSB), Nikolay Kovalev, states that the FSB is committed to halting the illicit transfer of military technologies, citing the 26 March smuggling of steel alloys from Russia to Iran via Azerbaijan. "We are continuing to investigate a criminal case of contraband delivery to Iran of a large consignment of enriched steel [as received] which was intercepted in Azerbaijan." Kovalev also mentions that attempts by certain Russian businessmen and officials to violate the restrictions are inadmissible. "We have uncovered and put a stop to unsanctioned activity by a group of specialists from the Moscow Aviation Institute working on missile technology," he said. Kovalev also reports that Iran's Sanam Company has been banned as being a threat to Russia's national security, and the scientific exchange program between Sanam and the Baltic State Technical University (the St. Petersburg VoenMekh), has been cancelled.

—Olga Semenova, ITAR-TASS (Moscow), 13 July 1998; in "Security Service Cracks Down on Weapons Technology Exports," FBIS Document FTS19980713001516, 13 July 1998.

16 July 1998

The Clinton administration announces trade sanctions on nine Russian entities that have been helping Iran develop its missile program. Seven of the nine entities have already lost their U.S. assistance in the form of grants or partnership programs that were meant to give the Russian scientists work so that they would not need to go to countries like Iran. The White House named the nine Russian companies and institutions that would be sanctioned: the INOR scientific center and the Grafit research institute, which provided steel for missile production; the Ployus research institute, which provided guidance units; Glavkosmos, the Russian counterpart of NASA; Baltic State University in St. Petersburg, which provided help with rocket-motor technology and training; Europalace 2000 and MOSO company, which provided 22 tons of steel that the U.S. government suspects was used to make Iranian missiles; and the Tikhomirov institute and the Komintern plant in Novosibirsk. The Russian Export Control Commission originally listed all of the organizations in an investigative report. The organizations are denying any wrongdoing. [Note: See July entry.]

—Steven Erlanger, "U.S. Imposes Curbs on 9 Russian Concerns," *New York Times*, 16 July 1998, p. A10, in Lexis-Nexis, www.lexis-nexis.com; Leonid Gankin, "Washington Will Punish Russian Organizations. At Moscow's Prompting," *Kommersant-Daily* (Moscow), 17 July 1998, p. 2; in "US May Impose Sanctions Against Nine Russian Companies," FBIS Document FTS19980717000564, 17 July 1998.

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22 July 1998

According to U.S. sources, Iran carried out a missile-test of its Shahab-3 surface-to-surface missile, firing it from southern Tehran. It has a range of 1,300km. This missile was reportedly produced with the help of North Korea. This missile could hit Israel, Turkey, Saudi Arabia, and parts of Russia. Iran confirms the missile test, but states that no country was targeted with the development of this missile. They also state that the missile was produced entirely by Iranians. The missile, according to Western sources, is still under development and it will take some time for it to be operational. Nevertheless, the Shahab-3 was put on display at a parade during Holy Defense Week in 1998.

—Staff Colonel Yaqub Aslan, "'World Strategic Rockets and Missiles': Iran's Surface to Surface Missiles," *Saff* (Tehran), No. 229, 22 May- 21 June 1999; in "Saff on Iran's Surface-to-Surface Missiles," FBIS Document FTS19990904000330, 4 September 1999.

22 July 1998

Iran test-fires the Shahab-3 medium-range surface-to-surface ballistic missile. U.S. and Israeli officials agree that the test is unsuccessful; the missile fails to complete its flight path and falls short of its target. The test is conducted approximately 160km south of Tehran. U.S. experts also identify the Shahab-3 as a variant of North Korea's Nodong missile. [Note: the missile test being unsuccessful due to the explosion is questioned by many sources who feel the explosion was intentional.]

—"US: Iranian Missile Test Missed Target," CNN, 23 July 1998, <http://www.cnn.com>.

22 July 1998

According to Israeli government sources, Iran tests a medium-range missile in the northern part of the country. The missile flies 800km, and defense experts say that Iran will likely be capable of firing the missile its full range of 1,300km in a few months. Israeli sources say the missile is fired from a site 150km south of Tehran. The missile flies for about 100 seconds, reaching a peak altitude of 60km before exploding. Whether the explosion was intentional or a failure in the system is unclear. However, Israeli officials believe that overall the test is successful, and it proves that Iran is well on its way to developing the 1,300km-range Shahab-3 missile. Israel believes the Shahab-3 is based on North Korea's Nodong, aided by Russian technology. Without Russian assistance, Iran would be unlikely to complete the project. Both the United States and Israel believe that Iran will have completed the prototype of the Shahab-3 within one year. The missile is launched at 6:00 a.m., and is detected by two or three U.S. satellites, traveling on a southeasterly orbit before exploding.

—David Makovsky and Amos Harel, *Haaretz* (Tel Aviv), 24 July 1998; in "Israeli, U.S. Sources Assess Iranian Missile Danger," FBIS Document FTS19980724000447, 24 July 1998; Alon Ben-David, Israel Television Channel 1 Network (Jerusalem), 24 July 1998; in "Iranian Missile 'Explodes' During 22 Jul Test," FBIS Document FTS19980724001182, 24 July 1998; Zeev Schiff, "In the Wake of Iranian Test," *Haaretz* (Tel Aviv), 29 July 1998, p. B1; in "Iran Missile Test Aimed at Becoming 'Fait Accompli'," FBIS Document FTS19980804001188, 4 August 1998.

22 July 1998

United States Vice President Al Gore says he would push Russian officials to fulfill commitments to investigate the nine Russian organizations suspected of supplying ballistic missile technology to Iran. Gore reports that the Iranian missile issue is a central point of his trip to Moscow, scheduled later in the week.

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—David Makovsky, *Haaretz* (Tel Aviv), 22 July 1998; in "Gore Pledges to Press Moscow on Missile Technology to Iran," FBIS Document FTS19980722000978, 22 July 1998.

22 July 1998

A CIA report says that China, North Korea, and Russia sold missile technology to Iran in 1997.

—Gertz, *Bill Washington Times*, 22 July 1998, p. 1; in *Nonproliferation Review*, Vol. 6, No. 2, James Martin Center of Nonproliferation Studies, Winter 1999, p. 161.

22 July 1998

A senior U.S. administration official says the Shahab-3 missile test is a demonstration of Iran's "perceived need to have the capability to threaten targets outside the immediate Persian Gulf area." Furthermore, Iran's primary goal is "not to strike its enemies, but to be seen as a political and military force to be reckoned with in the Middle East."

—Tim Weiner, "Iran Said to Test Missile Able to Hit Israel and Saudis," *New York Times*, 23 July 1998, www.nytimes.com.

22 July 1998

The Shahab-3 missile-test site is supposedly located about 100km southeast of Tehran. The test-launch is supposedly moved up by a week. A mid-level U.S. defense officer failed to inform the crew of the RS-135C (Cobra Bell) spy plane stationed in Turkey of the change. As a result, only U.S. spy satellites detected the launch.

—Yossi Melman, "US 'kept Israel in dark' on Iran missile," *Haaretz* (Tel Aviv), 18 August 1998, www3.haaretz.co.il.

23 July 1998

Iran successfully tests a medium-range missile, says a senior administration official. The weapon has a range of approximately 800 miles and is capable of hitting Israel and Saudi Arabia, thus having the potential to alter the political and military balance of power in the Middle East. A U.S. spy satellite detects the test in the morning. Intelligence experts believe Iran bought the missile from North Korea. Iran is working on a nuclear warhead but is believed to be years away from building and testing such a weapon, although the United States is not certain of the sophistication of Iran's programs. "This test shows Iran is bent on acquiring nuclear weapons, because no one builds an 800-mile missile to deliver conventional explosives," states Gary Milhollin, a leading expert on the spread of weaponry. It is not clear whether the missile test follows an Iranian internal political debate or whether it is ordered by Mr. Khamenei to embarrass Mr. Khatami and undermine any rapprochement with the United States. The Iranian test tells the world something about Iran's military ability, but not its intentions, officials said. A former intelligence official is quoted saying, "My guess is they purchased a very small number of these missiles, and that is as much a political statement as anything, and that the statement is to Israel, and that statement is, 'You are now vulnerable. You have to take us seriously'." Present and former intelligence officials say the missile came from North Korea, which has vowed to continue selling its weapons to any nation that can provide it with hard currency. Government experts had expected a test by Iran, although not this soon. An independent commission headed by former Defense Secretary Donald H. Rumsfeld reported to Congress last week that Iran could develop an intercontinental ballistic missile (ICBM), theoretically capable of striking the United States, within five years, but the CIA estimates that no such threat will emerge until 2010 at the earliest. The Iranians have purchased technology for numerous ballistic missile programs. "But the important point here is that they have very little

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indigenous internal capability to make a real missile, and they've required extensive outside technical support," the former official states. Today's test employs a missile similar or identical to the North Korean Nodong missile. "Whether they fired a Nodong missile themselves or whether they assemble a missile by reverse-engineering a Nodong—either way, this is a North Korean missile with another name," said the senior official. Iran has named the missile Shahab-3.

—Tim Weiner, "Iran Said To Test Missile Able to Hit Israel and Saudis," *New York Times*, 23 July 1998, in Lexis-Nexis, www.lexis-nexis.com.

24 July 1998

Iran's missile deployment is dependent on whether Iran will build the Shahab-3 indigenously or import a complete missile system from North Korea. It is speculated that it will take between one or two years. Officials state that Iran's missile program couldn't be stopped, even if countries like Russia and China are continuously urged not to support Iran. Iran flight-tested the Shahab-3 earlier in the week and it is unclear whether it was a North Korean missile that was painted over, or if it was an Iranian missile based on the North Korean Nodong missile. The flight-test is described as one "for technical purposes in which the dummy warhead explodes before hitting the ground well down [the test] range." The Russian and Chinese governments have entities within their countries that are selling technology, knowledge, and parts needed in missile production to Iran. The United States hopes the Russian and Chinese governments will bring this to a halt. It is also debated whether Iran can create its own missile after having purchased a Nodong missile from North Korea. The case in which Israel bought a French medium-range missile, and then worked on their own Jericho missile capable of carrying nuclear warheads, was noted in regard to this possibility.

—Walter Pincus, "Iran May Soon Gain Missile Capability; Teheran Could Build, Deploy Medium-Range Weapon in 2 Years, U.S. Officials Say," *Washington Post*, 24 July 1998, p. A28, in Lexis-Nexis, www.lexis-nexis.com.

24 July 1998

Israeli officials and government analysts report that Iran is now prepared to begin testing the Shahab-3's missile guidance and warhead separation systems.

—Steve Rodan and Arieh O'Sullivan, "Iran Test-Fires Shihab-3 Missile," *Jerusalem Post*, 24 July 1998.

24 July 1998

According to the Russian Foreign Ministry, Iran's recent missile-test "has not delighted" Russian diplomats. Moscow does not officially comment on the test, but does not indicate that the launch is a potential threat to national security.

—Elza Dober, "Iranian Missiles Can Reach Russia. Tehran Hastens Introduction of Anti-Russian Sanctions," *Russkiy Telegraf* (Moscow), 25 July 1998, p. 2; in "Iranian Missile Not Seen as Potential Threat," FBIS Document FTS19980728001098, 28 July 1998.

24 July 1998

Kuwait's First Deputy Prime Minister and Foreign Minister Shaykh Sabah al-Ahmad al-Jabir says that Iran's missile test should not be seen as a threat to regional security. "I am hoping that this development is not taken as a threat to the security of Kuwait or the region," he states. "We are hoping for stability in the region and the absence of an

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arms race."

—"Sabah al-Ahmad: The Iranian Missile Does Not Threaten Kuwait or the Region," *Al-Qabas* (Kuwait), 26 July 1998; in "Kuwaiti Foreign Minister: Iranian Missile Not a 'Threat'," FBIS Document FTS19980726000064, 26 July 1998.

25 July 1998

Iranian Defense Minister Ali Shamkhani announced that Iran successfully tested a 1,300km-range surface-to-surface missile. He said that the test reflects Iran's defense policy, which is based on improving Iran's deterrent ability. The missile test should not be viewed as a security threat to other nations, nor should it be interpreted as a disruption to regional stability and power balance.

—"Iran Radio on Iran's Missile Test, Defense Minister Comment," Voice of the Islamic Republic of Iran (Tehran), 26 July 1998; in FBIS Document FTS19980726000408, 26 July 1998.

26 July 1998

Defense Minister Rear Admiral Ali Shamkhani was quoted by Iranian state-television saying "the missile with a range of 1,300 kilometers was tested on Wednesday by Iranian experts without any foreign support." The Shahab-3 is capable of reaching Israel, parts of Russia and Turkey, Iraq, and U.S. troops stationed in Saudi Arabia.

—Afshin Valinejad, "Iran: Missile Test a Success," *Jerusalem Post*, 26 July 1998, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

26 July 1998

Iranian Foreign Ministry spokesman Mahmoud Mohammadi fully rejects "irresponsible statements" in the international media that allege Iran will equip its medium-range missiles with non-conventional warheads. "Iran reiterates its commitment to the conventions and international treaties regarding weapons of mass destruction," he states. Mohammadi reiterates Iranian Defense Minister Ali Shamkhani's claims that Iran's missile capability is intended strictly for defensive purposes.

—"Xinhua Cites Iran on Missile Technology for 'Defense'," Xinhua (Beijing), 26 July 1998; in FBIS Document FTS19980726000620, 26 July 1998.

27 July 1998

Pakistan's Foreign Minister Gohar Ayub Khan defends Iran's recent missile-test, saying that Iran, like any other country, has a right to take steps to strengthen its defense. When asked about the launch, he states, "Everyone knows that the highly advanced Iranian missile program had been in progress for some time. Iran had every right to do so." Pakistan's Religious Affairs Minister Zarfarul Haq congratulates Iranian Defense Minister Ali Shamkhani on the successful test.

—"Pakistani Foreign Minister Defends Iranian Missile Test," IRNA (Tehran), 27 July 1998; in FBIS Document FTS19980727000179, 27 July 1998.

27 July 1998

Iran's Kar Va Kargar writes that the Shahab-3 missile "can be a strong source of reliance for other Islamic countries and the Islamic nation. The Islamic bomb has provided them with a source of spiritual and psychological reliance in a tumultuous world...The only thing which should be listened to, if the time comes, is our national interest or the

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necessity of defending Muslim countries in the region and the Islamic world."

—"Islamic missile!" *Kar Va Kargar* (Tehran), 27 July 1998, p. 2; in "Iranian Daily: Shahab Missile To Defend Islamic World," FBIS Document FTS19980727001220, 27 July 1998.

28 July 1998

The U.S. Assistant Secretary for Near East Affairs estimates that Iran's Shahab-4 missile still relies on foreign expertise to improve its engine and guidance system. The Shahab-4 will reportedly have a range of up to 2,000km. —Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 40.

28 July 1998

Israel Defense Forces intelligence chief Major General Amos Malka tells the Knesset Foreign affairs and Defense Committee that Iran's Shahab-3 ballistic missile program has not yet reached the point of no return; halting Russian aid to the program could set back Iran's efforts to deploy the Shahab-3 by several years. —"Iran Expected to Complete Shihab-3 Prototype Next Year," *Jerusalem Post*, 29 July 1998, www.jpost.com.

28 July 1998

A senior Israeli security source says that Iran is developing a long-range strategic branch that would be capable of using ballistic missiles to conduct a first-strike attack against Israel. The source said the Shahab-3 is not intended as a defensive missile and that Israel is one of its intended targets. —Amos Harel and Gideon Alon, "Iran's Missile Launch Was a Success—But Rockets Won't Fly Without Russian Help," *Haaretz* (Tel Aviv), 29 July 1999, www3.haaretz.co.il.

28 July 1998

According to a senior Israeli defense source, the Iranian Shahab-3 missile-test was not a failure. The source asserts that the Iranians had conducted a test-flight of the Shahab-3 and deliberately destroyed the missile in mid-air. —"Defense Source: Iran Missile Test 'Not a Failure'," Israel Television Channel 1 Network, 28 July 1998.

29 July 1998

Iran's missile programs include the 1,300km-range, liquid-fueled Nodong medium-range ballistic missile (MRBM) capable of carrying a 1,000kg warhead; the 1,300-1,500km, liquid-fueled Shahab-3 MRBM capable of carrying a 750kg warhead; the 2,000km-range, liquid-fueled Shahab-4 MRBM capable of carrying a 1,000kg warhead; the 100-150km-range, solid-fueled Zelzal-1 short-range ballistic missile (SRBM); the 350-400km-range, solid-fueled Zelzal-2 SRBM; the 1,000-1,500km-range Zelzal-3 MRBM; and two unconfirmed projects to develop an intercontinental ballistic missile (ICBM) with a 5,500-10,000km range. CRS bases this information on recent press reports. —Stuart D. Goldman, Kenneth Katzman, Robert D. Shuey, and Carl E. Behrens, "Russian Missile Technology and Nuclear Reactor Transfers to Iran," in *CRS Report for Congress* (Washington, DC, 29 July 1998), p. 8.

29 July 1998

A senior security source states that Iran will complete the prototype of its Shahab-3 medium-range ballistic missile by next year and will start producing them by the end of the century. The Shahab-3 is a 53-foot-long ballistic

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missile that can travel 4,300mph and carry a 1-ton warhead, says Gen. Mohammad Bagher Qalibaf of the Islamic Revolution Guards Corps' air wing. Continued development poses a direct threat to Israel. However, the project could be halted if the United States puts more pressure on Russia to stop Russian companies from selling missile knowledge to Tehran. Intelligence sources report that the Shahab-3 is to be followed by the Shahab-4 with a range of between 2,000 and 2,500km, putting southern and central Europe within striking distance.

—"Iran Says New Missile Can Travel 4,300 mph With Great Accuracy," *Baltimore Sun*, 3 August 1998, in Lexis-Nexis, www.lexis-nexis.com; Arieh O'Sullivan and Liat Collins, "Iran Expected to Complete Shihab-3 Prototype Next Year," *Jerusalem Post*, 29 July 1998, in Lexis-Nexis, www.lexis-nexis.com.

29 July 1998

Iran works on a long-range missile, the Shahab-4, which may be deployed in two to five years. Assistant Secretary of State Martin Indyk says the United States would redouble the efforts to curb the transfer of technology to Iran, while an Iranian spokesman states that the missile is designed for defensive purposes only. The Shahab-4, which Western intelligence assesses is based on the Soviet SS-4 missile, is entirely a product of Russian missile technology, and can carry biological, chemical, or nuclear warheads.

—"U.S. Official Says Iran is Developing a Long-Range Missile," *Buffalo News*, 29 July 1998, in Lexis-Nexis, www.lexis-nexis.com; Steve Rodan, "Shihab-4 missile 'will have nonconventional warhead capability'," *Jerusalem Post*, 31 July 1998, in Lexis-Nexis, www.lexis-nexis.com.

29 July 1998

Members of a bipartisan commission that determines the threat posed to the United States by ballistic missiles report that North Korea, Iran, and others conceal their ballistic missile programs from U.S. spy satellites by using underground laboratories and factories to build and test weapons. The panel describes the underground construction as one factor contributing to the "erosion" of U.S. intelligence agencies' ability to monitor weapons proliferation. William Graham, a panel member and former science adviser to Ronald Reagan, says "ample evidence" exists that the North Koreans "created a sizable missile production infrastructure and therefore it is highly likely that considerable numbers of Nodongs have been produced."

—Walter Pincus, "Buried Missile Labs Foil U.S. Satellites," *Washington Post*, 29 July 1998, in Lexis-Nexis, www.lexis-nexis.com.

29 July 1998

U.S. missile experts believe that the failure of the Shahab-3 missile-test on 22 July indicates a possible malfunction of the missile's liquid-fueled engine.

—Bryan Bender, "Shahab-3 only partial success," *Jane's Defence Weekly*, 29 July 1998.

29 July 1998

The head of Iran's Expediency Council, Akbar Hashemi-Rafsanjani, says that Iran's missile technology is for defensive purposes only and is developed domestically. "At present we feel no need to use expertise [*sic*] of others," he states. Rafsanjani also reports that, "Iran produces missiles using domestic technology and design, and Shahab-3 is a thoroughly Iranian missile. Although inspiration may have been taken, it nevertheless is not like foreign models." He also adds, "Those who harbor ill intentions against Islamic Iran should know that Iran's

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defense capabilities are strong."

—"Rafsanjani: Iran's Missile Technology for Defensive Purpose," IRNA (Tehran), 29 July 1998; in FBIS Document FTS19980804000523, 4 August 1998; "Iran's Rafsanjani Comments on Shahab-3 Missile Test," Voice of the Islamic Republic of Iran First Program Network (Tehran), 29 July 1998; in FBIS Document FTS19980804001136, 4 August 1998.

29 July 1998

Russia's embassy in Kazakhstan denies allegations that Russia has provided Iran with missile technology.

—"IRNA: Russia Again Denies Missile Cooperation With Iran," IRNA (Tehran), 29 July 1998; in FBIS Document FTS19980804000539, 4 August 1998.

29 July 1998

According to an Israeli intelligence officer, Major-General Amos Malka, Iran will complete a prototype of its Shahab-3 medium-range ballistic missile within one year, and will start producing them by the end of 1999. Malka tells the Knesset Foreign Affairs and Defense Committee that Iran's missile program could be stopped if Russian companies stop selling missile technology to Tehran. According to a senior security source, Iran's 22 July 1998 missile-test was not a prototype of the 1300km-range Shahab-3 but was a preliminary test of the single-stage rocket engine. Israeli experts believe Iran intentionally detonated the rocket before it reached its full range, and that the test was for political and strategic motives rather than technical ones. Israel believes the Shahab-3 is an Iranian-built and assembled missile based on North Korea's Nodong missile and redesigned by Russian experts. The Shahab-3 will likely be followed by the Shahab-4, which will have a range of 2,000-2,500km. The source also says that Iran is establishing production lines and training units to operate the missiles.

—Arye O'Sullivan and Liat Collins, *Jerusalem Post*, 29 July 1998, p. 2; in "Source—Iran to Complete Shihab-3 Prototype 'Next Year'," FBIS Document FTS19980804000817, 4 August 1998.

30 July 1998

During an interview, Iran's Defense Minister Ali Shamkhani states that Iran had successfully tested its Shahab-3 missile. He states that Iran has "achieved some capabilities in so far as ground-to-air, ground-to-ground, and shore-to-sea missiles." He reports that Iran's missile production is positively related to necessity. He also mentions that although Iran does not currently have intercontinental ballistic missiles (ICBMs) in its plans, the country does have the technology to make them. Shamkhani maintains that ICBMs are a part of the space technology necessary for security. He states that Iran's policy regarding research and development of military equipment is one with "very transparent and clear principles."

He states that the Shahab-3 was tested in order "to maintain security equilibrium in the region, ensure lasting peace, speed up the process of cohesion and unity, and deter any kind of regional aggression against our country.... It was merely a natural progression in the Islamic Republic of Iran's defense industries." He adds that "the domestic production of the Shahab-3 is less dependent on foreign resources than the production of the Paykan cars is dependent on foreign sources. The technology is truly domestic. We are able to produce them on the basis of our domestic capacities."

—Studio Interview with Iranian Defense Minister Admiral Ali Shamkhani, "World of Politics" program, IRIB Television Second Program Network (Tehran), 30 July 1998; in "Iran's Defense Minister on Shahab-3 Missile," FBIS

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Document FTS19980805002669, 30 July 1998; IRIB Television (Tehran), "The World of Politics," 30 July 1998, in FBIS Document ID: FTS19980805000854, 5 August 1998.

30 July 1998

Iran's ambassador to Moscow denies knowledge of Russian companies alleged to have sold weapons technology, prompting a U.S. aid ban.

—"Iran denies missile connection," *Financial Times* (London), 30 July 1998, in Lexis-Nexis, www.lexis-nexis.com.

30 July 1998

According to Gennadiy Khromov, representative for Russia's Glavkosmos (Main Administration for the Development and Use of Space Technology for the National Economy and Scientific Research), the organization "does not at present participate in any activities connected with the transfer of dual-purpose goods and technologies to Iran." Khromov acknowledges that Glavkosmos does have general industrial and scientific contracts with Iran, but they are in the non-restricted category. He also indicates the possibility of private contact between Russian individuals and Iranian entities. "Glavkosmos only works on contract and cannot be held responsible for illegal actions of individual citizens," he says. A Russian commission is investigating nine Russian companies the United States plans to impose sanctions against, in violation of export control regulations. [Note: See July entry.]

—Veronika Romanenkova, ITAR-TASS World Service (Moscow), 30 July 1998; in "Russia's Glavkosmos Denies Supplying Technology to Iran," FBIS Document FTS19980805000773, 5 August 1998.

31 July 1998

Iran's Ambassador to Saudi Arabia, Mohammad Reza Nouri, states that "Iran's missile capabilities are at the disposal of the Kingdom of Saudi Arabia. We believe that Iran's power is the kingdom's power and the kingdom's power is Iran's power. Our relations with Saudi Arabia have reached a historical stage where we are complementing one another, and if we have a missile or non-missile capability, it is at the kingdom's disposal." Kuwait also announces that it does not consider Iran's new missile to be a threat to the region.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 47.

31 July 1998

The United States has been monitoring Iranian missile tests as well as technology transfers between Iran and Russia, according to public testimony given before Congress by CIA Director George Tenet. Tenet testifies that Iran would have the capability to launch long-range missiles in less than ten years, the time given in his earlier estimates. Yet, the test of the Shahab missile did not receive full U.S. intelligence coverage due to a misunderstanding between the Air Force and the Joint Chiefs of Staff planners. The CIA has been monitoring Iran's missile programs and had predicted that it would test a long-range missile this year. The Israeli press stated, "that a CIA satellite has been steadily tracking Iranian activity and that last Wednesday (24 July), it spotted traces of this experiment." Both the Israeli government and the U.S. State Department had believed that the test would not take place for at least another year.

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—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 42.

31 July 1998

According to Israeli military sources, Iran will be able to deploy its Shahab-4 missile within two to five years. The new missile will have a range of over 2,000km and will be capable of carrying non-conventional warheads. The Shahab-4 is being developed with Russian technology, and is allegedly based on the Soviet SS-4 missile. The United States also indicates that the Shahab-4 could be completed within two to five years. The Shahab-3 is based on the North Korean Nodong missile, with Russian assistance in a "fast track program" that will shorten the development stages. Iranian Defense Minister Ali Shamkhani has said that the Shahab-3 "is absolutely domestically produced and has no assistance from any foreign country." The Israeli sources note that Russia has not significantly slowed the transfer of missile technology to Iran, despite commitments to do so.

—"Israeli Sources: Shahab-4 To Have Nonconventional Warhead," *Jerusalem Post*, 31 July 1998; in FBIS Document FTS19980805000977, 5 August 1998.

1 August 1998

Russia's Ambassador to Iran, Konstantin Shuvalov, reports that his country has not offered assistance to Iran's missile development programs and will not do so in the future. Iranian President Mohammad Khatami states that Iran has been able to successfully test its 1,300km-range Shahab-3 missile, despite the numerous sanctions imposed on his country. This, he says, indicates that Iran relies on its own experts to develop its missile systems. In a speech at the Iranian Ministry of Defense, Khatami says, "I have to say that today we rely on the ideas and abilities of our own forces in many areas of defense, even in some very modern areas which include the successful test that was conducted recently for the Shahab-3 missile."

—"Russian Envoy in Tehran: No Russian Help for Iran's Missile," IRNA (Tehran), 1 August 1998; in FBIS Document FTS19980805002929, 5 August 1998; "Iran Denies Foreigners Role in Missile Program," Xinhua (Beijing), 1 August 1998; in FBIS Document FTS19980805003284, 5 August 1998; "Iran's Khatami on Military Issues, Missiles," IRIB Television First Program Network (Tehran), 1 August 1998; in FBIS Document FTS19980805003649, 5 August 1998.

1 August 1998

Iranian President Mohammad Khatami warns against the "growing Israeli nuclear threat to the region" and defends Iran's defense program, including its recent missile-tests. Khatami says the Shahab-3 missile "is completely of Iranian manufacture." Ayatollah Mohammad Yazdi, head of the Iranian judiciary, says, "This missile [Shahab-3] has not been produced in order to attack any country. We are not planning to attack anyone. However, we will not let anyone provoke us, no matter how strong he is."

—Daniel Sobelman, "Khatami calls Israel 'nuclear threat' to region," *Haaretz* (Tel Aviv), 2 August 1998.

1 August 1998

Khatami says, "Iran will not seek permission from anyone for strengthening its defense capability."

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), pp. 39-40, www.csis.org.

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2 August 1998

Iran's Ambassador to Pakistan Medhi Akhounzadeh says that no nuclear or missile cooperation exists between Iran and Pakistan. Shai Feldman, director of the Jaffee Center for Strategic Research, agrees that it is unlikely that Pakistan will transfer sensitive nuclear material or technology to Iran or any other Arab state.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 40.

2 August 1998

Iranian Defense Minister Ali Shamkhani states in an interview that the military cooperation between Iran and Russia is completely open and that there are no secret agreements between the two countries. He also states that the updating of Iran's weapons was crucial to the country. In response to the question of whether Iran supplies military aid or missiles to the Lebanese Hizballah, he says that he can "declare with all confidence and assurance that we do not provide any military aid to Hizballah."

—Najah Muhammad, Interview with Iranian Defense Minister Ali Shamkhani, *Al-Wasat* (London), 2-9 August 1998, pp. 10-13; in "Iran: Defense Minister on Arms, Other Issues," FBIS Document FTS19980805001897, 5 August 1998.

2 August 1998

General Mohammad Bagher Qalibaf, head of Iran's Islamic Revolution Guards Corps' air wing, says that the Shahab-3 is a 53-foot-long ballistic missile, capable of carrying a one-ton warhead to an altitude of almost 82,000 feet, traveling at 4,300 miles per hour, guided by an Iranian made system. "The final test of every weapon is in a real war situation," he says, "but, given its warhead and size, the Shehab-3 is a very accurate weapon."

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 40.

2 August 1998

In an interview with the Saudi-owned weekly *Al-Wasat*, Iranian Defense Minister Rear Admiral Ali Shamkhani pledges that Iran's military power would not be directed at any Arab state. Shamkhani states, "It is certainly not directed against the interests of the Arab states; on the contrary, it adds to the strength of the Islamic world in facing the enemies of the Arab and Islamic nations," suggesting that Iran's military build-up is intended to confront Israel. Asked why Iran is building up its military muscle, Shamkhani replies, "You would notice that no other country has been as bullied or threatened as Iran. Israel, for instance, menaces Iran more than it menaces any other country." Shamkhani also denies the existence of a secret military or arms-purchase agreement between Iran and Russia. Since the collapse of the Soviet Union, the United States has shifted its hostility to Iran. He says, "Washington wants to paint us as the region's monster." Shamkhani says he believes a military strike against Iran by the United States or Israel is "unlikely in the foreseeable future," but he does not believe a resumption of ties between Tehran and Washington is imminent. Iranian President Mohammed Khatami states plainly that Israel constitutes the main danger to peace. "Armed with a stockpile of nuclear, chemical, and biological weapons, the Zionist regime is a major threat to the regional countries as well as others," he says in remarks at a Defense Ministry exhibit that are quoted by the Associated Press.

—Douglas Davis, "Iran: Military buildup is needed to counter Israel," *Jerusalem Post*, 2 August 1998, in Lexis-Nexis, www.lexis-nexis.com.

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3 August 1998

Kenneth Timmerman states that during President Clinton's visit to China, "workers from the China Great Wall Industry Corporation were loading large quantities of solid-propellant ingredients onto a freighter bound for Iran.... [It] may have been disguised as aid to Iran's NP-110 solid-rocket program. The NP-110 program is believed to be a front for Iran's long-range missile procurement activities in China."

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 36.

3 August 1998

General Mohammed Baghir Qalibaf, head of the Islamic Revolution Guard Corps' air wing, says that the Shahab-3 missile can travel at a speed of 7,000km/hour.

—"Mordechai: We Need Resources to Counter Iran Threat" *Jerusalem Post*, 3 August 1998, in Lexis-Nexis, www.lexis-nexis.com.

4 August 1998

Prince Turki bin Abdullah of Saudi Arabia says that "the kingdom was not concerned by Iran's testing of the Shehab-3 last month." After arriving in Tehran carrying messages for Iranian President Mohammad Khatami and former President Hashemi Rafsanjani, the prince expresses happiness over the test and adds that his country is not concerned at all about the test. Khatami tells Turki "that all our resources are being deployed in the interest of peace and security. Iran and Saudi Arabia could together play an effective role in ensuring the region's security."

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, pp. 46, 47.

4 August 1998

Israeli Prime Minister Benjamin Netanyahu tells the Knesset Defense and Foreign Affairs Committee that Israel would use diplomatic means to impede further development of Iran's missile programs. Netanyahu also states that the Shahab-3 is part of an entire missile program and that Iran is more likely to carry out more missile-tests in the future. He also adds that the Russians are providing assistance without which the Iranians would not have been able to test their missile.

—Liat Collins, "PM: Israel Can Defend Itself Against Iran," *Jerusalem Post*, 5 August 1998, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

4 August 1998

Iranian Air Force Commander Brigadier General Mohammad-Bagher Qalibaf says that the Shahab-3 missile is 17 meters long, weighs 16 tons, and can carry at least a 1,200kg warhead. He also says the missile is the least vulnerable to missile defense systems.

—"IRGC Commander Reveals Shahab-3 Missile's Size, Capability," IRNA (Tehran), 4 August 1998; in FBIS Document FTS19980606000515, 6 August 1998.

5 August 1998

According to an affidavit being filed with the Israeli High Court, alleged businessman Gregoriy Luchansky owns an

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unnamed company that supplies nuclear missile technology to Iran and North Korea. Refael Kohen, director of the population administration of Israel's Ministry of Interior files the affidavit, which implicates Luchansky in the illicit transfer of weapons technologies.

—"Israel Official: Luchansky Supplied Iran Nuclear Material," *Globes* (Tel Aviv), 5 August 1998; in FBIS Document FTS19980805002151, 5 August 1998.

6 August 1998

According to a senior Turkish Foreign Ministry official, Turkey does not see Iran's Shahab-3 missile as a threat. A U.S. defense official says that Turkey is concerned about Iran's successful test of the Shahab-3. Omani Air Force Commander Brigadier General Muhammad Bin-Mahfuz Bin-Sad al-Aridi praises Iran's recent test-firing of its Shahab-3 missile, saying that efforts to increase Iran's military ability will benefit other Islamic countries.

—"Turkish Foreign Ministry: Iran's Missiles Pose 'No Threat'," IRNA (Tehran), 6 August 1998; in FBIS Document FTS19980806002148, 6 August 1998; "Omani Air Force Chief Hails Iran Missile Test, Departs," IRNA (Tehran), 6 August 1998; in FBIS Document FTS19980806001277, 6 August 1998.

8 August 1998

Lebanon's defense minister tells the Central News Unit in Beirut, "we are very pleased with Iran's missile-test, and we hope that Iran will now produce Shahab-4 and Shahab-5...the upgrading of Iran's missile capability will not endanger the countries of the region, in fact it will strengthen Muslim countries."

—"Lebanese Defense Chief Hails Iran's Missile Capability," Voice of the Islamic Republic of Iran First Program Network (Tehran), 8 August 1998; in FBIS Document FTS19980808001037, 8 August 1998.

18 August 1998

According to an Israeli intelligence source, the United States did not provide Israel with advance intelligence information it had about Iran's intention to test its Shahab-3 ballistic missile in July 1998. The source's information contradicts earlier assumptions that the July test of the Shahab-3 missile took both the United States and Israeli intelligence by surprise. [Note: Refer to the entry for 22 July 1998 for more information.]

—Yossi Melman, "US 'Kept Israel in Dark' on Iran Missile," *Haaretz* (Tel Aviv), 18 August 1998, www3.haaretz.co.il.

24 August 1998

The secretary of Iran's Expediency Council, Mohsen Rezai, says that if any country fires even one missile at Iran, Iran would definitely respond by firing ten. He also states, "We [Iran] do not ask for anyone's permission to equip our armed forces, and we will produce all types of advanced weapons except nuclear and chemical weapons."

—"Reza'i: Iran Will Respond to Any Missile Attack," IRNA (Tehran), 25 August 1998; in FBIS Document FTS19980825000384, 25 August 1998.

27 August 1998

The United States and Israel are scheduled to exchange information and assessments regarding Iran's acquisition of missile technology. The talks are to focus on the recent Shahab-3 test and Russia's role in Iran's missile programs, in preparation for President Clinton's summit with Russian President Yeltsin.

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—Amir Oren, *Haaretz* (Tel Aviv), 27 August 1998, p. A2; in "Israeli, US Teams To Discuss Russian Aid to Iran," FBIS Document FTS19980827000739, 27 August 1998.

31 August 1998

Iranian and Pakistani officials are believed to have witnessed the launch of North Korea's Taep'o-dong-1 three-stage space launch vehicle. The launch reportedly fails to put North Korea's first satellite into orbit. Iran has been involved in the financing of the Taep'o-dong, as well as exchanging information, technology, and personnel.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 33.

September 1998

Russia signs a plan that calls for the continued construction of the Bushehr nuclear power plant.

—"Iran: President Khatami returns home, comments on successful visit," IRNA (Tehran), 16 March 2001; in FBIS Document IAP20010316000002, 16 March 2001.

September 1998

A freighter loaded with large quantities of solid-propellant ingredients from the China Great Wall Industry Corporation bound for Iran, is due to dock in Iran. It may have been disguised as aid to Iran's NP-110 solid-fueled rocket program that could be a cover for Iran's long-range missile procurement in China.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 36.

1 September 1998

The commander-in-chief of Iran's military, Major General Yahya Rahim-Safavi, says that medium-range SAM-6 missiles will be used in the Ashura-3 military exercises. Coinciding with the Ashura-3 exercises, Iran is launching the Shabaneh (nocturnal) amphibious exercises on 2 September, which will include missile launchers.

—"Iran: IRGC to Use SAM-6 Missiles in Military Exercise," IRIB Television First Program Network (Tehran), 1 September 1998; in FBIS Document FTS19980901001291, 1 September 1998; "Iran Begins Amphibious Shabaneh Exercise in Persian Gulf," Voice of the Islamic Republic of Iran First Program Network (Tehran), 2 September 1998; in FBIS Document FTS19980902000419, 2 September 1998.

2 September 1998

Israeli Defense Minister Yitzhak Mordechai says he urged Chinese President Jiang Zemin to prevent the transfer of sensitive military technology to Iran. Mordechai told Israel Radio that he asked Jiang during their meeting in Beijing "to do everything he could to ensure that China does not transfer technology in the areas of long-range missiles or non-conventional arms to countries which are hostile to us, like Iran." A spokesman for Mordechai says that Jiang gave "strong and clear" assurances that China is not assisting Iran with developing any non-conventional weapons. Chinese Premier Zhu Rongji assured Israeli Prime Minister Benjamin Netanyahu in May 1998 that China would not sell nuclear nor missile technology to Iran or other countries that might transfer it to Iran. That same month, however, China reportedly provided Iran with 1,000 tons of a special steel alloy used to build ballistic missiles.

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—H. Asher Bolande, AFP (Hong Kong), 2 September 1998; in "Israeli Minister Urges Jiang to Stop Arms Exports to Iran," FBIS Document FTS19980902000635, 2 September 1998.

4 September 1998

Senior Israeli intelligence officials believe that Iran is developing a spy satellite in conjunction with its missile program. The officials say they identified a satellite launcher in a video of Iranian President Khatami visiting a missile factory. The officials also say that based on analysis of Iran's test of the Shahab-3, the missile is virtually identical to its Pakistani counterpart, with both missiles modeled after the North Korean Nodong.

—Qobi Marenko, Channel 2 Television Network (Jerusalem), 4 September 1998; in "Iran Reportedly Developing 'Spy Satellite'," FBIS Document FTS19980905000580, 5 September 1998.

5 September 1998

Iran deploys two mobile surface-to-air (SA-6) missile batteries along the Afghan border.

—Mehrddad Balali, "Iran claims right to "legitimate defense" as tensions with Taliban mount," Agence France Presse (Tehran), 5 September 1998, in Lexis-Nexis, www.lexis-nexis.com.

8 September 1998

A senior Israeli intelligence officer tells Knesset members that even if Russian missile assistance to Iran were to end, Iran would still be able to complete development of its Shahab-3 ballistic missile, but lack of assistance would hinder development of the Shahab-4 missile. It is the first time that Israeli intelligence officials say the Shahab-3 project could be completed without Russian assistance.

—Arieh O'Sullivan, "IDF: Iran Can Complete Shihab-3 Missile Even if Russia Stops Aid," *Jerusalem Post*, 9 September 1998, www.jpost.com.

8 September 1998

A senior Israeli intelligence official says that Russia continues to allow the transfer of missile technology to Iran, despite discussions between President Clinton and Putin during their recent summit in Moscow. The Israeli source said that at this point, even if Russia were to stop all technical aid, Iran would still be able to finish its 1,300km-range Shahab-3 missile.

—"Intelligence Officer—Shahab-3 Project Unstoppable," *Qol Yisrael* (Jerusalem), 8 September 1998; in FBIS Document FTS19980908001240, 8 September 1998.

8 September 1998

A military parade in Tehran marks the first time that many Iranian missiles are displayed publicly. The newest missile is the Shahab-3 ballistic missile. One Shahab-3 is carried on a transporter-erector launcher (TEL) vehicle and the other on a reload vehicle. During the parade, the Shahab-3 on the reload vehicle is the rear-end of the missile. Visible is one large motor with four carbon composite control vanes in the motor efflux. The single motor indicates a clear difference to earlier reports about the North Korean Nodong missile, which, in 1993, was believed to use a cluster of four Scud-B motors. The rear-end body design of the Shahab-3 also appears to be different from Pakistan's Ghauri (or Hatf-5) missile. Further similarities between the Shahab-3, Nodong-1, and the Ghauri are unclear, though it is believed that the three missiles share a basic design and that there has been some data

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exchange following the limited flight trials. Another ballistic missile type is also shown and is believed to be a Scud-B or Scud-C. Five air-to-air missiles on display during the parade are identified as the Russian R-27 "Alamo" and the R-73 "Archer," the U.S. AIM-7 Sparrow and AIM-9 Sidewinder, and an Iranian modification to the U.S. HAWK surface-to-air missile (SAM). It is believed that the U.S. MIM-23 HAWK, sold to Iran in the 1970s, was modified by the Self-Sufficiency Group of the Islamic Republic of Iran Air Force in the early to mid-1990s for the F-14 Tomcat or to replace the Phoenix air-to-air missile. Also on display are the Chinese YJ-1 (C-801) solid-propellant anti-ship missile, the Chinese YJ-2 (C-802) turbojet-powered anti-ship missile, and an unidentified air-to-surface missile. The C-801 is reportedly known as the Karus in Iran and the C-802 as the Tondar. Three Iranian-built, solid-propellant surface-to-surface missiles (SSMs) are on display: the Zelzal-2, the Nazeat, and the Shahin. The Zelzal-2 was offered for export in 1996 with a range of 150km by the DIO. The DIO has been developing the Nazeat family (versions 1-10) since the 1970s; in 1996, the Nazeat versions 4-10 were offered for export.

—"Iran's missiles on parade," *Jane's Defence Weekly*, 9 December 1998, in Lexis-Nexis, www.lexis-nexis.com.

8 September 1998

Iran displays the Shahab-3 ballistic missile in a military parade to mark the 1980 beginning of Iran's eight-year war with Iraq.

—Barry May, "Iran Shows New Missile For First Time," Reuters, 25 September 1998.

8 September 1998

The missiles displayed in the parade in Tehran's Azadi Square to commemorate Iran's Holy Defense Week are the Shahab-3, the Zelzal-2, and the Nazeat. Some are painted with slogans such as "Israel should be wiped out from the map" and "the USA can do nothing." The Shahab-3 is displayed on a transporter-erector launcher (TEL).

—"Iran Displays Shahab-3," *Current Missile News*, 1 October 1998, www.cdiss.org.

9 September 1998

In a briefing to the Knesset Foreign Affairs and Defense Committee, an Israeli senior intelligence official says that if the Russians stop transferring their technology to Iran at this stage, Iran could still finish the missile on its own.

—Arieh O' Sullivan, "Intelligence: Iran can complete Shihab 3 even if Russia stops aid," *Jerusalem Post*, 9 September 1998, in Lexis-Nexis, www.lexis-nexis.com.

16 September 1998

Iran reportedly masses about 25 attack aircraft, 80 tanks, 2 mobile missile batteries, 90 artillery pieces, and 60 armored cars on its border with Afghanistan.

—"Iran's Military on Alert Tensions With Neighboring Afghanistan on The Rise," *Toronto Star*, 16 September 1998, in Lexis-Nexis, www.lexis-nexis.com.

23 September 1998

The second phase of the Victory-7 (Fath-e haft) military exercises, during which Iran plans to install surface-to-sea missile systems and destroy mock targets with missiles, begins in the northern Persian Gulf.

—"Iran: Second Phase of Victory-7 War Games Start in Gulf," Voice of the Islamic Republic of Iran First Program Network (Tehran), 23 September 1998; in FBIS Document FTS19980923001071, 23 September 1998.

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24 September 1998

"Notwithstanding the payload part (as Pakistan is the only Muslim country with nuclear capability), the other ballistic capabilities of these countries are fairly identical." The daily notes that Pakistan's Ghauri missile closely resembles Iran's Shahab-3, and "there is strong suspicion that these two medium-range missiles may be of North Korean origin." The *Nation* lists the technical details for the Shahab-3 in relation to the Ghauri. The Shahab-3 has a 1,300km range, which is "fairly near Ghauri." Also like the Ghauri, it possibly uses liquid oxygen fuel in a single-stage engine, and is fired from a mobile launcher. The Shahab-3 is also said to carry a one-ton warhead, fly at 7,000km (4,320 miles) per hour, and have an accuracy (CEP) of 4 kilometers. Its ballistic height is 250km, whereas the Ghauri reaches an elevation of 350km.

—EAS Bokhari, "Ballistic missile programs of Iran and Pakistan — some similarities," *The Nation* (Islamabad), 24 September 1998, p. 7; in "Article Compares Iran, Pakistan Missiles," FBIS Document FTS19980925000164, 25 September 1998.

25 September 1998

Iran's Minister of Defense Ali Shamkhani states that work will be done on the Shahab-4 and Shahab-5, but says it wouldn't begin immediately. Iran does not want to remain merely a regional power, but, with the Shahab-5, which will have a range of up to 10,000km, Iran hopes to be recognized as a world power.

—Konstantin Eggert, "'Meteor' for the Ayatollahs. Iran Needs Ballistic Missiles in Order To Become a World Power," *Izvestiya* (Moscow), 22 October 1998, p. 5; in "Part II of Iran's Missile Program Article," FBIS Document FTS19981022001488, 22 October 1998.

26 September 1998

Iran displays some of its 1,300km-range Shahab-3 missiles in Tehran during a military parade to mark the anniversary of the start of the 1980-1988 War against Iraq. The missiles are carried on large trucks with anti-Israel and anti-American slogans. One banner says, "Israel should be wiped off the world map." Iran's elite Revolution Guards Corps parades the missiles along with other missiles Iran claims to have developed without foreign assistance.

—"Tehran Displays Shahab at Military Parade," *Arab News* (Jeddah), 26 September 1998; in FBIS Document FTS19981020001551, 26 October 1998.

26 September 1998

Iranian Defense Minister Ali Shamkhani says that Iran will not deploy the Shahab-3 missile against the Taliban in neighboring Afghanistan. "The Taliban has been threatening us," he said, "but so far, we have exercised self-restraint because of diplomatic decency, patience, and tolerance." Shamkhani also denies that Iranian military officials were on hand for North Korea's missile tests, and says that Tehran and Pyongyang are not involved with each other's missile projects. He says that Iran is capable of independently producing the Shahab-3.

—"Shahab-3 will not be used against Taliban," *Iran Daily* (Tehran), 27 September 1998; in "Shamkhani: Iran Will Not Use Shahab-3 Against Taliban," FBIS Document FTS19980927000262, 27 September 1998.

26 September 1998

Israeli Prime Minister Benjamin Netanyahu tells Israel Radio while visiting New York that Israel would not "sit back

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with our arms crossed in the face of the very serious strategic threat that Iranian missiles pose to us."

—Ed Blanche, "Israel mulls strike on Iran," *Jane's Defense Weekly*, 7 October 1998, p. 27.

27 September 1998

The Iranian Defense Minister says that Iran is planning to produce a longer-range missile. It is believed to have received substantial technology from North Korea. However, Rear Admiral Ali Shamkhani denies any foreign assistance to Iran and says that Iran can produce as many missiles as it needs.

—"Iran Planning Missile with Extended Range," *Chicago Sun Times*, 27 September 1998, in Lexis-Nexis, www.lexis-nexis.com.

27 September 1998

Israeli Defense Minister Yitzhak Mordechai rejects Labor MK Ephraim Sneh's call for Israel to launch a pre-emptive strike against Iran's Shahab-3 missiles as "redundant and harmful." Rear Admiral Ali Shamkhani, Minister of Defense and Armed Forces Logistics, in an interview with the Dubai daily *Al Ittihad*, threatens Israel with a "stunning response" if Israel were to attack the nuclear reactor in Bushehr or any other facility in Iran.

—Liat Collins and Steve Rodan, "Mordechai: We can protect our citizens from Iran threat," *Jerusalem Post*, 28 September 1998, in Lexis-Nexis, www.lexis-nexis.com.

28 September 1998

Israel Defense Force Chief of General Staff Lt.-General Shaul Mofaz says that Iran's weapons program shows that the Israel Defense Forces (IDF) must be prepared to carry out pre-emptive strikes. Mofaz describes Iran as a long-term threat.

—"Mofaz issues warning on missiles," *Jerusalem Post*, 29 September 1998, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

28 September 1998

Israeli Prime Minister Benjamin Netanyahu says Iran is developing the Shahab-4 missile, which could reach into Europe, and the Shahab-5 and Shahab-6 missiles, which could reach the eastern seaboard of the United States. He also says the Iranians are building "an enormous infrastructure [including] hardened missile silos," which would protect the missiles from a U.S. or Israeli pre-emptive strike. Netanyahu says that such developments have prompted the Israeli perception that an enhanced deterrent and security capability is needed. A blue-ribbon congressional commission on missile threats earlier in 1998 reported that Iran has the technology and resources to build an intercontinental ballistic missile (ICBM) "within five years of a decision to proceed. In addition to this Scud-based long-range ballistic missile program, Iran has acquired and is seeking major, advanced missile components that can be combined to produce ballistic missiles with sufficient range to strike the United States."

—Martin Seiff, with contributions from Bill Gertz, "Iran's long-range missile plans worry Netanyahu Says US cities may be targeted," *Washington Times*, 1 October 1998, p. A2, in Northern Light, www.northernlight.com.

28 September 1998

Israel Defense Force Chief of Staff Lt. General Shaul Mofaz announces in Jerusalem that pre-emptive strikes against Iran might be necessary to prevent it from acquiring ballistic missiles and nuclear weapons. "The Israeli army must

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be ready to launch a pre-emptive strike if this becomes necessary."

—Ed Blanche, "Israel mulls strikes on Iran," *Jane's Defence Weekly*, 7 October 1998, in Lexis-Nexis, www.lexis-nexis.com.

29 September 1998

A spokesman for the Iranian military says that Iran assessed the use of domestically manufactured military equipment, including the new Katyusha missile, during the Zolfaqar-2 military exercises.

—"Use of Iranian-Made Arms in Zolfaqar-2 Shows Military Power," IRIB Television First Program Network (Tehran), 29 September 1998; in FBIS Document FTS19980929001471, 29 September 1998.

29 September 1998

Iran's English language news *Kayhan International* praises Iran's self-sufficiency in the military industry, and notes that Defense Minister Ali Shamkhani recently announced that Iran is developing the Shahab-4 and Shahab-5 ballistic missiles, which would have longer ranges than the 1,300km-range Shahab-3.

—"Tehran Daily Lauds Iran for Self-Sufficiency in Arms Industry," IRNA (Tehran), 29 September 1998; in FBIS Document FTS19980929001406, 29 September 1998.

29 September 1998

Israeli security sources report that Iran's development of the Shahab-4 ballistic missile is proceeding "quietly and thoroughly, parallel to the development of their nuclear program."

—Ben Kaspi, "Iran's Missile Program Analyzed," *Maariv* (Tel Aviv), 29 September 1998; in FBIS Document FBIS-NES-98-274, 1 October 1998.

October 1998

The Russian Federal Security Service (FSB) recently admitted to "cases of cooperation with Iran which could have resulted in Russian deliveries violating international agreements." Information on the SS-20 may have been supplied although there is a lack of evidence. However, it seems that information on the SS-4 was provided. Recent actions indicate that Russia is trying to stop the recruitment and limit travel of Russian scientists to Iran. The Russian Visas and Registration Department (OVIR) arranged the visit of Russian scientists to Iran even though they possessed state secrets. Two agencies in Russia under the Foreign Intelligence Service (SVR) are held responsible for issuing passports to those possessing state secrets. One is the Interdepartmental Commission for the Consideration of Appeals by Citizens of the Russian Federation in Connection with the Restriction of Their Right to Leave the Russian Federation, which is headed by FSB First Deputy Minister Igor Ivanov. The other is the Interdepartmental Commission on the Protection of State Under the Russian Federation Government, which is headed by Vladimir Bulgak. A scientist says that he recognized a number of his colleagues from the Central Institute of Aviation Machine Building (TsIAM) upon his arrival in Iran. Russian specialists in Moscow are said to have arranged the trip to Iran.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 34.

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October 1998

The United States reiterated its stance on the Russian institutes that allegedly provide Iran with missile technology at the most recent meeting in October 1998. The issue has been discussed at eight meetings between the United States and Russia. Russia has investigated the allegations, and says there has been no official cooperation with Iran's missile programs. Regarding Russia's Glavkosmos GkhO (State Cost-Accounting Organization), which is under the Russian Space Agency, materials, equipment, and technologies delivered to Iran between January 1996 and August 1998 did not violate any export restrictions. The organization also manufactured and delivered ovens for heat treatment of materials and parts for Iran's Institute of the Oil Industry, which is part of the National Oil Company, and the Power Engineering Research Center.

—"U.S. Claims on Iran Arms Projects Refuted," *Nezavisimaya Gazeta* (Moscow), 27 February 1999; in FBIS Document FTS19990308000140, 27 February 1999.

October 1998

Iran has been trying to recruit Russian scientists, which has led to the recent arrest and expulsion of a junior Iranian diplomat, Reza Teymouri, who was caught attempting to buy missile technology. Teymouri is reportedly the fifth Iranian expelled from Russia in the last year. Three others were caught trying to buy liquid-fueled rocket components from NPO Trud. Yuri Koptev, head of Russia's Space Agency, says, "There have been several cases where some Russian organizations, desperately struggling to make ends meet and lacking responsibility, have embarked on some ambiguous projects." Koptev also reports that Russia has stopped the technical assistance being given to Iran's missile programs.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 35.

October 1998

The Russian Duma calls for increasing military cooperation with Iran, stating that this cooperation would be in the interest of Russian manufacturers.

—"Duma Bolsters Arms Ties to Iran," *Washington Times*, 26 October 1998, p. A14.

2 October 1998

U.S. State Department Spokesman James Rubin says that North Korea could face "very negative consequences" if it conducts further tests or exports long-range missiles. Rubin expresses concern over North Korea's export of Scud missiles to Iran, Syria, and Pakistan.

—"U.S. Says Progress in Missile Talks 'up to Pyongyang'," Deutsche Presse-Agentur, 2 October 1998, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

2 October 1998

Hezbollah's spiritual leader Sheik Mohammed Hasan Nasrallah warns that if Israel were to launch a pre-emptive strike against Iran, the latter would retaliate with sophisticated weapons from both Iran and Lebanon.

—David Rudge, "Hizbullah warns of retaliation if Israel strikes Iran," *Jerusalem Post*, 2 October 1998, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

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12 October 1998

The Kyrgyz security service detains 16 railroad cars carrying smuggled weapons, including missiles for Grad (multiple rocket system) installations, en route from Iran to anti-Taliban Coalition forces in Afghanistan. The weapons are to be carried by truck via the mountainous Badakhshan Autonomous District in eastern Tajikistan to Ahmad Shah Masud, a coalition leader. Iran had supposedly asked Kyrgyzstan on 23 September to allow the transport of humanitarian and special cargo.

—"Kyrgyz Seize Weapons From Iran Destined For Anti-Taliban," Interfax (Moscow), 12 October 1998; in FBIS Document FTS19981012000780, 12 October 1998; "Kyrgyz Supreme Council Discusses Iranian Arms Find," Radio Rossii Network (Moscow), 13 October 1998; in FBIS Document FTS19981013001676, 13 October 1998.

12 October 1998

At an aerospace conference in Isfahan, Rear Admiral Ali Shamkhani, Minister of Defense and Armed Forces Logistics, urges increased investment in Iran's aerospace industry to accelerate technological development and improve military capabilities. He is quoted by IRNA as saying that widening research and development along with expanding production would answer Iran's "tactical needs." He states, "The aerospace issue is relevant both from the point of view of an infrastructure to develop technology for all industries and defense requirements." Much of Iran's build-up in the aerospace sector has focused around its missile development capability, which has been buttressed by support from China, North Korea, Pakistan, and Russia.

—Ed Blanche, "Iran to Increase Aerospace Spend," *Jane's Defence Weekly*, 4 November 1998, in Lexis-Nexis, www.lexis-nexis.com.

14 October 1998

U.S. President Envoy Robert Galluci arrived yesterday in Israel to discuss Russian technology transfer to Iran for the construction of the Shahab-3 missile with a range of 1,300km.

—Danna Harman and Steve Rodan, "US Envoy Meets on Russian Missile Aid to Iran," *Jerusalem Post*, 14 October 1998, in Lexis-Nexis, www.lexis-nexis.com.

21 October 1998

Iran may be lacking the funds to completely equip its military with new weapons, so they have put all resources into the missile program, which will be the basis for Iran's defense policy. Iran's solid-fueled missiles don't have a range beyond 150km, and Iran is still seeking long-range solid-fueled missiles with a range of 1,000 to 1,500km. China is helping Iran with the technical aspects of the targeting and control systems for its solid-fueled missiles, but Iran still considers it necessary to develop liquid-fueled missiles such as the Shahab-3.

Iran has bought Scud-B- and Scud-C-type missiles from North Korea, manufactured after Soviet technology. The Scud-B has a range of 300km, and the Scud-C has a range of 500km. When North Korea said they would develop the Nodong-1 medium-range missile with a 1,500km range, Iran voiced its interest.

Iran has an organization called the SANAM Industrial Group handling missile issues. Any missile fuel issues are dealt with by SANAM's Department 140/31, which is also known as the Parchin Missile Industrial Group. SANAM Department 140/16, which is the "Precision Instruments Production Association," imports necessary parts for the

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targeting and control systems. The Parchin Group is located close to the Defense Industries Organization's chemical plants and it is speculated that a production facility for targeting and control systems will be built in the vicinity as well.

—Konstantin Eggert, "'Meteor' for the Ayatollahs. Iran Needs Ballistic Missiles in Order To Become a World Power," *Izvestiya* (Moscow), 21 October 1998, p. 5; in "Iran's Missile Program Viewed," FBIS Document FTS19981021001050, 21 October 1998.

22 October 1998

An Israeli Colonel at Israel's Ministry of Defense states in an interview with *Izvestiya* that Israeli military intelligence officials figure that Iran will be done with its Shahab-3 program in a year and will then be able to handle its military development without foreign help. They say that Iran still needs to work on the missile's engine and navigation system. The Shahab-4, which uses parts from the Soviet R-12, is not as far along in its development as it should be. Progress is slow on the solid-fueled missile that China is helping produce. The officials also say that Iran has a Shahab-5 project under way.

—Konstantin Eggert, "'Meteor' for the Ayatollahs. Iran Needs Ballistic Missiles in Order To Become a World Power," *Izvestiya* (Moscow), 22 October 1998, p. 5; in "Part II of Iran's Missile Program Article," FBIS Document FTS19981022001488, 22 October 1998.

22-28 October 1998

Major-General Mohammed Kadri, a strategic expert at the Al-Ahram Center for Strategic Studies, says, "Iran's projects aimed at developing long-range missiles do not constitute a move towards a shift in the current balance of power in the Middle East."

—Maye Ostowani, "Israel Nemesis?," *Al Ahram Weekly*, 22-28 October 1998, No. 400, [www. Ahram.org.eg](http://www.Ahram.org.eg).

23 October 1998

South Korea's Ministry of Unification (MOU) says that North Korea is suspected of having changed methods of selling missiles to countries such as Iran and Pakistan beginning in 1993. Rather than selling completed missiles, North Korea is believed to export missile components and assemble the missiles in the importing country. The MOU suspects North Korean-supplied missile technology to Iran for its Shahab-3 missile and to Pakistan for its Ghauri missile. North Korea is believed to have exported 250 Scud missiles (worth \$580 million) to Iran, Syria, the United Arab Emirates, and other countries between 1987 and 1992.

—"Unification Ministry on DPRK Missile Exports, Development," *Chungang Ilbo* (Seoul), 22 October 1998; in FBIS Document FTS19981025000081, 25 October 1998.

25 October 1998

"The successful manufacture and test-firing of the Shahab-3 missile has created a defense and security balance between the Persian Gulf littoral states as a group and forces outside our region. Through adopting policies to maintain the balance, factors of tension and conflict are eliminated while at the same time our security is improved," he said. The Defense Minister also said the Shahab-3 test "compels those who may have tried to take advantage of the lack of security balance to think twice." When asked about Western allegations that Iran is developing a Shahab-4 missile, Shamkhani said that Iran has no current need for such missiles, and that the

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allegations are false.

—Ali Akbar Dareini, "Shahab-3 has created regional security balance, confidence' Shamkhani says," *Kayhan International* (Tehran), 25 October 1998, p. 3; in "Iran's Shamkhani on Defense Capabilities, Shahab-3 Missile," FBIS Document FTS19981108000534, 8 November 1998.

25 October 1998

French Defense Minister Alain Richard says that the Iranian missile Shahab-3 is not operational yet. He adds that it exploded few seconds after its launch during a test. [Note: See next entry.]

—"The Iranian missile Shahab-3 exploded after its launch," Agence France Presse, 25 October 1998, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

29 October 1998

In response to claims by the French Defense Ministry that the July 1998 test of the Shahab-3 was a failure, Iranian Defense Minister Ali Shamkhani says that the test was completely successful, and France has no valid proof of this claim.

—"Shamkhani: Shahab-3 Missile Test 'Successful'," IRIB Television Fourth Program Network (Tehran), 29 October 1998; in FBIS Document FTS19981029001402, 29 October 1998.

November 1998

Russian and Iranian scientists are reportedly developing a missile known as the SS-400 with a range of 3,600km.

—Gerald M. Steinberg, *Arms Control and Non-Proliferation Developments in the Middle East: 1998-99* (Ramat Gan, Israel: Begin-Sadat Center for Strategic Studies, September 2000), p. 20.

1 November 1998

General Ali Shahbazi says that commandos and infantry forces with katyusha launchers and 107mm missile launchers are participating in the Zolfaqar-2 maneuvers taking place in Zaboul South East of Iran starting Sunday, 1 November.

—"Zolfaqar-2 Forces Parade in Eastern Iran Before Commander," IRNA (Tehran), 1 November 1998; in FBIS Document FTS19981102000382, 1 November 1998.

3 November 1998

Rajab Safarov, member of the political consultation committee for the Russian President and vice president of the coordination center for the Russian-Iranian program, denies during an interview that Moscow transfers military technology to Iran. He does not leave out the possibility of illegal transfers on a non-state level. He says that the Shahab-3 is "16 meters long, flies at a speed of 7,000km/h and can have one or more warheads with a total payload of one ton. Its range is 1,300km." According to Safarov, the missile program is intended only for Iran's regional security and was accelerated due to defeat in the Iran-Iraq War. He states that work on Iran's Shahab-4 and Shahab-5 ballistic missiles is in full swing. He describes the Shahab-5 as an intercontinental ballistic missile (ICBM) with a range of up to 10,000km, which can carry chemical, bacteriological, or nuclear warheads. In response to questions whether there is a way to stop Iran's nuclear ambitions, Safarov says that a critical point will be reached in two to three years, after which Iran cannot be stopped anymore.

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—Manfred Quiring, "Iran becomes a Superpower: Missile Program Causes Neighbors Unease; Welt-talk with a Moscow Expert," *Die Welt* (Berlin), 3 November 1998, www.diewelt.de. [CNS translation]

11 November 1998

According to Ambassador Nikolay Uspenskiy, deputy head of the Russian Security Council's International Security Department, Russia agrees with the United States that no missile or dual-use technologies should be supplied to Iran. "Our country adheres to the international commitments on technologies whose export is disallowed," he states. "Furthermore, exporters have been given a list of companies which are seen as unreliable." Russia and the United States have created joint task forces on export controls.

—"Russian Official Briefs on Dual Use Technology Control," Interfax (Moscow), 11 November 1998; in FBIS Document FTS19981111000224, 11 November 1998.

13 November 1998

Washington suspects China of having provided missile technology to Iran despite the Chinese claim that they had not.

—Charles Hutzler, "US Suspects China Gave Missile Technology to Iran and Pakistan," *Journal Of Commerce*, 13 November 1998, in Lexis-Nexis, www.lexis-nexis.com.

21 November 1998

Admiral Mohtaj, Commander of the Iranian Navy, says that the Islamic Revolution Guards Corps (IRGC) navy and the Army would hold military exercises beginning 13th December in an area of 20,000 square miles from Chahbar to the Strait of Hormuz. The exercise will involve 50,000 personnel from the three forces of the Navy, the IRGC, and the Basij. This exercise would focus on electronic warfare and missile technology, among other things.

—"Further Details of IRGC, Navy Exercise," IRIB (Tehran), 21 November 1998; in FBIS Document FTS19981121000803, 21 November 1998.

23 November 1998

General Abdolkarim Tavakoli, commander of the Iranian Army's naval forces, announces that Iran is building three multipurpose destroyers to be equipped with missiles and electronic defense systems. Construction began in early 1998, and the project will be completed in five years. The first destroyer should be finished and put into service within the next two years. Iran successfully repairs its Falakhan missile-launching frigate, 60% of which was damaged during the Iran-Iraq War (1980-1988).

—"Iran: Three Multipurpose Destroyers Under Construction," IRNA (Tehran), 23 November 1998; in FBIS Document FTS19981123000419, 23 November 1998; "Three Iranian Naval Vessels Join Naval Fleet," Voice of the Islamic Republic of Iran First Program Network (Tehran), 28 November 1998; in FBIS Document FTS19981128000397, 28 November 1998.

23 November 1998

General Abdolkarim Tavakoli, commander of the first zone of the naval forces of the Army, reports that three multipurpose destroyers are under construction. He says that one of the destroyers would join the Navy in two years. These destroyers would be equipped with missile, electronic defense, and far and near reconnaissance

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systems.

—"Three Multipurpose Destroyers Under Construction," IRNA (Tehran), 23 November 1998; in FBIS Document FTS19981123000419, 23 November 1998.

23 November 1998

More than 100 North Korean and Chinese missile experts have been working at Iran's Missile Industrial Complex in Tehran's suburb of Hemat.

—Con Coughlin, "China Lends a Hand with Iranian Missiles," *Telegraph* (London), 23 November 1998, www.telegraph.co.uk.

24 November 1998

Rear Admiral Ali Fadavi, deputy commander of Iran's Islamic Revolution Guards Corps navy, says that Iran will be using advanced surface-to-surface and sea-to-sea missiles during the Vahdat-77 (Unity-77) war games in the Persian Gulf and Gulf of Oman, 4-9 December.

—"Iran: 'Advanced' Missiles To Be Used in Gulf Maneuvers," IRNA (Tehran), 24 November 1998; in FBIS Document FTS19981124000768, 24 November 1998.

28 November 1998

The Islamic Republic Navy will build a missile-launching frigate, which will be launched in two years.

—"Three Iranian Vessels Join Fleet," Voice of the Islamic Republic (Tehran), 28 November 1998; in FBIS Document FTS19981128000397, 28 November 1998.

December 1998

Israeli Foreign Minister Ariel Sharon is to visit Russia to discuss the transfer of missile and nuclear technology to Iran.

—"Sharon to Moscow To Discuss Iran Missiles," *Maariv* (Tel Aviv), 16 December 1998; in FBIS Document FTS19981216001191, 16 December 1998.

December 1998

Iran is regarded as possessing a more advanced surface-to-surface missile (SSM) research and development base than North Korea and has already acquired, through Chinese, North Korean, and Russian assistance, the technical infrastructure to develop a long-range missile. It is further suggested that Iran, which has a sounder economy than North Korea, is more capable of producing an intercontinental ballistic missile (ICBM) than North Korea. It is also noted that the Nodong-1 is technologically similar to the Shahab-3.

—Ben Sheppard, "Ballistic missile proliferation and the geopolitics of terror," *Jane's Intelligence Review*, 1 December 1998, p. 40, in Lexis-Nexis, www.lexis-nexis.com.

4 December 1998

An Iranian spokesman for the Vahdat-77 war games, Issa Golverdi, reports that Iran will test fire a surface-to-surface missile during military exercises, called Vahdat-77 (Unity-77), which begin today. The exercises extend from the central Persian Gulf to the Strait of Hormuz and into the Gulf of Oman.

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—"Iran to Test Surface-to-Surface Missiles in War Games," *Indian Express*, 10 December 1998, www.expressindia.com.

5 December 1998

Brigadier Golverdi, Iranian military spokesman, says that air-to-surface missiles were fired during the Unity-77 military exercises. Hashami Rafsanjani, the head of Iran's Expediency Council, says that the exercises are to promote unity and cooperation between Iran and other states in the southern Persian Gulf.

—"Rafsanjani Comments on Aims of Unity-77 Exercises," Voice of the Islamic Republic of Iran First Program Network (Tehran), 5 December 1998; in FBIS Document FTS19981205000673, 5 December 1998.

5 December 1998

A missile-launching frigate parades in front of the command ship before the Vahadat-77 naval exercises.

—"Second Phase of Vahdat-77 Naval Exercises Begins," IRNA (Tehran), 5 December 1998; in FBIS Document FTS19981205000187, 5 December 1998.

7 December 1998

Brigadier Golverdi, Iranian military spokesman, says that the "Mersad" electronic missile guidance system would be tested in the Unity-77 military exercises in the Persian Gulf and Gulf of Oman. He states that real missiles would be used in the test of the guidance system.

—"Iranian Navy To Test Missile Guidance System in Exercises," IRNA (Tehran), 7 December 1998; in FBIS Document FTS19981207000425, 7 December 1998.

8 December 1998

China protests its association with a recent shipment of missile technology to Iran and says it adopts a responsible position vis-à-vis missile proliferation. Responding to allegations that China recently delivered missile technology to Iran, Chinese Foreign Ministry spokesman Zhu Bangzao states, "China has honored its commitments by adopting effective and strict controls and there is no such issue as proliferation." The *Washington Times* had reported that China supplied Iran with telemetry equipment for its July 1998 test of the 1,300km-range Shahab-3 missile.

—"Spokesman Refuses Comment on Missile Transfer to Iran," AFP (Hong Kong), 8 December 1998; in FBIS Document FTS19981208000530, 8 December 1998.

8 December 1998

China refutes allegations that it delivered a new shipment of "missile technology" to Iran. Western press reports suggest that China exported telemetry equipment to Iran, which may then have been used in Iran's 22 July Shahab-3 missile-test.

—"China Mum on Missile Technology Transfer to Iran," Agence France-Presse, 8 December 1998, in Lexis-Nexis, www.lexis-nexis.com.

9 December 1998

Brigadier Golverdi, Iranian military spokesman, says that Iran would test a surface-to-surface missile in the final stage of the Unity-77 exercises. He says, "This missile defense system is considered one of the most important links of the defensive chain in the tactical modern warfare system."

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—"Iran: Surface to Surface Missile To Be Tested in Exercises," IRNA (Tehran), 9 December 1998; in FBIS Document FTS19981209000751, 9 December 1998.

10 December 1998

Iran successfully test fires a surface-to-sea cruise missile and four Fajr-3K ballistic missiles during the final stage of the Unity-77 military exercises.

—"Iranian Navy Fires Cruise, Ballistic Missiles," Voice of the Islamic Republic of Iran First Program Network (Tehran), 10 December 1998; in FBIS Document FTS19981210001221, 10 December 1998.

10 December 1998

According to Russian First Deputy Prime Minister Yuriy Maslyukov, Russia needs tighter export controls of missile technology to Iran. Maslyukov meets with U.S. Deputy Secretary of State Strobe Talbott, who raises the issue of Russian missile assistance to Iran. Maslyukov says that the United States needs to provide proof of such assistance so that Russia can effectively control the transfers.

—"Maslyukov on 'Stronger Control' of Missile Know-How Exports," Interfax (Moscow), 10 December 1998; in FBIS Document FTS19981210001096, 10 December 1998.

10 December 1998

U.S. Secretary of State Madeline Albright urges the Russian Foreign Minister to limit cooperation with Iranian Missile Program.

—Graig R. Whitney, "Albright Presses Russian To limit Aid to Iran for Missile Program," *New York Times*, 10 December 1998, in Lexis-Nexis, www.lexis-nexis.com.

10 December 1998

Iranian Rear Admiral Issa Golverdi, spokesman for the Vahdat-77 war games, says four land-based surface-to-surface cruise missiles are also successfully test-fired at targets and sea. He says the aim of the maneuvers is to "strengthen the unity of states to the south and north of the Persian Gulf and to show that the Persian Gulf countries are capable of ensuring the region's security."

—"Iran Navy Launches Missiles to End Gulf War Games," Reuters, 10 December 1998.

11 December 1998

On the last day of the Vahdat-77 war games, four of Iran's new Fajr-4 missiles, an updated version of the 1995 Fajr-3 missile, are test-fired.

—"Tehran Runs Tests of New Missiles," *Washington Times*, 11 December 1998, p. A19.

11 December 1998

Former Iranian President Ali Akbar Hashemi Rafsanjani says, "Missile production has truly become a local technology in Iran.... Despite their [U.S.] efforts, it is out of their hands now, thank God, because we have reached the level we needed to get to...Iran is today a proper missile producer which does not need any country, not China, not Russia and not others." He says that Iran's missile program "started from scratch" during the Iran-Iraq War after Iranian cities came under Iraqi missile attack. "We realized that missiles are vital for our defense. We launched real scientific efforts in our universities, sometimes using components or technology from outside and

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even Western technology. We used our scientists who had studied in America itself until we had access to the technology." Shamkhani earlier acknowledged during a Tehran Channel Two television interview, that the Shahab-3 "is just for defensive purposes and is not aimed at any country. Our policy is that we bear the first strike. After that, however, we strike back hard and will not let anyone even think of a second strike." Israel alleges that the Polyus Research Institute in Moscow provided the Shahab-3's guidance system, while U.S. officials say Beijing supplied 1,000 tons of steel for Iran's missile program in 1998. According to the National Council of Resistance of Iran, Russia has helped Iran solve thermodynamic problems and wind-tunnel tests, while North Korean involvement is considered "substantial." China is understood to have contributed telemetry equipment.
—Ed Blanche, "Iran claims missile self-sufficiency," *Jane's Missiles & Rockets*, 1 January 1999, in Lexis-Nexis, www.lexis-nexis.com.

12 December 1998

Akber Hashemi Rafsanjani, former Iranian president, says that the United States is no longer able to hamper Iran's missile industry because Iran has achieved technological self-sufficiency.
—"Iranian Boast of Arms Advances," *Boston Globe*, 12 December 1998, in Lexis-Nexis, www.lexis-nexis.com.

13 December 1998

Iran's successful test of the Fajr-4 ballistic missile is an achievement for all Islamic countries. "Iran has added yet another feather to the Islamic world's cap in scientific and technological advancement," the paper says.
—"Iran's Singular Accomplishment," *Pakistan Observer* (Islamabad), 13 December 1998, p. 6; in "Paper Sees Iran Missile Test as 'Islamic' Achievement," FBIS Document FTS19981214000393, 14 December 1998.

13 December 1998

Commander of the Islamic Revolution Guards Corps naval forces, Rear Admiral Ali Akbar Ahmadian, says that the Unity-77 exercises are "amongst the most successful war games" Iran has conducted. Iran test fired a 120km-range C-802 surface-to-surface missile during the exercises. Ahmadian also says that the Persian Gulf countries no longer see Iran's defense capabilities as a threat to regional security.
—"Iran Commander: Unity-77 War Games Among Most Successful," IRNA (Tehran), 13 December 1998; in FBIS Document FTS19981213000416, 13 December 1998.

13 December 1998

According to *Jane's Intelligence Review*, Western Europe will be within reach of an Iranian missile within five years, while Israeli and Western intelligence believes it will be "many years off."
—Arieh O' Sullivan, "Jane's: Europe in Reach of Iranian ICBMs in 5 years," *Jerusalem Post*, 13 December 1998, in Lexis-Nexis, www.lexis-nexis.com.

22 December 1998

Japanese Prime Minister Keizo Obuchi tells Iran's Foreign Minister Kamal Kharrazi that Japan is concerned that Iran is transferring missile technologies to other countries, including North Korea. Kharrazi has previously denied the allegations.

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—"Obuchi Conveys Concerns About Iran's Missiles," *Kyodo* (Tokyo), 22 December 1998; in FBIS Document FTS19981222000610, 22 December 1998.

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1997

1997

"By mid-1997, Iran reportedly possessed approximately 60 ship-launched C-802s." They also "deployed a number of coastal C-802 batteries on Qeshm Island."

—Bates Gill, "Chinese Arms Exports to Iran," *MERIA Journal*, Vol. 2, No. 2, May 1998, 8 June 2001, www.biu.ac.il.

1997

According to Vladimir Orlov, director of the Russian Political Research Center, Russian intelligence stopped three Iranian attempts to acquire missile technology in 1997. Three foreigners, initially claiming to be Iranian, were caught by Security Services attempting to smuggle 21.7 tons of high-quality steel for use in missiles. The steel was being smuggled through Azerbaijan into Iran. Russian authorities later identified the three people caught (Nurzulayev, Saidov, and Zabarov) as being Tajikistani nationals. The leader of the group was reported to be an Iranian national named Ali Mazidi Mohammedi, who is reported to be currently in Iran. The three were being charged with smuggling and not violations of international missile technology accords because this alloy steel was expected to leave Moscow. However, the Russians have stated that the American information lacked detail and so they were unable to stop the truck leaving Moscow. U.S. officials are reportedly concerned that Azerbaijani officials were able to stop the shipment while the Russians were not. Senator Orin Hatch says, "the Russian government could have done better but, in general, jumped right on the case."

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," Study conducted for the James Martin Center for Nonproliferation Studies (Monterey, CA), October 1998, p. 56.

Early 1997

With Hong Kong still under British control, government customs officials raid the offices of Rex International, a local company jointly controlled by the Chinese government and Iran's military-industrial complex. Documents seized are alleged to show that the firm handled a shipment to Iran of high-grade steel pipes, manufactured in China, which were suitable for use in chemical or weapons manufacturing processes. The consignment was sent to a plant in Tehran run by the Defense Industries Organization (DIO), Iran's main weapons procurement agency.

—Con Coughlin, "Hong Kong Used as Conduit For Iran Arms Sales," *Sunday Telegraph* (London), 14 September 1997, p. 27, in Lexis-Nexis, www.lexis-nexis.com.

1997

Iran has an impressive arsenal of ballistic missiles, including possible orders of the Chinese-made M-9 with a range of 280-620km; the Iranian-made Iran-130 with a range of more than 150km; the Oghab with a range of more than 40km; a new surface-to-surface missile (SSM) with a range of more than 125km; HY-2 Silkworm missiles; CSS-8 with a range of 150km; 320km Scud-B with a payload of 1000kg; and 500km Scud-C with a payload of 700-800kg.

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Iran deploys SA-6 missiles on Abu Musa Island. The commercial availability of the global positioning system (GPS) will increase the precision of the Iranian missiles.

—Paula A. DeSutter, *Denial and Jeopardy Deterring Iranian Use of NBC Weapons* (Washington, DC: National Defense University Press, 1997), pp. 36, 52, 53.

1997

Iran tries to "fabricate sets of assemblies and parts for a liquid-propellant rocket motor under the guise of equipment for gas pumping [gas-distributing] stations at the Samara Scientific-Technical Complex Imeni Kutznetsov (former Trud NPO [Scientific-Production Association])." Russian Security Service officials stop the process after the contract was signed and the technical documents were drawn up. The Russians also find out that Iran, through Sanam, prepared to hold aerodynamic tests at the Zhukovskiy Central Aero-Hydrodynamics Institute (TsAGI) and wanted a wind tunnel made.

—"Mikhail Kirillin: Several U.S. Firms Engaged in Developing Missile Equipment Have Links with Iranians," *Yadernyy Kontrol Dossier* in *Yadernyy Kontrol* (Moscow), March-April 1998, No. 2, Vol. 38, pp. 37-43; in "Iran's Missile Industry, U.S. Missile Development Firms with Iranian Links," *FBI Document FTS19980605000876*, 5 June 1998.

1997

China claims that North Korea may have sold the HY-2 missiles to Iran. According to Bates Gill, director of the East Asian Nonproliferation Project at the Monterey Institute of International Studies, North Korea could have sent HY-2s to Iran because it received HY-2s and parts of its technology from China in the 1970s and has made them itself since the early 80s.

—Bates Gill, "Chinese Arms Exports to Iran," *MERIA Journal*, Vol. 2, No. 2, May 1998, www.biu.ac.il.

1997

The United States should reduce the economic embargo imposed on Iran and adopt a more focused approach by limiting the ban to weapons of mass destruction, missiles, and dual-use technology. Iran is involved in clandestine efforts to develop long-range missile capabilities. To counter Iran's missile program, the United States should work closely with Iran's suppliers of missiles and missile technology such as North Korea.

—Zbingiew Brzenski, Brebt Scowcroft, and Richard W. Murphy, *Differentiated Containment: US Policy Towards Iran and Iraq* (New York: Council on Foreign Relations, Inc., 1997), pp. 23-24.

1997

Iran's inventory currently includes the Chinese anti-ship Silkworm missile (HY-2), with a range of 80km, and accompanying mobile launchers. Iran may try to extend the range of this first-generation cruise missile technology and adapt it for indigenous production. There are unconfirmed reports of Iranian interest in and purchase of the Ukrainian Sunburn cruise missile, which has a probable range that is twice that of the Silkworm. Iran has also been developing a family of simple battlefield missiles: the Oghab (40km), Tondar (40km), Nazeat (90km), Shahin-2 (100-130km), Iran-130 (130km), and the Mushak (160km). Iran claims to be developing a missile with a range of up to 200km, most likely a modified version of one of these missiles.

—Chubin Shahram, *Eliminating Weapons of Mass Destruction: The Persian Gulf Case* (Washington, DC: The Henry L. Stimson Center, March 1997), p. 12.

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1997

Iran has at least 250-300 Scud-B missiles and at least 8-15 launchers.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 35.

1997

The Iranian Air Defense forces officially declare the SA-5 Gammon surface-to-air missile (SAM) operational.

—"Almaz S-200 Angara (SA-5 'Gammon') low-to high-altitude surface-to-air system," *Jane's Land-Based Air Defence 2000-2001*, in www.janesonline.com.

1997

Press reports state that Russia's assistance to Iran includes special steels and alloys, tungsten coated graphite, wind tunnel facilities, gyroscopes and other guidance technology, rocket engine and fuel technology, laser equipment, machine tools, and maintenance manuals.

—Stuart D. Goldman, Kenneth Katzman, Robert D. Shuey, and Carl E. Behrens, "Russian Missile Technology and Nuclear Reactor Transfers to Iran," in *CRS Report for Congress* (Washington, DC: 29 July 1998), p. 6.

1997

North Korea resumes low-level deliveries of missile components to Iran.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 25.

January 1997

Israeli officials tell the United States that Russian institutes and firms provide equipment and technology to Iran's missile programs. The Israelis say that this assistance would help Iran develop medium-range ballistic missiles that could be equipped with chemical warheads, capable of striking throughout the Middle East. U.S. intelligence agencies reportedly confirm the assessment.

—Stuart D. Goldman, Kenneth Katzman, Robert D. Shuey, and Carl E. Behrens, "Russian Missile Technology and Nuclear Reactor Transfers to Iran," in *CRS Report for Congress* (Washington, DC: 29 July 1998), p. 3.

27 January 1997-3 February 1997

A Sudanese government official denies that Iran supplied Sudan with "chemical-tipped" missiles and other weapons to aid in the ongoing civil war.

—"Sudan Denies Charges of Iran Arms Shipment," *Defense News*, 3 February 1997, p. 2.

29 January 1997

Colonel Husayn Iraj, Director of public relations department of the Ideological and Political Organization of the Army, says that a grand exhibition displaying aircraft, ground-to-ground missiles, air defense systems, and other air force activities will be held in the region of Mehrabad.

—"Grand Manoeuvre of Ground Forces in Ten-Day Dawn Celebrations," *Tehran Times*, 29 January 1997; in "Air Force to Hold Display in Mehrabad," FBIS Document FTS19970129001601, 29 January 1997.

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February 1997

Iran and Syria sign agreements for cooperation in communications, electricity, trade, oil, transport, and agriculture. A protocol was also signed for cooperation in research and development in the military industry.

—Michael Evens, "Iran Seeks Syrian Aid to Bypass Spy Curbs," *Times* (London), 24 May 1997, in Lexis-Nexis, www.lexis-nexis.com.

February 1997

Iran's Sanam College, an institute involved in Iran's missile program, is supposedly established as part of an agreement between the Baltic State Technical University and the Shahid Bagheri Industrial Group.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," October 1998, p. 33.

February 1997

A \$90 million sale of 36 missiles to Iran and three older SA-10 SAM systems, made up of components from Russia, Croatia, and Kazakhstan, falls through.

—Bill Gertz, "Iran Buys Arms from Russia," *Washington Times*, 16 April 1997, pp. 1, 16.

February 1997

U.S. Vice President Al Gore discusses reports of the Russian export of SS-4 Sandel ballistic missile technology to Iran with Russian Prime Minister Victor Chernomyrdin, who denies that the transfers occurred.

—Bill Gertz, "Russia Disregards Pledge to Curb Iran Missile Output," *Washington Times*, 22 May 1997, p. A3.

February-March 1997

Negotiations between Iranian intelligence agents and Russian arms brokers are under way. The Russian arms brokers offer to sell S-300 series anti-aircraft missiles at discount prices. Two S-300 systems, either advanced SA-10s or the newer SA-12, and 96 missiles, which were produced this year near Moscow, are offered to Iran for \$180 million. Intelligence officials report that Iran appeared to be pursuing the purchase of the SA-10s as well as 500 advanced man-portable Iglu (SA-18) anti-aircraft missiles.

—Bill Gertz, "Iran Buys Arms from Russia," *Washington Times*, 16 April 1997, pp. 1, 16.

1 February 1997

Iran has succeeded in manufacturing a 240mm missile with a range of more than 40km. Parchin Missile Manufacturing Industries, which is part of the defense industries, manufactured the Fajr-3 rocket. Its is 5.2 meters in length, has a flight weight of 408kg, and has a head (kolahak) of 90kg, 45kg of which consists of highly explosive material. It also has three blades (parreh) in its tails that open up after firing. The missile was tested in November 1996 during the 10-day "Victory-7" military exercises.

—"40-K1-Range Missile Reaches Production Stage," *Saff* (Tehran), No 202, February-March 1997, 1 February 1997, p. 22; in FBIS Document FTS19970615000841, 15 June 1997.

2 February 1997

Haaretz's military affairs analyst, Zeev Schiff, recently disclosed that "secret negotiations" are under way between Moscow and Tehran on the manufacture of S-4 surface-to-surface missiles in Iran. The missile's range is 1,600

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miles.

—Jay Bushinsky, "Russia's Role," *Jerusalem Post*, 2 February 1997, p. 6, in Lexis-Nexis, www.lexis-nexis.com.

4 February 1997

Brigadier General Mohiyedin Abutalebi, Air Force commander at Mehrabad, says that the equipment and weapons displayed at the exhibition at Mehrabad Airport demonstrate the combat capability of the IRAF. The Iranian Air Force is ready to defend Iranian air space and interests. He adds that the IRAF is self-sufficient in surface-to-surface and surface-to-air missiles, reconstruction and basic overhaul of fighters, and fabrication of weapons and aircraft parts.

—"Air Force Officer on IRAF Progress in Self-Sufficiency," IRNA (Tehran), 4 February 1997; in FBIS Document FTS19970204001997, 4 February 1997.

6 February 1997

U.S. Vice President Gore warns Russian Premier Chernomyrdin about transferring technology and parts for the SS-4 medium-range ballistic missile to Iran.

—Stuart D. Goldman, Kenneth Katzman, Robert D. Shuey, and Carl E. Behrens, "Russian Missile Technology and Nuclear Reactor Transfers to Iran," in *CRS Report for Congress* (Washington, DC: 29 July 1998), p. 6.

9 February 1997

Mohamad Hashemi, an arms dealer, and his two brothers are involved as middlemen in the sale of missiles to Tehran. After learning that his brothers are to be indicted over their role in supplying weapons to Iran in breach of the American embargo, Hashemi leaves America and has been living in London since the mid-1980s. Until 1992, Hashemi reports directly to Britain's secret intelligence service, MI6, on his involvement in military trade with countries including Iran, Germany, and China. He claims that during the 1980s, he was encouraged by MI6 to sell Chinese-made Silkworm missiles to Iran. In a second contract, Hashemi arranged to supply more than £350 million of Silkworm radar-guided missiles from China to Iran.

—Tim Kelsey, "Tory Donor Has Spent Lifetime as Arms Dealer," *Sunday Times* (London), 9 February 1997, in Lexis-Nexis, www.lexis-nexis.com; Tim Kelsey, "Tory Donor Charged Over Iran Defence Deal," *Sunday Times* (London), 9 February 1997, in Lexis-Nexis Universe, www.lexis-nexis.com.

10 February 1997

The Israeli prime minister discusses information about Russian arms developers working in cooperation with Iran towards the production of a ballistic missile with a range of 1,400km. The Israeli *Defense News* reports that Brigadier General Amos Gilad, head of the Intelligence Branch research division, has presented the same information to the Americans.

—"Russians Said Developing Ballistic Missile With Iran," Channel 2 Television Network (Jerusalem), 10 February 1997; in FBIS Document FTS19970529001231, 29 May 1997.

12 February 1997

U.S. intelligence supports Israeli intelligence claims that Iran received detailed information about the production of the 2,000km-range R-12 (SS-4 Sandel) missile, which is capable of carrying a 1mt nuclear warhead. U.S. intelligence

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sources state that Iran received detailed instructions on how to construct the missile with finished system components. According to the Nonproliferation Policy Education Center, the SS-4 "can carry a 4,400-pound warhead but is so inaccurate, it is only useful for delivering nuclear or biological warheads."

—"U.S. Confirms Russia Warned Over Arms Sales," Executive News Service, 12 February 1997, via Reuters; Denis Zadornov, "Washington Is Again Begrudging Moscow's Dealings With Tehran—Moscow Thinks That It Has Given No Grounds for This," *Kommersant-Daily* (Moscow), 14 February 1997; in "Smuggling of SS-4 Missile Know-How Viewed As Possible," FBIS Document FTS19970529001171, 29 May 1997; "Reckless Russian Rocket Exports," Nonproliferation Policy Education Center, in www.fas.org.

12 February 1997

Russia receives a diplomatic warning from the Clinton administration about its alleged assistance with Iran's missile program. Unnamed senior administration officials tell the *Times* that according to intelligence reports, Russia recently transferred technology to Iran for the Russian SS-4 missile.

—"World in Brief," *Atlanta Journal and Constitution*, 12 February 1997, p. A14, in Lexis-Nexis, www.lexis-nexis.com.

13 February-14 February 1997

The Russian state company "Rosvooruzheniye" denies the *Los Angeles Times* report that it sold Iran the technology for the production of the SS-4 medium-range missile. The SS-4 (Soviet designation R-12) is a stationary surface-to-surface ballistic missile with a range up to 2,000km.

—Vladimir Abarinov, "Rosvooruzheniye Asserts It Has Not Sold Missile Technologies to Iran," *Segodnya* (Moscow), 15 February 1997; in "Russia Denies SS-4 Technology Sale to Iran," FBIS Document FTS19970529001169, 29 May 1997.

14 February 1997

Israeli and U.S. intelligence suspect that Russia transferred know-how of SS-4 missile production to Iran. These missiles supposedly have a range of 2,010km. Quoting an unnamed U.S. official, the *Los Angeles Times* says that the Russians have transferred details about instructions for the construction of missile delivery systems and that some components of the missile were given to Iran. Many experts, however, believe that the transfer of know-how is due to espionage or smuggling rather than official deliveries, and that many countries like Ukraine, Belarus, Kazakhstan, and Uzbekistan possess such technology.

—Denis Zadornov, "Washington Is Again Begrudging Moscow's Dealings With Tehran. Moscow Thinks That It Has Given No Grounds for This," *Kommersant-Daily* (Moscow), 14 February 1997; in "Smuggling of SS-4 Missile Know-How Viewed As Possible," FBIS Document FTS19970529001171, 29 May 1997.

26 February 1997

Israeli Prime Minister Benjamin Netanyahu tells U.S. President Bill Clinton that the ground-to-ground missiles Russia provides to Iran present a threat to Israeli security. Iran could potentially launch missiles to Western Europe, after which they might be able to reach the Atlantic coast of the United States.

—"PM on Iranian Missile Threat to U.S., Har Homa Construction," *Qol Yisrael* (Jerusalem), 26 February 1997; in FBIS Document FTS19970625004069, 25 June 1997.

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March 1997

An Iranian precision-guided air-to-surface missile (PGM) appears in this month's *Jane's Missiles & Rockets*. [Note: For more information on the PGM, refer to the entry for May 1997.]

—"Iran's mystery PGM identified," *Jane's Missiles & Rockets*, 1 May 1998, p. 9, in Lexis-Nexis, www.lexis-nexis.com.

March 1997

Russia's Grait State NII (Scientific Research Institute), under the Russian Ministry of Economics, develops graphite-based composites for aircraft and space equipment. In March 1997, Grait delivered 4,100kg of basalt prepreg to Iran, which is not on any Russian export control lists.

—"U.S. Claims on Iran Arms Projects Refuted," *Nezavisimaya Gazeta* (Moscow), 27 February 1999; in FBIS Document FTS19990308000140, 27 February 1999.

March 1997

Meeting with Israeli Prime Minister Benjamin Netanyahu in Moscow, Russian President Boris Yeltsin suggests that Israel financially compensate Russia if it agrees not to sell weapons to Iran. Yeltsin admits that Russia was considering a deal to supply Iran with the technological know-how for the SS-4 Sandel SSM.

—"Russia Proposed Alternative to Iran Weapons Deal to Iran," *Asian Defence Journal*, May 1997.

4 March 1997

Israeli Prime Minister Benjamin Netanyahu says that Israel will press Moscow not to assist Iran with ballistic missile technology because doing so is "inherently endangering the very future of Israel and...endangers the future and interests of Russia." Iraqi Deputy Prime Minister Tariq Aziz also expresses concern to Russian Foreign Minister Yevgeny Primakov about the transfer, but he believes Primakov's assertion that Moscow did not knowingly allow the transaction.

—Adam Tanner, "Russia Says It Is Not Helping Iran with Missiles," Reuters, 5 March 1997; in Executive News Service, 5 March 1997.

Early April 1997

Israel's Air Force commander says that Iran tested components of a long-range missile with a range of 950 miles, thus capable of hitting Israel. He says that Iran had the assistance of Russian experts. According to Israeli publications, Iranian missile plants exist in Shiraz, Kurambad, Farhin, and Semnan.

—Christopher Walker, "Iran 'Developing Long-Range Missile'," *Times* (London), 15 April 1997, p. 13; in "Air Force Commander Claims Iran Tested Missile Components," FBIS Document FTS19970415000179, 15 April 1997; Eric Arnett, "Iran Made Rocket Motor Test, Says Israeli General," *Jane's Defence Weekly*, 23 April 1997, p. 4.

April 1997

A report from the Stockholm International Peace Research Institute states that the Iranian authorities have decided to abandon the quest for a weapon that could reach Israel, and that they would not develop any ballistic missiles with a range exceeding 1,000km.

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—Duncan Lennox, "Iran's ballistic missile projects: uncovering the evidence," *Jane's Intelligence Review*, June 1998, p. 27.

April 1997

In a speech at Ramat Gan, Tel Aviv, Israeli Air Force Chief Major General Eitan Ben Eliahu announces that Iran tested components of a missile capable of striking Israel. Israeli Defense Minister Moshe Arens states that Iran tested a rocket engine designed for a 1,500km-range missile. Such a missile requires two stages, with one engine per stage. From a ground-test of one engine, it is possible to estimate the range of the two-stage missile. The longest-range missile known to date in Iran's arsenal is the 500km-range Scud-C.

—Eric Arnett, "Iran Made Rocket Motor Test, Says Israeli General," *Jane's Defence Weekly*, 23 April 1997, p. 4.

April 1997

The Israelis state that Russian experts were on hand for the engine test, and some sources indicate that Russian assistance to Iran's nuclear program coupled with Iran's missile technology advances may invite a pre-emptive Israeli strike against its nuclear infrastructure. Israeli sources also report that there are missile production facilities at Shiraz, Kuramabad, Farhin, and Semnan.

—Christopher Walker, "Iran Long-Range Missile Threat," *Times* (London), 15 April 1997, www.the-times.co.uk.

April 1997

A report from the Stockholm International Peace Research Institute (SIPRI) suggests that Iran may have been involved with the Chinese M-18 and DF-25 missile projects. The M-18 program is known as the Tondar-68 in Iran, but according to Chinese sources, the DF-25 program has been cancelled.

—Eric Arnett, "Iran's Missile Ambitions Scaled Down, Says SIPRI," *Jane's Defence Weekly*, 16 April 1997, p. 16.

April 1997

Germany's Bundesnachrichtendienst (Federal Intelligence Service, BND), reports that Iran's chemical and missile programs are some of the most advanced in the Middle East. They also report that Iran is building defense factories in Parchin, 40km south of Tehran, with Chinese assistance.

—Heinz Vielain, "BND Says Iran 'Stepped Up' Arms Program Considerably," *Welt am Sonntag* (Berlin), 27 April 1997, p. 4; in FBIS Document FTS19970428000303, 28 April 1997.

April 1997

Russia continues to provide massive aid to Iran's missile project. Israeli officials say that Tehran is developing a missile with a range of up to 1,500km that can hit any part of Israel. Israeli Air Force Commander Maj.-Gen. Eitan Ben-Eliyahu says that in the beginning of April, "the Iranians held tests, albeit ground tests so far, with Russians to develop a missile with a range of 1,500km. That can have Iran reach Israel through the use of ballistic missiles." The Israeli officials add that the missile will be able to carry a non-conventional, including nuclear, warhead and that Tehran plans to test-launch it within three years. According to the officials, Russia was invited to help Iran with its ballistic missile after North Korea was apparently unable to supply its Nodong-1 missile. The Nodong-1, with a range of 1,300km, has supposedly been fired once but never reached the stage of deployment. According to Efraim Kam, deputy director of Tel Aviv University's Jaffee Center for Strategic Studies, "Iran tried to get Nodong-1, but it

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never arrived. Maybe it was because of financial difficulties in North Korea. Maybe there were political difficulties with the Americans. This leaves Russia now as the No. 1 supplier to Iran."

—Steve Rodan, "Iran Long-Range Missile Slated for 2000," *Jerusalem Post*, 15 April 1997, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

6 April 1997

The Iranian Economic Affairs Group Engineer Mahluji announces that Iran has developed the technical knowledge to produce light aluminum. Mahluji says that "Light aluminum has applications in the production of intercontinental missiles, spaceships...because of its high resistance to high temperatures and to magnetic fields."

—"Complex Aluminum Production Technique Achieved," *Tehran Times* (Iran), 6 April 1997, p. 13; in FBIS Document FTS19970619001591, 19 June 1997.

8 April 1997

U.S. officials say that Iran has tripled the number of missiles on its Gulf coast in the past two years and, by fitting Chinese cruise missiles onto patrol boats, is more capable of shutting down the Gulf shipping lanes that are crucial for the flow of oil to the West. Iran also has big strategic interests. It now buys the bulk of its weapons from Russian arms dealers, which reportedly include sensitive parts for long-range ballistic missiles.

—"Driven by Oil and Spite for U.S., Iran Reaches for Dominance," *Christian Science Monitor*, 8 April 1997, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

9 April 1997

U.S. officials report that Iran is completing two tunnels to house its Scud ballistic missiles. The site is located at Kuh-e-Padri on Iran's Persian Gulf coast, halfway between Bushehr and Bandar Abbas.

—"U.S.-Israel Talks Extend Missile Development," *Jane's Defence Weekly*, 9 April 1997, p. 4.

11 April 1997

Chang Chun Ik cites a *Washington Post* report on this date that says North Korea has exported 150 Nodongs to Iran.

—Chang Chun Ik, *Pukhan Haek-Missile Chŏnjaeng* (Seoul: Sömundang, May 1999), p. 291.

12 April 1997

During a visit to Russia by Ali Akbar Nateq-Nuri, Iran's Majlis Speaker, Moscow says it is prepared to consider selling S-300 anti-aircraft missiles to Iran in order to create an air defense system around the nuclear electrical power station being built in Bushehr.

—Vyacheslav Zalomov, "West Declares Open Season on Iran," *Pravda Pyat* (Moscow), 12 April 1997; in "Iran Missile Deal Mooted as 'Answer to NATO Expansion'," FBIS Document FTS19970414000563, 14 April 1997.

13 April 1997

Iran and China conclude a \$4.5 billion contract for weapons, including missile launchers. China sells 10 Chinese Hegu Class destroyers equipped with C-802 missiles (surface-to-surface missiles with a range of more than 120km) to Iran. Iran also acquires 400 Silkworm and Seersucker missiles used against surface targets in China and an unknown quantity of the same missile from Ukraine. Russia, however, will not help Iran modernize the Soviet-

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made ballistic missile SS-4, though the negotiations were conducted in that respect.

—"If There's a War Tomorrow," *Moskovskiy Novosti* (Moscow), 13-20 April 1997, No. 15, p. 19; in "Russia's Supplies of Armaments to Iran," FBIS Document FTS19970717001163, 17 July 1997.

14 April 1997

Israeli Air Force Commander Eitan Ben-Eliyahu reports that Iran tested a missile capable of reaching Israel. Eliyahu says that Russia is helping Iran develop two missiles with ranges of 620 and 780 miles.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 39.

16 April 1997

A colonel in the Kazakh Army is renegotiating a \$90 million sale of 36 missiles and three older SA-10 SAM systems to Iran that fell through in February 1997. [Note: Refer back to the entry for February-March 1997 for more information.]

—Bill Gertz, "Iran Buys Arms from Russia," *Washington Times*, 16 April 1997, pp. 1, 16.

16 April 1997

American intelligence officials try to sabotage a Russian weapons deal with Iran by leaking details of two meetings monitored in Moscow in which arms shipments were agreed. These include the transfer to Tehran of 500 advanced shoulder-launched "Igla" anti-aircraft missiles. The United States indicates that the shipments are being organized by Russian brokers acting separately from Rosvooruzheniye, the state arms exporter, and that they are offering discount prices. Other older surface-to-air systems were also discussed.

—Hugh Davies, "U.S. Acts on Russian 'Hizbollah' Arms Deal," *Daily Telegraph*, 17 April 1997, p. 19, in Lexis-Nexis, www.lexis-nexis.com.

17 April 1997

German authorities believe that Germany is the central location for a procurement network, developed by the Iranians, designed to support Iran's missile and nuclear programs.

—Rudolf Lambrecht, Leo Mueller, and Tilman Mueller, "A Roaring Trade with Tehran," *Der Stern* (Hamburg), 17 April 1997; in "Report Details Arms Sales to Iran," FBIS Document FTS19970418000722, 18 April 1997.

17 April 1997

At a Senate hearing, U.S. officials say they do not have evidence in regards to Russia's help to Iran's missile program. Robert Einhorn, the Assistant Secretary of State for Proliferation, states that "We haven't concluded that these transactions have taken place, that transfers of advanced missiles have taken place. But we need to watch that very carefully. We are extremely concerned, however, by North Korea's supply of Scud missiles and Scud-related technology to Iran, as well as reports of missile-related cooperation with Russia and Chinese entities."

—Steve Rodan, "U.S.: Disputes Israel View on Iran Missiles," *Jerusalem Post*, 20 April 1997, p. 12, in Lexis-Nexis, www.lexis-nexis.com.

20 April 1997

The Clinton administration regards Iran as a major security threat to the United States, but does not share Israel's

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intelligence assessment that Russia is helping Tehran develop a medium-range ballistic missile. Israeli officials, including Prime Minister Benjamin Netanyahu, insist that Moscow has embarked on a massive aid program to help Iran build a missile with non-conventional warheads that could strike Israel. Last week, Air Force Commander Maj. Gen. Eitan Ben-Eliyahu said that Iran has already conducted ground tests of the indigenous missile.

—Steve Rodan, "U.S.: Disputes Israel View on Iran Missiles," *Jerusalem Post*, 20 April 1997, p. 12, in Lexis-Nexis, www.lexis-nexis.com.

21 April 1997

Brig. General Rahim Safavi, deputy commander of the Islamic Revolution Guards Corps (IRGC) says that on 22 April 1997, Iran will begin the "Tariq al-Quds" (Road to Jerusalem) maneuvers in southern, southwestern, and western Iran in the provinces of Hormozgan, Bushehr, Khuzestan, and Kermanshahan. During the maneuvers, Iran's surface-to-surface, surface-to-air, and surface-to-sea missiles will be tested. Safavi says they have the technical knowledge and skills to build missiles themselves. Iran will utilize three new Russian submarines and Chinese anti-ship missiles during the maneuvers.

—"Khamene'i to Attend Launch of Tariq al-Quds Maneuvers," IRNA (Tehran), 22 April 1997; in FBIS Document FTS19970422000103, 22 April 1997; Michael Binyon, "Iran Prepares for American Attack in War Games," *Times* (London), 23 April 1997, in Lexis-Nexis, www.lexis-nexis.com; Martin Walker, "Washington Seeks Tough United Front in Europe Against Iran," *Guardian* (London), 23 April 1997, p. 10, in Lexis-Nexis, www.lexis-nexis.com.

22 April 1997

Western intelligence sources say Iran has been trying to increase the range of its missiles with help from China, North Korea, and Russia.

—"World in Brief: Iran Tests Missiles in War Games," *Atlanta Journal and Constitution*, 22 April 1997, p. A4, in Lexis-Nexis, www.lexis-nexis.com.

23 April 1997

"Tondar missile-launching frigates" take part in a parade together with more than 200 naval and air units to display the Islamic Revolution Guards Corps' (IRGC) preparedness to defend Iran.

—"Tehran Radio Reports on Iranian Military Exercises in Gulf," Voice of the Islamic Republic of Iran First Program (Tehran), 23 April 1997; in FBIS Document FTS19970423000557, 23 April 1997.

24 April 1997

General Rahim Savafi says that the most important characteristic of the Tariq-al Quds exercises is that it includes missile, air, naval, and ground operations staged simultaneously in the southern and western borders. Highlighting the defensive aspect of the exercises, the general says that the Islamic Revolution Guards Corps (IRGC) will test its surface-to-air, shore-to-sea, and surface-to-surface missile.

—"Gen. Safavi on Upcoming Exercise; Missile Testing," IRNA (Tehran), 21 April 1997; in FBIS Document FTS19970421001052, 21 April 1997.

24 April 1997

Haaretz reports that North Korea recently supplied Iran with a computer program enabling it to produce the

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1,300km-range Nodong missile.

—"North Korea Sold Missile Technology to Iran – Haaretz," Mideast Mirror, 24 April 1997, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

24 April 1997

IRNA reports that Iran tested several types of indigenously produced surface-to-sea, surface-to-surface, and sea-to-surface missiles during the maneuvers. Missile units of the Islamic Revolution Guards Corps (IRGC) start the third phase of Tariq al-Quds maneuvers. Dozens of Iranian-produced surface-to-sea, surface-to-surface, and sea-to-surface missiles are fired for half an hour at the positions of a hypothetical enemy.

—"Iranian-Made Missiles Tested During Tariq al-Quds Exercises," IRNA (Tehran), 24 April 1997; in FBIS Document FTS19970424000220, 24 April 1997.

24 April 1997

Video reports show Ayatollah Khamenei standing up during a briefing by military officers, cutting to a close-up of a missile and vehicles, followed by shots of soldiers moving in irregular formations.

—"Video Selection List' TEH 97-123," IRIB Television First Program Network (Tehran), 24 April 1997; in FBIS Document FTS19970424000685, 24 April 1997.

27 April 1997

A German Federal Intelligence Service (BND) report states that Iran has stepped up its arms programs considerably since 1996. BND experts obtained a great deal of information on the copying of Scud-C missiles. They believe Iran can accomplish the copying by the end of 1997. The report also states that Iran receives Russian support in its missile efforts.

—Heinz Vielain, "Intelligence Service Warns: Iran is Developing Nuclear Weapons," *Die Welt am Sonntag* (Hamburg), 27 April 1997, p. 4; in "BND Says Iran 'Stepped Up' Arms Programs 'Considerably'," FBIS Document FTS19970428000303, 28 April 1997.

28 April 1997

Iran completes its largest-ever military maneuvers. Approximately 200,000 Islamic Revolution Guards Corps (IRGC) troops participated in the "Tariq al-Quds" maneuvers, with dozens of missile launchers and frigates carrying long-range missiles as well as other military hardware. Iran announces that the maneuvers carried a message of warning to deter the United States from attacking Iran.

—"Military Exercise Called Warning to Gulf, U.S.," *Al-Wasat* (London), 28 April 1997, p. 5; in FBIS Document FTS19970604003459, 28 April 1997.

29 April 1997

Major General Mohsen Rezai, Commander of the Islamic Revolution Guards Corps (IRGC), says that the Tariq al Quds exercises were not only an amphibious military maneuver but also involved Navy, Air Force and missile units of the IRGC as well as units of the Basij.

—"IRGC Commander: Military Exercise Achieved All Objectives," IRNA (Tehran), 29 April 1997; in FBIS Document FTS19970429000686, 29 April 1997.

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30 April 1997

Iran's Defense Industries Organization (DIO) develops more advanced anti-tank weapons using its established manufacturing complex. The DIO's most sophisticated anti-tank weapon is the Raad anti-tank guided missile system, which is essentially the Russian Malyutka (AT-3 Sagger).

—"Iranian Anti-Armour Expertise Widens," *Jane's Defence Weekly*, 30 April 1997.

30 April 1997

The U.S. embassy in Almaty sent a note to Kazakhstani officials protesting Kazakhstan's \$90 million sale of SA-10 "Grumble" (S-300) surface-to-air missiles to Iran.

—Bill Gertz, "U.S. Protests Kazakh's Plans to Sell Iran Advanced Missiles," *Washington Times*, 4 June 1997, p. A4.

May 1997

Citing "technical reasons," North Korea calls off talks with the United States regarding its ballistic missile sales to Iran and Syria. The talks were also supposed to address reports that North Korea is preparing to deploy Nodong-1 missiles. The talks were scheduled for 12-13 May in New York.

—*Korea Times*, 7 May 1997, in "DPRK Postpones 12-13 May Missile Talks With U.S.," FBIS-TAC-97-127, 7 May 1997, Document ID FTS19970507000738, www.korealink.co.kr.

Early May 1997

Iranian missile technicians traveled to China to observe a ground-test of a 450mm-diameter solid-rocket motor to be used in the NP-110. Iran is supposedly developing the NP-110 missile with China.

—Bill Gertz, "China Joins Forces with Iran on Short-Range Missile," *Washington Times*, 17 June 1997, p. A3.

May 1997

Brigadier-General Rahim Safari, the Revolution Guards commander in charge of the forces, boasts that Iran now has the capability to close the Straits of Hormuz. During last week's Tariq al-Quds exercises, the Iranians demonstrated their new Tondar (thunder) surface-to-air missiles and a new anti-ship weapon. In addition, the Iranians have recently received a delivery of a consignment of the North Korean Nodong surface-to-surface missile that would enable them to launch attacks on Israel.

—Con Coughlin, "Iran Sends More Spies to Europe," *Sunday Telegraph*, 4 May 1997, p.30, in Lexis-Nexis, www.lexis-nexis.com.

May 1997

A precision-guided air-to-surface missile (PGM), which appeared in *Jane's Missiles & Rockets* in March, is likely the Iranian Self-Sufficiency Group of the Islamic Republic of Iran Air Force's first indigenous design. The missile uses TV guidance, which raises the likelihood that the seeker may have been based on that of the Hughes AGM-65A and B version of the Maverick. Another potential source of the technology could be the Martin Marietta AGM-62 Walleye TV-guided bomb. The nose section of the Iranian PGM is similar to that of the Walleye, whose TV/datalink guidance would be easier to copy than that of the "fire-and-forget" of the Maverick. No export orders of the Walleye were ever announced, though Israel is known to have received the Walleye, making it possible that Iran was supplied the Walleye before the Islamic Revolution. No other technical details of the missile have been

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released, though it is estimated that the range is between 10-15km and the warhead could be 250-300kg.
—"Iran's mystery PGM identified," *Jane's Missiles & Rockets*, 1 May 1998, p. 9, in Lexis-Nexis, www.lexis-nexis.com.

Late May 1997

Hezbollah guerillas in southern Lebanon obtain Caesar anti-aircraft missiles. Colonel Ahmad Jandaraq, military official of the Iranian Islamic Revolution Guards Corps (IRGC) in the region, attended the distribution process.
—"Report: Hizballah Receives Antiaircraft Missiles From Iran," *al-Watan al-Arabi* (Paris), 4 July 1997, p. 14.

4 May 1997

Major General Mohsen Rezai, Commander of the Islamic Revolution Guards Corps (IRGC), says that the "Great Road to Jerusalem" maneuvers were a joint operation. They were not limited to land and sea, but included land, air, sea, and missile operations that were successfully completed. In these maneuvers, the Iranian forces were able to test and reduce the percentage of error of their missiles. He adds that Iran already had the capability to repair and maintain its arsenal of missiles without foreign assistance and that Iran is producing high-quality missiles.
—"Mohsen Reza'i Interviewed on Maneuvers, Revolution Guard," *Iran* (Tehran), 4 May 1997; in FBIS Document FTS19970604001297, 4 June 1997.

11 May 1997

A joint military exercise codenamed Salman-e Fateh (The Victorious Salman) starts this morning in the Persian Gulf and the Sea of Oman with the secret code of "O Martyred Husayn." Naval and air units of the Iranian Army take part in this exercise. The exercise takes place in an area of 24,000 nautical miles between the Southern Persian Gulf Port of Jask, in Southern Iran and the second naval region in Bushehr. Warships, military helicopters, missile-launching frigates, submarines, amphibious units belonging to the navy, and fighter and bomber aircraft belonging to the Air Force are taking part in the exercises.
—"New Military Exercise Begins in Gulf, Sea of Oman," IRNA (Tehran), 11 May 1997; in FBIS Document FTS19970511000074, 11 May 1997.

24 May 1997

Syria and Iran collaborate on improving the Scud-C missile, which both countries have bought from North Korea and China.
—Michael Evens, "Iran Seeks Syrian Aid to Bypass Spy Curbs," *Times* (London), 24 May 1997, in Lexis-Nexis, www.lexis-nexis.com.

27 May 1997

Peter Frisch, president of the Cologne-based Office for the Protection of the Constitution and chief of Germany's counter terrorism, tells the *Jerusalem Post* that Iran is developing ballistic missiles that can reach deep within Europe and is working intensively to develop nuclear warheads. Frisch says that "they are getting missiles that can reach 3,000km, and they can reach not only Israel but Germany as well." Frisch says that German authorities are working to stop German companies from exporting parts for Iran's ballistic missile and nuclear programs. He says that Iran, Libya, and Pakistan have been trying for years to obtain parts for their non-conventional weapons

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programs through Germany.

—Steve Rodan, "German Terrorism Chief: Iran's Missiles Can Hit U.S.," *Jerusalem Post*, 28 May 1997, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

31 May 1997

The Chinese government sells C-802 cruise missiles to Iran. Chinese Foreign Ministry spokesman Cui Tiankai defends the transfer at a Beijing press conference, saying, "Our engagement with other countries, including Iran, in small amounts of conventional weapons is totally appropriate and legal."

—Thomas W. Lippman, "U.S. Confirms China Missile Sale to Iran," *Washington Post*, 31 May 1997, p. A15.

June 1997

The Iranian Sanam Group tries to get classified information regarding aviation equipment from Russia. The Russian Security Service intervenes and expels one Iranian from Russia and keeps two others from Sanam from coming into Russia.

—"Mikhail Kirillin: Several U.S. Firms Engaged in Developing Missile Equipment Have Links with Iranians," *Yadernyy Kontrol* (Moscow), March-April 1998, No. 2, Vol. 38, pp. 37-43; in "Iran's Missile Industry, U.S. Missile Development Firms with Iranian Links," FBI Document FTS19980605000876, 5 June 1998.

3 June 1997

Iran tests the C-802, according to a senior U.S. military officer. [Note: For more information on the missile and the test, refer to the entry for 18 June 1997.]

—Bill Gertz, "Senate Asks for Sanctions on China," *Washington Times*, 18 June 1997, p. A13.

6 June 1997

Iran conducts a live-fire test in the Persian Gulf. The C-802 is fired from an F-4 fighter attack aircraft. [Note: For more information on the missile and the test, refer to the entry for 18 June 1997.]

—Bill Gertz, "Senate Asks for Sanctions on China," *Washington Times*, 18 June 1997, p. A13.

17 June 1997

China is assisting Iran produce a 100km-range solid-fueled missile under the name NP-110. Iran is using Chinese x-ray equipment to check the solid fuel and the missile casings.

—*Washington Times*, 17 June 1997, p. A3; in *Nonproliferation Review*, Vol. 5, No. 1, Fall 1997, James Martin Center for Nonproliferation Studies, p. 143.

18 June 1997

The U.S. Senate passes a non-binding resolution calling upon the Clinton administration to impose sanctions on China for selling C-802 cruise missiles to Iran.

—Bill Gertz, "Senate Asks for Sanctions on China," *Washington Times*, 18 June 1997, p. A13.

18 June 1997

U.S. Secretary of Defense William Cohen reports that Iran's C-802 missile tests were the first known launch by Iran

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of the air-launched variant of the Chinese-made C-802, known as the C-801.

—"Chinese Missiles Tested," *Iran Brief*, 3 July 1997.

18 June 1997

A Russian report states that Iran tested the Chinese-made C-801 missile aimed at destroying oil tankers on 3 and 6 June. These missiles can be armed with chemical and nuclear warheads. One of the missiles was fired without a warhead from a missile-carrying gunboat, while the second was armed with a conventional warhead and was fired from a F-4 fighter of the Iranian Air Force. It was fired at a ship without any crew on board. Iran is the only country in the world that purchased Chinese made C-801 and their upgraded version C-802. These missiles are aimed at protecting the Iranian coasts and are mounted on ground mobile launchers. The C-801 has a range of 40km; it weighs 655kg and is 4.66 meters long. Its warhead weighs 165kg.

—Rafael Birkbayev, *Itar-Tass* (Moscow), 18 June 1997; in "Independent Iranian Sources' Confirm Missile Tests," FBIS Document FTS19970618000517, 18 June 1997.

July 1997

Iran will have missiles for nuclear, chemical, and biological warheads with a range of 2,000km.

—*Iran Brief*, 1 August 1997; in *Nonproliferation Review*, Winter 1998, Vol. 5, No. 2, James Martin Center for Nonproliferation Studies, p. 142.

1 July 1997

The CIA reports to Congress that China and Russia are Iran's "primary sources for missile-related goods."

—"CIA Fingers China, Russia for Missile Tech," *Iran Brief*, 3 July 1997.

July 1997

Iran is in the final stage of the development of a 1,100km-range missile and has started research and development of for a 2,000km-range missile.

—*Washington Times*, 25 August 1997, p. 3, in *Nonproliferation Review*, Winter 1998, Vol. 5, No. 2, James Martin Center for Nonproliferation Studies, p. 142.

3 July 1997

A report states that the Clinton administration complained to senior Russian officials about Moscow's apparent collaboration with Iran on various ballistic missile projects. A U.S. official states that Iranian and Russian missile experts have held a series of meetings, creating the suspicion that Iran is acquiring both information and know-how.

—R. Jeffrey Smith, "Administration Concerned About Russia's Nuclear Cooperation with Iran," *Washington Post*, 3 July 1997.

10 July 1997

The final stage of the military exercise of the Division 77 of Khorasan, code named Samen ol-Hojajis, is carried out in the general area of Obat-e Jam. [Note: Reference to the eighth Imam.] Brigadier Karimi, the commander of the exercise, says that the most advanced electronic equipment and new military techniques and technology, air-tracking and destruction of an unmanned aircraft with a Sahand missile will be used during the maneuver.

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—"Missile Destroys Unmanned Aircraft in Khorasan Exercise," IRIB Television First Program Network (Tehran), 10 July 1997; in FBIS Document FTS19970710000778, 10 July 1997.

29 July 1997

Valery Nesterushkin, a spokesman for the Russian Foreign Ministry, states that Russia has not supplied Iran with equipment related to ballistic missiles, nor does it cooperate with Iran in the missile field.

—"Russia Does Not Cooperate With Iran in Missile-Building, Says Russian Foreign Ministry Spokesman," RIA Novosti, 29 July 1997.

29 July 1997

Russia expels an Iranian diplomat for allegedly trying to purchase missile engine blueprints. The diplomat is supposedly Iran's main figure for acquiring missile and other WMD technologies from Russia.

—Stuart D. Goldman, Kenneth Katzman, Robert D. Shuey, and Carl E. Behrens, "Russian Missile Technology and Nuclear Reactor Transfers to Iran," in *CRS Report for Congress* (Washington, DC: 29 July 1998), p. 9.

August 1997

The French SPOT satellite picks up a missile site in the mountains of Bakhtaran province in western Iran. According to the imagery, construction is already well underway. The site contains several underground bunkers and facilities joined by large-radius roads built to move the Shahab-3. According to exiled Iranian groups with sources inside the country, Iran plans to field a brigade of 15 Shahab-3 missiles. The missiles will be assigned to the Al-Hadid Missile Brigade. Based on the satellite imagery, it appears that the Iranian missiles will be loaded on transporter-erector launchers (TELs), which will be kept underground until needed and then deployed to pre-surveyed sites where they can be quickly launched. [Note: The satellite picked up these images in July 1994 as well.]

—Duncan Lennox, "Iran's ballistic missile projects: uncovering the evidence," *Jane's Intelligence Review*, June 1998.

22 August 1997

The Clinton administration has been urging Russia to stop the cooperation of Russian entities with Iran in the field of ballistic missiles that might reach Israel. Some of these entities were state-owned military industrial companies during the Soviet Era.

—Steven Erlanger, *New York Times*, 22 August 1997, p. 1; in *Nonproliferation Review*, Winter 1998, Vol. 5, No. 2, James Martin Center for Nonproliferation Studies, p. 142.

24-29 August 1997

Israeli Prime Minister Netanyahu raises the issue of Iran possessing intercontinental ballistic missiles (ICBMs) and other offensive rocket capabilities during his trip to the Far East. He cites the commercially motivated sales of raw materials and sophisticated industrial equipment to Iran during his talks with Japanese and Korean officials and business executives. In Seoul, he is given up-to-date information about North Korea's exports of surface-to-surface missiles to Iran.

—Jay Bushinsky, "PM, Albright Discuss Missile Threat," *Jerusalem Post*, 12 September 1997, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

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26 August 1997

The United States announces that it will grant political asylum to two North Korean defectors, Chang Sung Gil, ambassador to Egypt, and his brother Chang Sung Ho, a trade envoy in France. Chang Sung Gil, the first North Korean ambassador to defect, is expected to provide the United States with information pertaining to North Korean missile sales to Egypt, Iran, and Syria.

—Steven Lee Myers, "Defecting Envoy from North Korea To Get U.S. Asylum," *New York Times*, 27 August 1997, p. A1, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

27 August 1997

After the United States refuses to return two defectors, one of whom is expected to provide information pertaining to North Korean missile sales to Egypt, Iran, and Syria. North Korea cancels joint talks with the United States on missile exports.

—"News at a Glance," Deutsche Presse-Agentur, 27 August 1997, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

27-28 August 1997

During a visit to South Korea, Israeli Prime Minister Benjamin Netanyahu discusses North Korea's alleged missile sales to Iran.

— Jay Bushinsky, "PM: Korean DMZ Unfeasible for Golan," *Jerusalem Post*, 29 August 1997, p. 22.

September 1997

Iran's Shahab-3 and Shahab-4 ballistic missile programs have benefited from North Korea's assistance. Iran, according to the report, has received "at least a dozen" Nodong missiles from North Korea. The Shahab-4 reportedly has a range of 2,000km with a 1,000kg payload, and some believe it is based on the Russian SS-4.

—"Russia-Iran Ties Remain Issue at Gore-Chernomyrdin Meeting," *Arms Control Today*, September 1997, p. 29.

September 1997

L.P. Chromova, director of the Russian firm Inor, completes a deal with A. Asgharzadeh (reported to be a director of one of Iran's missile factories) to sell 620kg of 21HKMT special alloy steel used in missile manufacturing. Iran already bought 240kg of this steel. They are also seeking detailed information on special heat treatment procedures for the steel alloy. Inor previously sold maraging steel to the Shahid Hemat Industrial group and was offering to sell 49K2F, CUBE2, AND 50N steel alloys in thin foil form.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," October 1998, p. 32.

September 1997

Israeli sources reveal that private and state-owned Russian companies have supplied Iran with gyroscopes, electronic components, wind tunnels, guidance and propulsion systems, and other components instrumental in missile design and production. Russian President Yeltsin denies the allegations. The Russian Scientific and Production Center Inor reportedly concludes a deal to sell Iran a factory to make four special metal alloys to be used in the production of long-range missiles. Inor agrees to sell 620kg of 21HKMT alloy, which is also used in North Korean missiles. Iran already purchased 240kg of the alloy, and Inor previously sold Iran's Shahid Hemat

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Industrial Group manufacturing steel for missile cases, composite graphite-tungsten material, laser equipment, and special mirrors for missile tests.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 41.

September 1997

Russian officials say that transfers of missile technology to Iran are being made without the government's consent.

—Stuart D. Goldman, Kenneth Katzman, Robert D. Shuey, and Carl E. Behrens, "Russian Missile Technology and Nuclear Reactor Transfers to Iran," in *CRS Report for Congress* (Washington, DC: 29 July 1998), p. 9.

September 1997

Russia is helping Iran develop four missiles, including the Shahab. U.S. intelligence reports say that China is also helping with these projects. Israeli reports say that the Shahab-3 is a liquid-fueled missile with a range of 1,200-1,500km with a 1,550kg payload.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 39.

September 1997

Israeli intelligence officials report that Iran's Shahab-3 and Shahab-4 (Meteor-3 and Meteor-4) surface-to-surface ballistic missile programs benefited from North Korean assistance.

—Craig Cerniello, "Russia-Iran Ties Remain Issue At Gore-Chernomyrdin Meeting," *Arms Control Today*, September 1997, www.armscontrol.org.

4 September 1997

Shen Guofang, spokesman of the Chinese Foreign Affairs Ministry, says that the U.S. Navy's allegations that China has provided Iran with banned chemical products for the manufacture of missile fuel are unfounded.

—"Beijing Denies Having Provided Iran With Military Material," Agence France Presse, 4 September 1997, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

10 September 1997

U.S. Department of Defense officials say they received an Israeli intelligence report claiming that Iran is developing long-range ballistic missiles that could be deployed within three years.

—Bill Gertz, "Russia, China Aid Iran's Missile Program," *Washington Times*, 10 September 1997, p. 1.

10 September 1997

Reports of Russian enterprises helping Iran build ballistic missiles cause serious concern to the U.S. government.

James Foley, State Department spokesman, states that these concerns have been relayed to the Russian government. Moscow assures the U.S. government that it is abiding by nonproliferation accords restricting transfer of ballistic missile technology. According to Mr. Foley, the U.S. government is still "disturbed by the discrepancy between these assurances and reports of Russian firms cooperating with Iran."

—"Russian Groups 'Helping Iran With Missiles'," *Financial Times* (London), 11 September 1997, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

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11 September 1997

The German Customs Criminal Investigations Office (ZKA) in Cologne accelerates its investigation of German companies suspected of illegally exporting to Iran's arms industry. Among the suspect companies is a Duisburg company, which may have illegally delivered components to Iran's missile industry.

—"Germany: Export of Dual-Use Goods to Iran Investigated," *Der Stern* (Hamburg), 11 September 1997, p. 182-184; in FBIS Document FTS19970911000422, 11 September 1997.

11 September 1997

Secretary of State Madeleine Albright meets with Israeli Prime Minister Benjamin Netanyahu, Foreign Minister David Levy, Defense Minister Yitzhak Mordechai, and other Israeli senior aides to discuss Russian missile technology transfers to Iran. According to Israeli sources, Russia's transfer of missile know-how to Iran is a powerful technological program that entails long-term Russo-Iranian cooperation. This gives Tehran an enormous arsenal and the capability to manufacture missiles capable of carrying biological, chemical, or nuclear warheads within the next two-and-a-half years.

—Jay Bushinsky, "PM, Albright Discuss Missile Threat," *Jerusalem Post*, 12 September 1997, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

12 September 1997

Israeli Prime Minister Benjamin Netanyahu orders all joint Israeli-Russian economic projects to be halted in response to reports that the Russian government is intimately involved in Iran's ballistic missile development.

—Ben Kaspit, "Jerusalem Considers Reaction 'Options' to Iran-Iran Deal," *Maariv* (Tel Aviv), 12 September 1997, p. 2; in FBIS Document FTS19970912000832, 12 September 1997.

12 September 1997

Valeri Nesterushkin, vice spokesman of the Russian Ministry of Foreign Affairs, says that Russia is not assisting the Iranian nuclear missile programs. He adds that the Russian investigating services probed into foreign allegations about such assistance but could not find any reliable proof.

—"Moscow reconfirms not assisting Iran in its nuclear missiles," Agence France Presse, 12 September 1997, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

13 September 1997

U.S. President Bill Clinton will send a special envoy to Moscow to discuss ending Russian assistance to Iran's missile program. An Israeli intelligence report identifies Russian Space Agency head Yuri Koptev as one of two Russian officials involved in the transfer of missile technology to Iran.

—Bill Gertz, "U.S., Israel Target Missile Aid to Iran," *Washington Times*, 13 September 1997, p. A5.

14 September 1997

Chinese arms dealers are taking advantage of lax government controls in Hong Kong to sell banned chemical weapons materials to Iran. The Chinese government is reportedly also providing Tehran with technical support and expertise to help develop ballistic missiles with a range of up to 2,000 miles. Before July's handover, Britain and the United States made a concerted effort to discourage the Chinese from using Hong Kong's diverse business

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activities to conceal their illegal trade with Iran. Most of the Chinese firms with ties to Tehran are linked to government-owned industries such as Norinco, China's main state-owned arms manufacturing conglomerate. [Note: For more information on these ties, refer to the entry for Early 1997.] Western intelligence agencies are studying reports that China is continuing to trade with Iran using a new set of "front companies." The importance of Hong Kong for Chinese businessmen trading with Iran has increased substantially after the German government last year closed the DIO's operation in Cologne, which was Tehran's main weapons procurement base in Europe. The Germans closed the DIO's offices after a tip-off that it was engaged in illegal activities.

—Con Coughlin, "Hong Kong Used as Conduit For Iran Arms Sales," *Sunday Telegraph* (London), 14 September 1997, p. 27, in Lexis-Nexis, www.lexis-nexis.com.

17 September 1997

The commander of the 10th Seyyed al-Shohada Division Asadollah Naseh says that it is thanks to the youth of Iran that the country is able to develop missile technology. He offers the TOW missiles as an example. He adds that Iran is the first missile power in the Middle East.

—"Military Commander on Iran's Missile Capabilities," *Keyhan* (Tehran), 17 September 1997, p. 7; in FBIS Document FTS19970929000087, 29 September 1997.

20 September 1997

American military intelligence agents begin investigating whether China's technology to build sophisticated missiles was obtained through the illicit transfer of classified information from U.S. Army supercomputers. The suspect Chinese missiles include a new ship-to-ship cruise missile that was sold to Iran and is capable of defeating defense systems on U.S. Navy warships. A military intelligence agent assigned to the investigation confirms that the guidance system of the Chinese C-802 missile appears to have been developed with American technology. [Note: This missile was acquired by Iran last year.]

—Stephen Green, "Missile Technology Leak From Army Computers Investigated," *San Diego Union-Tribune*, 20 September 1997, p. A19, in Lexis-Nexis, www.lexis-nexis.com.

21 September 1997

The joint headquarter of the Zolfaqar maneuvers says that the use of active reconnaissance networks, the stationing of electronic listening posts, defense equipment and ground-to-air missile sites, and air defense units identified and shot down the attacking aircraft of the imaginary enemy.

—"Achievements of Air Force in Iran Military Exercise," Voice of the Islamic Republic of Iran First Program Network (Tehran), 21 September 1997; in FBIS Document FTS19970921000541, 21 September 1997.

23 September 1997

Vice President Al Gore states that a Russian-American investigation shows Iran making a "vigorous effort" to obtain technology for building nuclear weapons and the ballistic missiles to carry them. Iran repeatedly denies these claims. U.S. and Israeli officials say that the Russian military-industrial complex, quasi-governmental research institutes, and former scientists and military specialists may be contributing to an Iranian ballistic missile program. The Russian government denies selling missile or nuclear technology to Iran. Nonproliferation experts say that the larger problem comes from Russia's vast, unprotected military-industrial complex, including many research

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institutes, manufacturing plants, and storage facilities where rocket and weapons components are kept.

—David Hoffman, "Gore Says Probe Shows Iran Seeks Technology to Build Nuclear Arms," *Washington Post*, 24 September 1997, p. A26, in Lexis-Nexis, www.lexis-nexis.com.

25 September 1997

Israel presses the Clinton administration to impose economic sanctions on Russian organizations and companies reported to be supplying ballistic missile technology to Iran. The sanctions would fall under the Gore-McCain Act, which states that sanctions are mandatory against any private or state-owned company or government organization that helps Iran acquire missile technology. Sanctioned organizations are excluded from doing business with the U.S. government. According to Israeli intelligence reports confirmed by U.S. sources, such Russian organizations as Rosvoorouzhnie, the state arms export agency, and NPO Trud, a maker of rocket motors, are exporting to Iran while having or seeking U.S. contracts. According to Israeli intelligence reports, Iran is a year or less away, with foreign help, from being able to produce long-range missiles with ranges of 700 to 1,200 miles. Private and state-owned Russian firms are reportedly providing gyroscopes, electronic components, wind tunnels, guidance and propulsion systems and the equipment Iran needs to produce such components. Martin Indyk, U.S. ambassador to Israel, said at his confirmation hearing that Russian cooperation in Iran's missile development effort "is of urgent concern to the U.S." However, he added, "We have not yet made a judgment about whether that transfer of technology has breached the Missile Technology Control Regime...If we do make that judgment, the sanctions that are required under the law would have to be applied."

—Thomas Lippman, "Israel Presses U.S. to Sanction Russian Missile Firms Aiding Iran," *Washington Post*, 25 September 1997, p. A31, in Lexis-Nexis, www.lexis-nexis.com.

26 September 1997

The Russian government privately concedes that Iran is buying dangerous missile technology from Russian scientists and institutions and promises greater attempts to end trade.

—Peter Slevin, "Russia Vows to End Iran's Secret Buy of Missile Technology," *New York Times*, 26 September 1997, in Lexis-Nexis, www.lexis-nexis.com.

26 September 1997

After his talks in the Kremlin with Jacques Chirac, the French president, Russian President Boris Yeltsin flatly denies Russia ever supplied nuclear or ballistic missile technologies to Iran.

—Christia Freeland, "Yeltsin Denies That Russia Aided Iran N-Weapons Effort," *Financial Times* (London), 27 September 1997, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

28 September 1997

Israeli Defense Minister Yitzhak Mordechai states that "Iran is on the verge of achieving capability of producing long-range missiles [with massive aid from Russia] that have strategic dangers to Israel as well as to U.S. interests in the region." In an interview, Mordechai tells the *Jerusalem Post* that the United States and Israel received intelligence information over the past few months that has led both countries to conclude that Tehran progressed faster than previously thought in both its medium-range ballistic missile and nuclear weapons programs. Western intelligence officials say that Iran has embarked on three missile programs. One has a range of 1,500km, another of

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3,000km, and a third is a program to develop a missile with a 5,500km range. According to Israeli publications, Iranian missile plants exist in the cities of Shiraz, Farhin, and Semnan.

—Steve Rodan, "Iran Missile Program Nearly Complete-Mordechai," *Jerusalem Post*, 28 September 1997, p.1, in Lexis-Nexis, www.lexis-nexis.com; Christopher Walker, "Iranian Ballistic Missile 'Almost Ready'," *Times* (London), 29 September 1997, in Lexis-Nexis, www.lexis-nexis.com.

30 September 1997

An Israeli official says that Russia's technical assistance to Iran's missile development program could put Israel within striking distance of Iran within 18 months. The official identifies the Polyus Research Institute in Moscow, and Kutznetzov (formerly NPO Trud) in the town of Samara as firms involved in developing engines and guidance systems for Iranian missiles. The official says that the Russian SS-4 Sandel would be the basis for the Shahab-4 (Meteor-4). The Shahab-4 would have a range of 800-900 miles. The official declines to say if elements of the missile system had been test-fired. However, a second official says that components of the missile system had been successfully tested recently.

—"New Iranian Missile Could Endanger Israel," *Milwaukee Journal Sentinel*, 22 September 1997, p.8, in Lexis-Nexis, www.lexis-nexis.com; Steve Rodan, "Israel in Iranian Missile Range by 1999," *Jerusalem Post*, 1 October 1997.

30 September 1997

Iran is developing nuclear, biological, and chemical weapons. The Mossad states, "Massive Russian assistance and close cooperation with Iran are enabling the Iranian regime to develop independent capabilities to produce medium-range ballistic missile systems within a very short time." Technical and HUMINT sources reveal that the Shahab-3 and -4 missiles have ranges up to 1,240 miles. The DIA confirmed the Mossad's information.

—William Safire, "Russia Caters to Iran's Taste for Arms; Tehran is Developing Midrange Ballistic Missiles," *New York Times*, 30 September 1997, in Lexis-Nexis, www.lexis-nexis.com.

30 September 1997

An Israeli official states at a briefing that advanced Russian technology will help Iran to produce a medium-range missile within 18 months. The official says that hundreds of Russian scientists and technicians are involved in the project. According to the official, two Russian companies, Polyus Research Institute in Moscow and Kutznetzov (formerly NPO-Trud) in Samara, were developing the engine and guidance system of the missile. Another official says that two Russian academic institutions, the Bauman National Technical University and the Tsagi Institute, were involved in developing rocket propulsion systems. They state that tests of some of the components were carried out recently and were successful. The official estimates that within 18 months, Iran would be able to produce the Shahab-3, a liquid-fueled missile with a range of 1,300km and a payload of 700kg. According to the joint U.S.-Israeli assessment, the Shahab-3 is making significant progress. Since its development was launched in 1994, the missile has completed required wind tunnel tests of the cone, and the engine has been tested as well. The navigation and control systems are believed to be in stages of advanced development although they may not have been completed. Sources say that Iran is developing four missiles. The Shahab-3 is considered to be the completed version of North Korea's Nodong missile. The Shahab-4, which has a range of 2,000km and a payload of more than one ton, is based on the technology of the Russian SS-4. The two other planned missile programs, which have not been named, aim to produce missiles with a range of 4,500 to 10,000km. Yiftah Shapir, a researcher at Tel

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Aviv University's Jaffee Center for Strategic Studies, thinks Israel is overestimating Iran's technological capabilities. Shapir states that the "...assessment seems very exaggerated. It will take several years of tests until the missile is operational. Take India. It took them six to seven years of tests until its missile moved out of the development stage to the operational stage."

—Steve Rodan, "Israel in Iranian Missile Range by 1999," *Jerusalem Post*, 1 October 1997, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

October 1997

The Iranian Navy conducts the test-firing of Iran's new Shahab-2 missile, with a range of nearly 1,000km. The launch is regarded as a success by Iranian officials.

—Con Coughlin, "Iran Missile Test Launch Puts Israel Within Range," *Sunday Telegraph* (London), 2 November 1997, p. 29, in Lexis-Nexis, www.lexis-nexis.com.

October 1997

Madeleine Albright drafted a list of grievances that the U.S. has about Russia's involvement in Iran's missile program. The points she makes are as follows: Russia designs and tests missile technology that is in Iran's interest and helps Iran gain the capability to perform these tests within its own country; the Trud Science and Production Association in Samara cooperates with Iran on making a "large liquid fuel rocket engine"; the Energomash Science and Production Association in Khimky provides Iran with components close to the RD-214 rocket engine and are used in conjunction with SS-4 ballistic missiles; TsAGI, the Central Aerohydrodynamics Institute in Zhukovskiy near Moscow, has been or will be performing aerodynamic tests for SANAM; the Bauman Higher Technical School in Moscow offers missile technology training to Iranian students and also gives technological help to Iran; the Baltic State Technical University in St. Petersburg offers training to Iranians in making rockets and cosmonautics. The report also states that China and Russia are working on making missiles for Iran that have a 2,000km range which is based on the North Korean Nodong missile. Supposedly Yuriy Koptev, the Russian Space Agency General Director, and officials from Rosvooruzheniye have been "directly involved in Iran's missile program." Officials from both the Russian Space Agency and Rosvooruzheniye deny this statement.

—Konstantin Eggert, "'Meteor' for the Ayatollahs. Iran Needs Ballistic Missiles in Order To Become a World Power," *Izvestiya* (Moscow), 22 October 1998, p. 5; in "Part II of Iran's Missile Program Article," FBIS Document FTS19981022001488, 22 October 1998.

1 October 1997

U.S. and Israeli intelligence sources claim that Iran is making significant progress on the Shahab-3, a version of the North Korean Nodong with a range of 1,300km.

—Steve Rodan, "Israel in Iranian Missile Range by 1999," *Jerusalem Post*, 1 October 1997, p. 1.

1 October 1997

Iran's Defense Industries Organization (DIO) has expanded considerably in recent years and has begun to export equipment. The DIO's most significant growth area is Missile Industries, which produces anti-tank guided weapons to long-range artillery rockets designed and built in Iran. Iran also makes rockets for the RPG-7 and the SPG-9 anti-tank weapons. For the RPG-7, a new rocket with a tandem high-explosive (HE) anti-tank warhead has been

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developed.

—"Built in Iran: The Push for Self-Sufficiency," *Jane's Defence Weekly*, 1 October 1997.

2 October 1997

Russia's internal security service acknowledges that it stopped an attempt by Iran to obtain ballistic missile technology from a Russian factory, NPO Trud in Samara. The official says that they "thwarted" an Iranian attempt to have parts manufactured for a liquid-fuel missile. The parts were being disguised as gas compressors or pumps. The official adds that "separate occasions of cooperation with Iran" have been uncovered in Russia in which Russia "may have contradicted the MTCR [Missile Technology Control Regime]." He adds that, "they had been detected at an early stage and a stop had been put to them." He also reports that Iranians study rocket construction in Russian institutes, including Baltic State University in St. Petersburg and Bauman State Technical University in Moscow, but that their studies involve "generally accessible" information. The official provides no further comments. The NPO Trud plant in Samara is one of several that Israeli officials have publicly identified as part of a "broad-backed program to help Iran build ballistic missiles with a range that could reach Israel and central Europe." The Israelis say that Iran is building two liquid-fueled rockets, the Shahab-3 and Shahab-4, with ranges of 1,500km and 2,000km, respectively.

—David Hoffman, "Russia Says It Thwarted Attempt by Iran to Get Missile Technology," *Washington Post*, 3 October 1997, p. A35, in Lexis-Nexis, www.lexis-nexis.com.

3 October 1997

An official from the Russian Federal Security Service (FSB) says that Iranian technicians received training in missile construction from two Russian universities. He also says that the Russian government halted deals to transfer missile technology and equipment to Iran.

—"Russians Admit to Training Iranian Missile Technicians," *Washington Times*, 3 October 1997, p. A17.

5 October 1997

An Israeli official names four Russian institutes aiding the Iranian missile program: Kuznetsov, one of the leading complexes in Russia for developing missile engines; the Polyus Research Institute that specializes in laser and guidance systems; Bauman University, Russia's leading technical university for aeronautics, space and missile engineering; and the Tsagi Institute where aerodynamic experiments are conducted. Contracts for development of the Shahab-3 missile amount to several hundred million dollars.

—Yoni Katz, "Russia Accused of Arming Iran with Missiles," *Scotland on Sunday*, 5 October 1997, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

7 October 1997

Admiral Ali Shamkhani says that the Victory-8 military exercise will be staged jointly by the navy of the Islamic Republic of Iran and the Islamic Revolution Guards Corps (IRGC) on over 50,000 square kilometers of sea from the island of Lavan near the Kuwaiti border. He adds that over 100 warships, destroyers, and frigate missile-launchers, troops carrying and logistics vessels and surface-to-ship missile brigades would take part in these maneuvers.

—"Defense Minister Describes Upcoming Victory-8 Exercises," IRNA (Tehran), 7 October 1997; in FBIS Document FTS19971007001194, 7 October 1997.

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8 October 1997

Ali Akbar Ahmadian, Commander of the Islamic Revolution Guards Corps (IRGC) navy says that his navy would employ 70 speedboats as well as 10 missiles gunboats "Thunder" in the maneuvers. The boats are part of the IRGC's six naval brigades active in the Victory-8 exercise.

—"Naval Commanders Preview Iran's 'Victory-8' Gulf Maneuvers," IRNA (Tehran), 8 October 1997; in FBIS Document FTS19971008001101, 8 October 1997.

9 October 1997

Israeli officials urge the United States to take immediate action against Russia to prevent Iran from acquiring ballistic missiles. They say that the window of opportunity for action is closing because Iran would obtain these missiles from Russia within 12 to 18 months.

—Yerah Tal, "Israel Suggests to U.S. 'Military Action' Against Iran," *Haaretz* (Tel Aviv), 9 October 1997; in FBIS Document FTS19971009000495, 9 October 1997.

9 October 1997

Iran's former President Hashemi Rafsanjani says that Iran has the capability to build anti-aircraft missiles with a range of 250km. Rafsanjani says that the missiles represent a significant improvement in Iran's rocket technology.

—"Iran's Missiles Have 156-Mile Range," *New York Times*, 10 October 1997; in IAEA Daily Press Review, 13 October 1997.

13 October 1997

During the third phase of Iran's Victory-8 maneuvers, missiles are fired on hypothetical targets. The fast flying Warriors of the Air Force demonstrates their combat and defense capability in the Persian Gulf waters by firing air-to-surface missiles.

—"Air-to-Surface Missiles Fired in Naval Maneuvers," IRIB Television First Program Network (Tehran), 13 October 1997; in FBIS Document FTS19971013000851, 13 October 1997.

14 October 1997

During the fourth stage of the Victory-8 exercises the Islamic Revolution Guards Corps uses rocket-launching frigates.

—"Iranian Radio Reports Use of RPV, Equipment in Exercises," Voice of the Islamic Republic of Iran First Program Network (Tehran), 14 October 1997; in FBIS Document FTS19971014000809, 14 October 1997.

16 October 1997

Unspecified intelligence reports identify Russian organizations suspected of involvement in Iran's attempt to develop ballistic missiles: Rosvoorouzhnie, the official Russian arms export agency; the Russian Central Aerohydrodynamic Institute; the metal alloy producer Inor, Bauman State Technical University; Baltic State University; NPO Trud, which manufactures rocket motors; and Polyus, which makes lasers. The report also identifies the Chinese company Great Wall for supplying Iran's missile program with missile telemetry equipment.

—Bill Gertz, "U.S. May Punish Russia for Iran Sales," *Washington Times*, 16 October 1997.

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17 October 1997

Commander of the Islamic Revolution Guards Corps (IRGC) Naval Forces Admiral Ali Akbar Ahmadian announces that his forces are capable of designing and manufacturing small missile-launching boats. He says that the new IRGC missile-launching boats would be deployed in the next joint military exercise, "Victory-9." Ahmadian says that shifting the missile sites, radar and modern communications tests, air and missile launching operations, expanding missile sites and testing upgraded missile systems are among the exercises planned during the maneuvers. —"Admiral Claims Capability to Build Missile Boats," IRNA (Tehran), 18 October 1997; in FBIS Document FTS19971018000075, 18 October 1997.

17 October 1997

China promises to suspend shipments of anti-ship cruise missiles to Iran. —"U.S. Says Chinese Will Stop Sending Missiles to Iran," *New York Times*, 18 October 1997, p. 1.

17 October 1997

The commander of the missile unit at the Khatam Al Anbiya naval base of the Islamic Revolution Guards Corps (IRGC) says that the Qa'areh (striker) missile system makes Iran the most powerful missile force in the Middle East. Second Rear Admiral Mohammad Razi Hayeq says that the IRGC's improved missiles were successfully tested during the joint Victory-8 maneuvers. He adds that conditions for new missile warfare were planned and staged during the various stages of the Victory-8. He also says that a joint mission by the new missile-launching frigates and the IRGC missile sites were staged during the exercise. The relocation of missile sites, radar exercises, testing of new communication systems, aerial and missile defense operations, increasing missile sites and testing of improved missile systems were carried out. —"Commander Says Iran "Most Powerful Missile Force" in Region," IRNA (Tehran), 17 October 1997; in FBIS Document FTS19971017001279, 17 October 1997.

18 October 1997

Guennady Tarasov, Russian Foreign ministry official spokesman, strongly denies the allegations of Russian assistance to Iran in developing ballistic missiles. —"Moscow 'Strongly' Denies Helping Iran Create Missiles," Interfax (Moscow), 18 October 1997; in FBIS Document FTS19971018000291, 18 October 1997.

18 October 1997

The Iranian naval forces claim success in developing missile-launching ships, which will give Iran superiority in the gulf, in terms of missiles. The Iranian president, Ali Akbar Hashemi Rafsanjani says that the 250km-range, Iranian-made surface-to-air missile can strike any part of the Persian Gulf. —"End of Iranian Military Exercises in the Gulf," Agence France Presse, 18 October 1997, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

20 October 1997

The United States agrees to sell China nuclear technology and in exchange Beijing will stop helping Iran and Pakistan develop their nuclear and missile programs. The Sino-American agreement, which could be signed

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October 29, would also include a promise by President Jiang Zemin that Beijing will stop selling anti-ship cruise missiles to Iran.

—Hugo Gurdon, "U.S., China in Nuclear Deal: Exchange Means China Must Stop Helping Iran, Pakistan," *Gazette* (Montreal), 20 October 1997, p. B1, in Lexis-Nexis, www.lexis-nexis.com.

21 October 1997

Iranian foreign ministry spokesman Mahmud Mohammadi says that Iran does not plan to purchase missiles from China.

—"U.S. 'Interference' in 'Peaceful' Iran-PRC Nuclear Relations," IRNA (Tehran); in FBIS Document FBIS-FTS19971021001109, 21 October 1997.

22 October 1997

A group of Iranian students studying at Bauman Moscow State Technical University attempted to manufacture a liquid-propelled rocket. The *Komsomolskaya Pravda* says that the Iranian students are receiving universally available training but adds that highly experienced missiles specialists also go to the same institute disguised as students. It is not clear whether the Iranian student project was a result of espionage or if the bosses of the production facility authorized it.

—Denis Baranets, "Scandals: Iranians Making Rockets. In Moscow...", *Komsomolskaya Pravda* (Moscow), 22 October 1997, p. 1; in "Probe Into Iranian's Rocket-Making Activities in Moscow," FBIS Document FTS19971022000227, 22 October 1997.

23 October 1997

Second Brigadier General Abol-hasan Sarfi, official in charge of anti-aircraft missiles at the Raad tactical base, says that this base was responsible for securing air cover in the region of the Great Zolfaqar Maneuvers. Using anti-aircraft rocket networks and air defense rockets, the Raad tactical base monitored and guided the operational region for the maneuvers. During these exercises, high-altitude missile systems were fired concurrent with the flight of aircrafts.

—"Zolfaqar Maneuver Commanders Interviewed," *Saff* (Tehran), No. 210, 23 October - 21 November 1997, pp. 12-17; in FBIS Document FTS19971203001108, 3 December 1997.

23 October 1997

Israel alerted the United States last January to the Russian sales to Iran. Iran has also reportedly received North Korean and Chinese assistance. Since January, the U.S. has confirmed transfers of Russian technologies used in missile design, construction, guidance systems, and engines. What is not known, experts say, is the success Iran has had in integrating components obtained from the Russian entities with those from Chinese, North Korean, and other sources. Nor is it clear whether it will succeed in developing non-conventional warheads for its missiles.

—Jonathan Landay, "More Flaws In Policy to Isolate Iran," *Christian Science Monitor*, 23 October 1997, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

24 October 1997

A committee of the U.S. House of Representatives approves a bill that would invoke sanctions against businesses

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involved in Iran's program to develop ballistic missiles.

—Sue Kirchoff, "U.S. House Panel Approves Iran Missile Sanctions Bill," Reuters, 24 October 1997.

25 October 1997

The Mossad, the Israeli Intelligence Services, says that Russia sent hundreds of missile experts to Iran to develop missiles with a range of 1,200 to 1,500km.

—"Israel gives priority to the Russian-Iranian relations with Primakov," Agence France Presse, 25 October 1997, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

26 October 1997

Russia's Foreign Minister Yvgeny Primakov denies that Moscow is helping Iran acquire ballistic missile technology. Primakov states, "Russia has and will continue economic and political ties with Iran, but there is no basis to rumors that the Iranians are receiving missiles from Russia."

—"Deal with Iran Denied," *Pittsburgh Post-Gazette*, 27 October 1997, p. A5, in Lexis-Nexis, www.lexis-nexis.com.

27 October 1997

Intelligence sources say that Russia's accelerated technological aid program will give Iran the capability to independently produce medium-range ballistic missiles that can strike Israel, the Gulf and central Asia within six to eight months. The sources say that Russia and Iran are already testing components for the Shahab-3 and by early 1999 will have finished the development of a medium-range missile with a range of about 1,300km. According to senior intelligence sources by mid-1998 the Iranians will have sufficient technology and parts to continue with their missile program even if Russia is forced to halt its participation. "We think it will be another few months that Iran will need Russia," a senior intelligence source says. "We're talking six to eight months."

—Steve Rodan, "Israel Not Expecting Russia to Yield on Iran," *Jerusalem Post*, 27 October 1997, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

28 October 1997

Israeli officials say that Iran is developing the Shahab-3 missile, which has a reported range of 1,300km and a warhead of 700kg. The Shahab-3 will be ready by 1999, though other specialists say that testing and making the missile operational will take longer. Iran is reportedly also developing the 2,000km-range Shahab-4 missile, which has a one-ton payload, based on the Russian SS-4. Israeli officials report that there are two other Iranian missile programs, one of which is intercontinental. Neither of these new programs has been named.

—Patrick Cockburn, "Middle East: Weapons that hold balance of terror," *Independent* (London), 28 October 1997, p. 10, in Lexis-Nexis, www.lexis-nexis.com.

28 October 1997

Russia expels an Iranian diplomat for allegedly trying to purchase missile engine blueprints. The diplomat is supposedly Iran's main figure for acquiring missile and other weapons of mass destruction technologies from Russia.

—Stuart D. Goldman, Kenneth Katzman, Robert D. Shuey, and Carl E. Behrens, "Russian Missile Technology and Nuclear Reactor Transfers to Iran," in *CRS Report for Congress* (Washington, DC: 29 July 1998), p. 9.

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November 1997

A Russian special services officer said that China and North Korea are the major suppliers to the Iranian missile program.

—Kaspit, Ben, *Maariv* (Tel Aviv) 9 December 1997 in FBIS-TAC-97-255, 9 December 1997 Interfax (Moscow) 9 November 1997, in FBIS-TAC, 9 November 1997, in *Nonproliferation Review*, Winter 1998, Vol. 5, No. 2, James Martin Center for Nonproliferation Studies, p. 142.

November 1997

German intelligence services BND reported that many agencies are involved in the Iranian missile program procurement. Among them is the Defense Industries Organization, Bonyad Mostafazan ve Janbazah and the State Purchasing Organization. BND investigates whether Krupp and Siemens subsidies are involved in any illegal deal with Iranian entities. The German company Hoffman Mess und Regeltechnik of Swabia has allegedly supplied test devices used in tuning gyro-compasses and guidance systems. BND says that Iran uses fake companies located in third countries for such purchases. Dubai and Pakistan are considered among these third countries.

—*Stern* (Hamburg), 9 November 1997, pp. 182-184, in FBIS-TAC-97-254, 9 November 1997; in *Nonproliferation Review*, Winter 1998, Vol. 5, No. 2, James Martin Center for Nonproliferation Studies, p. 142.

November 1997

As part of a plan to neutralize Iran's nuclear and missile programs, Israel receives the first of 25 advanced F-15I fighter planes. There are two options to the reported plan: one is to target Iranian missile plants in the cities of Shiraz, Kuramabad, Farhin, and Semnan or to target foreign scientists rather than the buildings at the sites.

—Christopher Walker, "Israel Steps Up Plans for Air Attacks on Iran," *London Times*, 9 December 1997, p. 12.

2 November 1997

Western intelligence officials are closely studying reports that Iran has conducted a successful test-launch of a new generation of ballistic missiles capable of hitting long-range targets. The Iranian Navy conducted the test-firing of Iran's new Shahab-2 missile, with a range of nearly 1,000km. The launch, which took place last month, was a success according to Iranian officials. Mohsen Rezai, the former commander-in-chief of Iran's Islamic Revolution Guards Corps (IRGC) says that the successful test means Iran is now close to being self-sufficient in manufacturing ballistic missiles, and states, "we are now able to produce intercontinental range." Western defense experts have been warning for several weeks that Iran's attempts to develop its own missile firing systems are nearing completion. Iranian technicians have been working closely with experts from North Korea and China for several years to develop Iran's own missile technology. Last week 16 countries signed a petition calling for a complete trade and weapons embargo against Iran. Curbing Iran's military build-up is often unsuccessful because Iran has many ways of procuring sophisticated technology and equipment. Concerns are being expressed that the Iranians will be able to exploit an international conference on hypersonic flight being held this week in London. Leading members of Russia's Tsagi Institute, experts in aerodynamics, scientists from NASA, the U.S. Air Force, and the European Space Agency, will discuss developments in missile technology.

—Con Coughlin, "Iran Missile Test Launch Puts Israel Within Range," *Sunday Telegraph* (London), 2 November 1997, p. 29, in Lexis-Nexis, www.lexis-nexis.com.

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2 November 1997

Iran, reportedly, successfully test-launched the Shahab-2, a missile with a range of around 1,000km. Western intelligence officials believe that the Shahab-2 was developed with North Korean assistance.

— Con Coughlin, "Iran Missile Test Launch Puts Israel Within Range," *Sunday Telegraph*, 2 November 1997, p. 29.

5 November 1997

The U.S. House of Representatives asks U.S. President Bill Clinton to impose sanctions on China and Russia for selling advanced missiles and technology to Iran.

—"U.S. House Approves China Legislation," Reuters, 6 November 1997.

6 November 1997

Israel asks the United States to fund the \$150 million production and development cost of a third Arrow ABM due to the ballistic threat from Iran and Syria.

—Yerach Tal and Amnon Barzilai, "Israel to Trade in Old Jets for New," *Haaretz*, 6 November 1997.

8 November 1997

Western intelligence are worried that the cooperation between U.S. and Russian companies might benefit the Iranian missile program. Some of the Russian companies are also cooperating with Iran in the development of missiles. A Russian consortium, Energomash, that produces engines, has cooperation programs with Pratt and Whitney, the Polyus institute has cooperation programs with Litton while TsAGI has cooperated with Lockheed Martin.

—*Le Point* (Paris), 5 November 1997 in FBIS-WEU-97-316 in *Nonproliferation Review*, Vol. 5, No. 3, Spring-Summer 1998, James Martin Center for Nonproliferation Studies, p. 146.

12 November 1997

The U.S. House of Representatives approves stronger sanctions against companies or research institutes that are aiding Iran in the development of medium- and long-range missiles. The Clinton administration disagrees with the House and says that "it interferes with diplomatic efforts to address the problem, which centers on Russian companies aiding Iran."

—"House Backs Tougher Action on Iran Missiles," Reuters, 13 November 1997.

14 November 1997

The Public Relations Department of the Russian Federal Security Service (FSB) announces the arrest of an Iranian diplomat caught attempting to buy technical documents on missile technology from Russian experts. The Iranian sought to buy blueprints and recruit Russian scientists to go to Iran. Iran's ambassador to Moscow insists that the 33-year-old Iranian was a student who had arrived in Russia with an ordinary visa. But American officials describe him as a representative of the Iranian missile program in Tehran. Russian officials say they had proof that he worked for Iran's government. Other attempts of acquiring dual use items have been reported recently.

—"Russian FSB Holds Iranian for Attempt to Buy Documents," Interfax (Moscow), 14 November 1997; in FBIS Document FTS19971114001132, 14 November 1997; "Moscow Accuses Iran Diplomat," *Financial Times* (London), 15 November 1997, p. 2, in Lexis-Nexis, www.lexis-nexis.com; "Russia to Expel Iranian Accused in Missile Case,"

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Journal Sentinel (USA), 18 November 1997, p. 15, in Lexis-Nexis, www.lexis-nexis.com; Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), pp. 39-40, www.csis.org.

14 November 1997

Reza Teymuri, the Iranian arrested while trying to get missile designs from a Russian, is a technical representative of the Iranian embassy in Moscow.

—Ivan Safranchuk, ed. by Dmitriy Yevstafiyev, "Scientific Notes No. 8: The Nuclear and Missile Programs of Iran and Russian Security – The Framework of Russian-Iranian Collaboration," *Nauchnyye Zapiski* (Moscow), 5 May 1999, vol. 8, pp. 1-36; in "Russia, Iran Nuclear Program Cooperation," FBIS Document FTS19990701001333, 1 July 1999.

17 November 1997

The Russian Foreign Ministry says that Russia apprehended an Iranian government official caught trying to buy missile technology. Iran's ambassador insists that the Iranian was just a student visiting Russia. However, U.S. and Russian officials believe he worked for the Iranian government. [Note: see 14, November.]

—Michael Gordon, "Russians Order Expulsion of Iranian Detained as a Missile Spy," *New York Times*, 18 November 1997, www.lexis-nexis.com.

18 November 1997

An Israeli diplomatic source says that a team of North Korean experts on Scud-C missiles is visiting Iran.

—"Israeli Source Claims DPRK Scud Experts in Iran," *Yonhap* (Seoul), 18 November 1997; in FBIS Document FTS19971118000008, 18 November 1997.

19 November 1997

The CIA announces that the Kazakh Colonel Oleg Sinkin was trying to buy missiles from Russia and then attempted to sell them to Iran. U.S. intelligence reports say that Sinkin tried to buy SS-21 Scarab short-range missiles from Russia.

—Bill Gertz, "Kazakh Colonel Suspected as Arms Broker to Iranians," *Washington Times*, 19 November 1997.

21 November 1997

Iran is suspected of negotiating a secret deal to help Libya develop a ballistic missile with a range of more than 1,250 miles. The intelligence assessment is that Tehran would supply the Libyans with surface-to-surface missiles and technology. This would lead to a weapon with a range of more than 800 miles and a 1,650lb warhead in the first phase, and an advanced system with a range of more than 1,250 miles and a warhead of 2,200lb at a later stage. Supposedly the new agreement will also involve building a plant in Libya to make fuels and fuel components for ballistic missiles. There are reports that Iranian instructors have also begun training courses in Libya on missile navigation and guidance.

—Michel Evans, "Tehran Deal to Help With Libyan Missile," *Times* (London), 21 November 1997, in Lexis-Nexis, www.lexis-nexis.com.

23 November 1997

Reports state that China and North Korea have sent more than 100 technicians to work on the final stages of Iran's

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surface-to-surface ballistic missile program. The reported goal is to give Iran an indigenous ballistic missile production capability by the end of 1998. The technicians are working at the Missile Industrial Complex in Hemat. They want to extend the range of the Nodong missile, which Iran bought from North Korea in the 1980s, to more than 1,600km. The Iranians are trying to complete development of the Shahab-3 and Shahab-4 missiles.
—Con Coughlin, "China, N. Korea Send Experts to Hone Iran's Long-Range Missiles," *Washington Times*, 23 November 1997, pp. 1, 5.

26 November 1997

A North Korean delegation led by Vice Foreign Minister Kim Gye Gwan meets with a U.S. delegation headed by Deputy Assistant Secretary of State Charles Kartman at the State Department. This meeting marks the first time a senior North Korean official has held talks at the State Department. During the six-hour meeting, various topics are discussed, including North Korea's missile development and past sales to Iran and Syria.
— George Gedda, "U.S., North Korea Hold Talks," Associated Press (Washington), 27 November 1997, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

30 November 1997

Captain Abdollah Manavi, operational Deputy commander of the Islamic Republic Of Iran's Navy says that the Navy has projects to develop missile systems, boosting defense capabilities in electronic warfare, improvement of electronics, radar, and telecommunication systems and control and command.
—"Operational deputy commander of the Navy: US nuclear submarines most dangerous threat to environment," *Keyhan* (Tehran), 30 November 1997, p. 7; in "Iran's Deputy Navy Chief on Future Plans, US' Gulf Presence," FBIS Document FTS19971208001045, 8 December 1997.

December 1997

Kenneth Timmerman states that Russian Deputy Foreign Minister Viktor Posuvalyuk claimed during a visit to Israel that Russia kicked out Iranian students studying at various Russian missile design centers and universities. Posuvaloyuk is one of the architects of the Iranian-Russian cooperation and labeled Israeli reports of Russian missile sales to Iran "a pile of inventions based on, to put it mildly, an unfounded story."
—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," October 1998, p. 51.

3 December 1997

Russian Deputy Foreign Minister Victor Possavaluyuk receives a message from Israeli Prime Minister Benjamin Netanyahu to pass on to Russian President Boris Yeltsin, stating the seriousness with which Israel views Russia's supply of missile technology to Iran.
—Jay Bushinsky, "Netanyahu Again Warns Russia About Supplying Technology to Iran," *Jerusalem Post*, 4 December 1997, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

15 December 1997

Satellite reconnaissance of the Shahid Hemat Industrial Group research facility detects "the heat signature of an engine test for a new generation of Iranian ballistic missiles, capable of carrying an 821kg warhead more than

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1,200km."

—Barton Gellman, "Shift by Iran Fuels Debate Over Sanctions," *Washington Post*, 31 December 1997, p. A16.

21 December 1997

A senior American official says that despite considerable efforts, it had not been possible to halt a flow of Russian missile technology to Tehran.

—Matthew Campbell, "Iran's Mullah's 'On Brink of a Nuclear Bomb'," *Sunday Times* (London), 21 December 1997, in Lexis-Nexis, www.lexis-nexis.com.

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1996

1996-1998

Russia's Glavkosmos GkhO (State Cost-Accounting Organization), which is under the Russian Space Agency, delivers materials, equipment, and technologies to Iran between January 1996 and August 1998. The Russians claim that these deliveries do not violate any export restrictions.

—"U.S. Claims on Iran Arms Projects Refuted," *Nezavisimaya Gazeta* (Moscow), 27 February 1999; in FBIS Document FTS19990308000140, 27 February 1999.

1996

Inor NPTs (Scientific Production Center) based in Korolev, Moscow Oblast, delivered general purpose structural steel and alloys to Iran in 1996. These alloys are not related to the low-carbon chrome-nickel corrosion-resistant steels, and are not restricted by the Missile Technology Control Regime (MTCR).

—"U.S. Claims on Iran Arms Projects Refuted," *Nezavisimaya Gazeta* (Moscow), 27 February 1999; in FBIS Document FTS19990308000140, 27 February 1999.

1996

Iran's Sanam Group asks Russia's Central Aerohydrodynamic Institute (TsAGI) to collaborate on work done at TsAGI in order "to determine the aerodynamic characteristics of a model to study the geophysics of a missile for atmospheric sounding."

—Ivan Safranchuk, ed., by Dmitriy Yevstafyev, "Scientific Notes No. 8: The Nuclear and Missile Programs of Iran and Russian Security – The Framework of Russian-Iranian Collaboration," *Nauchnyye Zapiski* (Moscow), 5 May 1999, vol. 8, pp. 1-36; in "Russia, Iran Nuclear Program Cooperation," in FBIS Document FTS19990701001333, 1 July 1999.

1996

The German government closes Iran's Defense Industries Organization's operation in Cologne, which was Tehran's main weapons procurement base in Europe. The Germans close the DIO's offices after a tip-off that it was engaged in illegal activities.

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—Con Coughlin, "Hong Kong Used as Conduit For Iran Arms Sales," *Sunday Telegraph* (London), 14 September 1997, p. 27, in Lexis-Nexis, www.lexis-nexis.com.

1996

The Instrumentation Factories Plant (IFP) acquires dual-use technology and materials used for a gyroscope production plant.

—"Mikhail Kirillin: Several U.S. Firms Engaged in Developing Missile Equipment Have Links with Iranians," *Yadernyy Kontrol Dossier* in *Yadernyy Kontrol* (Moscow), March-April 1998, No. 2, Vol. 38, pp. 37-43; in "Iran's Missile Industry, U.S. Missile Development Firms with Iranian Links," FBIS Document FTS19980605000876, 5 June 1998.

1996

Both Lyongaksan and the Korea Pugang Trading Corporation are sanctioned by the State Department for providing assistance to Iranian missile programs.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," October 1998, p. 37.

1996

A CIA report states that Iran receives major supplies of long-range missile technology from Russian and Chinese firms.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 39.

1996

Three Russian corporations sign military contracts with the Iranian Defense Industries Organization (DIO). The DIO's Shahid Hemmat Industrial Group (SHIG) concludes contracts totaling approximately \$150,000 with the Russian Central Aerohydrodynamic Institute. Plans include building a wind tunnel for missile design, producing model missiles, and writing related computer software. Inor, a Russian scientific center, seeks to sell Iran laser equipment, mirrors, and tungsten-coated graphite material.

—Bill Gertz, "Russia Disregards Pledge to Curb Iran Missile Output," *Washington Times*, 22 May 1997, p. A3.

1996

Sixteen Iranian undergraduate students were studying engineering and rocketry and several post-graduates were specializing in aerodynamics at the Moscow Aviation Institute. Also in 1996, Vadim Vorobei, now head of the faculty of engine production at the Moscow Aviation Institute, and five other Russian missile experts began lecturing in Tehran. They were eventually joined by dozens of other Russian scientists who specialized in guidance systems, metallurgy, aerodynamics, and turbo engines. Vorobei is an expert on the use of composite materials for producing rockets.

—Michael Dobbs, "Collapse of Soviet Union Proved boon to Iranian Missile Program," *Washington Post*, 13 January 2002, in Lexis-Nexis, www.lexis-nexis.com.

1996

The Israeli newspaper *Maariv* reports that North Korea has delivered at least 12 Nodong missiles to Iran. Some Israeli reports also point to the existence of an Iranian 1,000-1,500km-range Zelzal (Earthquake) missile program,

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developed by the Self-Sufficiency Department of the Islamic Revolution Guards Corps (IRGC) with technical assistance from Russia and China.

—"Missile Test Reported," *Iran Brief*, 5 May 1997, pp. 7-8.

1996

The cooperative military and political relationship between Iran and Syria is quite strong despite the possibility of peace between Syria and Israel. Syria and Iran have coordinated negotiations with North Korea over the sale of the Scud-C missile. Iran and Syria have been receiving Scud-Cs since the early 1990s, with Iran receiving the missile in 1992 and Syria in 1991. Western and Israeli sources say that North Korea and Iran have been collaborating on Scud-C missile assembly plants at two facilities near Aleppo and Hama. Components for the missiles have been shipped to Syria via Iran and test firings were conducted in both countries. In addition, Western intelligence sources suspect that since at least 1993, Iran and Syria have been cooperating to develop cruise missiles, using technology from Europe and Japan. [Note: For more information on the joint Iranian-Syrian cruise missile development program, see entry for 12 November 1993.]

—Steve Rodan, "Iran and Syria: A Stable Alliance Against Israel," *Jerusalem Post*, 12 April 1996, p. 7, in Lexis-Nexis, www.lexis-nexis.com.

1996

Iran has four or five operational land-based anti-ship missile units, with a total of 50-60 Silkworm missiles, and three-six launchers at each site. The Silkworms are deployed near Chah Bahar, Bandar Abbas, and Khuestak, near the Straits of Hormuz.

—Anthony H. Cordesman, *Iran's Evolving Conventional Military Forces, Working Draft* (Washington, DC: Center for Strategic and International Studies, 28 February 1996), p. 53.

1996-2000

Vadim Vorobei, a department head at the Moscow Aviation Institute says he and other Russian missile scientists contribute theoretical and scientific knowledge to Iran's missile programs over a five-year period of cooperation between the two countries. Vorobei says that the Russian experts include engineers and a missile guidance specialist, but insist that no secret information was transferred in violation of international agreements. Vorobei claims that Iran's missile programs are not as well developed as Western intelligence sources indicate. Specifically, he points to jet vanes for the guidance system of Iran's Shehab-3 medium-range ballistic missile being unable to withstand intense heat. Shehab-3 jet vanes are coated with graphite, considered a poor substitute for reinforced carbon-carbon or tungsten, which Iran has been unable to acquire. Western intelligence officials say the Shehab-3, with a range of about 800 miles, is a modified version of the North Korean Nodong missile.

—Michael Dobbs, "A Story of Iran's Quest for Power: A Scientist Details The Role of Russia," *Washington Post*, 13 January 2002, in Lexis-Nexis, www.lexis-nexis.com.

1996

In a 1996/1997 report, it is stated that Iran had around 200 M-7 missiles. It is uncertain whether Iran imported the complete M-7 missile systems or whether it converted the 130 HQ-2 surface-to-air missiles that Iran received from

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China during the 1980s.

—Bates Gill, "Chinese Arms Exports to Iran," *MERIA Journal*, Vol. 2, No. 2, May 1998, 8 June 2001, www.biu.ac.il.

6 January 1996

Vice Admiral Scott Redd, commander of the U.S. Navy's 5th Fleet, says Iran test-fires a new, Chinese-made anti-ship missile in the northern Arabian Sea. Redd says that Iran adapted "a significant number" of its ships for launching the newly acquired C-802 (YJ-2) anti-ship missile.

—"Naval Commander Warns of Iran Missile," *Washington Post*, 31 January 1996, p. A10.

6 January 1996

Iran modifies its Kaman-class Combattante II fast-attack craft to carry the C-802 anti-ship missile.

—"Signals, Iran Tests C-802 Anti-Ship Missile," *Jane's Navy International*, 1 April 1996, www.janesonline.com.

12 January 1996

North Korea is assisting Syria construct a missile factory. "Intelligence sources" believe the factory could be operational by 1998. The report also says that Iran and Syria are cooperating in the production of Scud-C missiles.

—Steve Rodan, "Eye in the Sky," *Jerusalem Post*, 12 January 1996, p. 14, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

21 January 1996

The Persepolis joint education center is created as part of a joint agreement between Iranian and Russian institutions. The Russian missile experts who will be teaching the Iranians have been identified as Martischenko, Barbashov, and Alexandrov. The Moscow Aviation Institute appears to be continuing with its training of Iranian engineers and technicians.

—Mark Gorwitz, "Foreign Assistance to Iran's Nuclear and Missile Programs," October 1998, p. 33.

30 January 1996

U.S. Navy Commander Vice Admiral Scott Redd, commander of the U.S. Fifth Fleet, says that Iran's naval forces recently test-fired the Chinese-designed C-802 (YJ-2/CSSC-8 Saccade) cruise missile. The Saccade missile, currently in the development stage, is substantially more advanced than the Silkworm missile. He says this is the first time Iran has had a sea-based anti-ship missile in its arsenal since 1988. Redd declines to say how many of the C-802 missiles Iran has, but that Iran has been modifying a "significant number" of naval patrol boats to make them capable of launching the new missile. The patrol boats are reportedly Houdong fast-patrol boats. He also says that Iran has been adding new sites ashore for surface-to-air and surface-to-surface missile launchers. Iran's activity points to a resurgent Iranian naval force in the Gulf. Redd says that Iran has four shore bases from which to launch anti-ship missiles and is expected to buy a third Kilo diesel submarine and perhaps five more Houdong patrol crafts in 1996. Admiral Redd also states that Iran's test of a short-range, anti-ship missile in the north end of the Persian Gulf is a threat to the region's security. Iran says that the Pentagon's claim that it tested a long-range missile in the northern waters of the Persian Gulf is another unfounded allegation aiming to deflect attention from U.S. interference in the region.

—Robert Burns, "Iran Tests Anti-Ship Missile, Navy Says," *Chicago Sun-Times*, 30 January 1996, p. 1, in Lexis-Nexis,

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www.lexis-nexis.com; "Iranian Commentary Calls US Claims of Missile Test 'Propaganda'," Voice of the Islamic Republic of Iran (Tehran), 31 January 1996; in FBIS Document FTS19960131000346, 31 January 1996; Reuters, "US sees threat to Gulf shipping from Iran missiles," *Financial Times* (London), 31 January 1996, p. 8, in Lexis-Nexis, www.lexis-nexis.com.

February 1996

Asian-based intelligence sources say China is helping Iran develop the Karus, which may be a modified or a license-built version of China's C-801/-802 surface-to-surface cruise missile. New information suggests that the test-fired C-802 launched this month is more likely the co-developed Karus missile.

—"China helping Iranian missile developments," *Jane's Defence Weekly*, 17 July 1996, p. 13, in Lexis-Nexis, www.lexis-nexis.com.

27 February 1996

Yevhen Mykytenko, head of the Ukrainian Foreign Ministry's Middle East department, says that Ukraine is abiding by all nonproliferation agreements and has not exported missile technology to Iran.

—Pavlia, Halia Intelnews (Kiev) 27 February 1996, FBIS-SOV-96-039, 27 February 1996, in *Nonproliferation Review*, Vol. 4., No. 1, Fall 1996, James Martin Center for Nonproliferation Studies, 1996, p. 162.

27 February 1996

North Korea might have sold the Nodong-1 missile to Iran, and the two countries might have discussed the possibility of cooperating on the construction of a Nodong production plant in Iran. Furthermore, Jane's says that North Korea completed the development of the Nodong and its mobile launcher in 1995.

—"Headline News Puk 'T'ando Missile Nodong 1 Ho' Iran'e P'anmae," *Joongang Ilbo*, 29 February 1996, www.joins.com.

28 February 1996

The Islamic Revolution Guards Corps (IRGC) is the main operator of Iran's land-based surface-to-surface missiles. The official Iranian Army commands a variety of other missiles and rockets. Iran has 880-890 multiple rocket launchers (MRLs), including the 240mm M-1989, 700 Chinese Type 63 107mm launchers, 100 Soviet BM-21, and 5 Soviet BM-11 launchers. Iran has made at least 50 MRLs, including the 122mm, 40-round Hadid rocket launcher system. They are currently producing the Arash and Noor rockets, variants of Russian and Chinese 122mm rockets, and the Fajer and Haseb, which are versions of a Chinese 107mm rocket. Some of these rockets have chemical warheads. The Iranian Army is also responsible for the Shahin, Oghab, and Nazeat long-range rockets. The Shahin-1 is a 333mm unguided artillery rocket with a solid-fueled motor, with a range up to 13km. The Shahin-2 has a range of 20km with a 190kg warhead. The Oghab is a 320mm unguided artillery rocket with a range of 34km and may have a chemical warhead. Iran has two versions of the Nazeat: a transporter-erector launcher (TEL) launched system apparently based on Chinese technology, using a solid-fueled engine; and a simple inertial guidance system. The 355.6mm version reaches a range of 105km with a 150kg warhead. The 450mm version has a range of 130-150km with a 250kg warhead. Iran's air defense system includes nine surface-to-air missile sites, but many of the sites do not have sufficient launchers to be effective. The Air Force is in control of three SA-5 units, with a total of 10-15 launchers protecting Tehran, ports, and major oil facilities. Iran is reportedly trying to purchase three

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more batteries of SA-5 missiles from the former Soviet Union. Both Russia and China have provided Iran with surface-to-air missiles and sensors, Cordesman advances "they scarcely give Iran a modern integrated air defense system that can resist attack by a power like the US." The IRGC operates the Chinese-supplied Silkworm surface-to-ship missile, which has a range of 80-90km. Iran has at least five land-based anti-ship missile units, including four sites operating Silkworm missiles, and at least one site using the Chinese C-801 anti-ship and ship-to-ship missiles. Iran has at least 60-100 Chinese supplied C-801 (YF-6) missiles.

—Anthony H. Cordesman, *Iran's Evolving Conventional Military Forces, Working Draft* (Washington, DC: Center for Strategic and International Studies, 28 February 1996), pp. 29-31.

March 1996

Vice Admiral John S. Redd, commander of U.S. Naval forces attached to the Central Command, warns that over the past 18 months, Iran has tripled the number of surface-to-surface and surface-to-air missile (SSM and SAM) sites. These are believed to include SA-5 batteries guarding coastal installations. The Islamic Revolution Guards Corps (IRGC) has SSM batteries on Qeshm and Sirri islands in the Strait of Hormuz. The Iranians are also reported to have installed HAWK SAMs on Abu Musa. Redd states that Iran has approximately 25 vessels capable of carrying SSMs. —Barbara Starr, "Iran adds new threat with cruise missile test," *Jane's Defence Weekly*, 7 February 1996, p. 14, in Lexis-Nexis, www.lexis-nexis.com; "USA warns of Iranian naval buildup," *Jane's Defence Weekly*, 27 March 1996, p. 14, in Lexis-Nexis, www.lexis-nexis.com.

2 March 1996

British Customs officials seize a 50kg shipment of maraging steel in Birmingham, United Kingdom and arrest Ali Asghar Manzapouri, an Iranian. The special steel shipment was en route to Iran from the United States.

—"Nuclear Smuggling Thwarted By Customs," *Iran Brief*, 9 September 1996, p. 2.

7 March 1996

U.S. Arms Control and Disarmament Agency Director John Holum says the U.S. government is considering economic sanctions on China for the sale of an unknown number of C-802 anti-ship cruise missiles to Iran.

—Bill Gertz, "US Mulls Sanctions On China For Arms Sales to Pakistan, Iran," *Washington Times*, 8 March 1996, p. A8.

13 April 1996

Iran conducts five days of naval exercises between the island of Jazireh-e Khark and Bushehr in the Persian Gulf using missile-launching frigates and "anti-surface air-to-sea air units." The Salman-1 of 75 (Iranian year 1375) exercise is scheduled to end on 17 April, Iran's Army Day.

—"Iran: Further Details on Naval Exercise in Persian Gulf," Voice of the Islamic Republic of Iran First Program (Tehran), 13 April 1996; in FBIS Document FBIS-NES-96-074, 13 April 1996.

13 April 1996

Iran delivers between 500 and 900 Katyusha rockets to Lebanon-based Hezbollah guerillas via the Damascus Airport in Syria.

—"Iran Resumes Arms Shipments to Hezbollah," *Iran Brief*, 6 May 1996, p. 7.

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16 April 1996

After Iran's Sanam Group asks Russia's Central Aerohydrodynamic Institute (TsAGI) to work together on missile research, TsAGI tells them to contact Rosvooruzheniye because they "did not have the authority to conduct official negotiations."

—Ivan Safranchuk, ed. by Dmitriy Yevstafyev, "Scientific Notes No. 8: The Nuclear and Missile Programs of Iran and Russian Security – The Framework of Russian-Iranian Collaboration," *Nauchnyye Zapiski* (Moscow), 5 May 1999, Vol. 8, pp. 1-36; in "Russia, Iran Nuclear Program Cooperation," FBIS Document FTS19990701001333, 1 July 1999.

17 April 1996

North Korea may have suspended its Nodong-1 program for technical and financial reasons. However, other analysts say that Nodongs are in the early stage of production and that North Korea may have as many as 60 Nodongs ready for use, and that 20 Nodongs may have already been exported to Iran. North Korea continues to develop the long-range Taepodong-1 (Paektusan-1) and Taepodong-2 missiles, with the first test for the Taepodong-1 (Paektusan-1) expected in 1997.

—Lennox Duncan, "Ballistic Missiles," *Jane's Defence Weekly*, 17 April 1996, pp. 40, 43-44.

22 April 1996

Israeli Prime Minister Shimon Peres says that the Iranian missiles seized in Germany and Belgium are supposed to be used against European and Jewish targets in Europe. He adds that the missiles were shipped on board a cargo ship transporting spices to Europe.

—Shimon Schiffer, *Yediot Aharonot* (Tel Aviv), 22 April 1996; in "Peres Discloses Iranian Missile Shipment Seized in Brussels," FBIS Document FTS19960422000724, 22 April 1996.

25 April 1996

A secret service (SS) agent of the U.S. treasury department says that North Korea has received high-performance printing presses from Iran in exchange for air warplanes and missiles including the Nodong and the Taepodong.

—Pak Yong-ki, *Hanguk Ilbo* (Seoul), 25 April 1996; in "DPRK Reportedly Imports Counterfeiting Technology From Iran," FBIS Document FTS19960425000250, 25 April 1996.

29 April 1996

U.S. Navy Captain Mark D. Neuhart, a spokesman for the U.S. Central Command (CENTCOM) confirms a report that appeared in *Jane's Defence Weekly* alleging that Iran was building tunnels along its Persian Gulf coast, apparently as protective storage sites for ballistic missiles. Neuhart says that there is no evidence yet of missiles in the tunnels, but that they appear to be for protective storage rather than launch sites. He states that he cannot discuss more specific details about the tunnels, but calls the project part of Iran's defense modernization effort. [Note: Please note that the entry referencing the *Jane's Defence Weekly* article is under the publication date 1 May 1996. It would appear that the magazine was publicly available before the printed publication date. The chronology does not reflect that.]

—Associated Press, "Iran Building Tunnels for Missiles, US Says," *New York Times*, 30 April 1996, p. A6, in Lexis-Nexis, www.lexis-nexis.com.

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May 1996

A Hong Kong journal article reviewing the development of China's missile force says that the M-18 missile was reportedly developed in conjunction with Iran. The article lists the range as 1,000km with a 400kg payload.

—Huang Tung, "China's Missile Progress," *Kung Chiao Ching* (Hong Kong), 16 May 1996; in "Journal Reviews Development of Missile Force," FBIS Document FTS19960516000019, 16 May 1996.

May 1996

Iran launches the M-9 variant missile.

—"Iran," *Jane's Defence Weekly*, 10 March 1999, in Lexis-Nexis, www.lexis-nexis.com.

May 1996

Col. Parviz Qowski, the commander of the Iranian "Raad" naval exercises, says that anti-ship missiles and the new Tondar missile were fired from the northern Persian Gulf during naval exercises. The only Iranian missile by that name known to Western experts is the Tondar-68, a ballistic missile with a reported range of 700km, which Tehran said it was developing several years ago. The Tondar-68 project was assisted by China and North Korea. It is possible that the Tondar may be a modified Chinese C-801 or C-802 missile.

—James Bruce, "Iran's long-range Tondar causes concern in West," *Jane's Defence Weekly*, 22 May 1996, p. 17, in Lexis-Nexis, www.lexis-nexis.com.

1 May 1996

General Binford Peay, commander in chief of the U.S. Central Command (CENTCOM), states that Iran has been constructing tunnels capable of housing long-range ballistic missiles along its Persian Gulf coastline.

—Barbara Starr, "Iran's Tunnels Are Missile Sites, Says USA," *Jane's Defence Weekly*, 1 May 1996, p. 3.

1 May 1996

Secret Argentinean government decrees are disclosed and reveal that the Raul Alfonsín government sold most of its arms to Iran from 1984-1987, at which time it was not under sanctions. Argentina did so to support Iran during its war with Iraq. The sales are valued at \$50 million and included Pampero short-range tactical missiles among other artillery.

—"The Business Deals of the Radicals and the Peronists: Iran and Croatia the Preferred Clients," *Clarín* (Buenos Aires), 2 May 1996, p. 6; in "Argentina: Arms Sales Decrees Under Menem, Alfonsín Listed," FBIS Document FBIS-LAT-96-093, 2 May 1996.

2 May 1996

Pentagon spokesman Navy Commander Joe March says that the Pentagon believes the tunnels along Iran's Persian Gulf coast are intended for long-range missiles. March states, "We have limited information about construction along Iran's southwest coast, which may be used for storage or deployment facilities for missile or missile-related activity." The Pentagon does not say that Iran already possesses long-range missiles that could be fired from the tunnels. Iran failed in an attempt to buy missiles from North Korea earlier in 1996 because the two governments could not agree on a price. Iranian officials deny that they are "up to anything."

—Stanley Meisler, "US Suspects Arms Use for Iran Tunnels; Military: Pentagon Says Long-Range Missiles May be

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Stored There But Tehran Denies Such Plans," *Los Angeles Times*, 3 May 1996, p. A4, in Lexis-Nexis, www.lexis-nexis.com.

3 May 1996

Information surfaces alleging Iran may have sold Croatia surface-to-surface rocket systems. There is contention regarding the origin of such rockets. As Iran does not manufacture them, it might have sold part of its arsenal or simply transferred these weapons from a third country to Croatia.

—Mario Galic, "Chinese Rockets for the Croatian Army?," *Nedjeldjna Dalmacija* (Split), 3 May 1996; in "Rumors on PRC Rockets, Iran Involvement Viewed," *FBIS Document FTS19960503000272*, 3 May 1996.

6 May 1996

An unnamed source in Iran's Islamic Revolution Guards Corps (IRGC) states that the IRGC acquired "at least" three Iraqi Al-Hussein surface-to-surface missiles (SSMs) after the 1990-1991 Gulf War. Iran reportedly uses the SSMs to enhance production, training, and research at the IRGC Land Force Missile & Artillery Training Center in Isfahan. Iran's Defense Industries Organization and the IRGC Self-Sufficiency Department use the center for research and production purposes, while the IRGC Land Force and Air Force train SSM and surface-to-air (SAM) crews at the Center. Two Russian missile experts and 10 Chinese artillery experts are employed as instructors at the Center. In addition to the missiles, Iranian military intelligence reportedly transported documents pertaining to the missiles out of Iraq.

—"Iran Studies Iraqi Missiles," *Iran Brief*, 6 May 1996, p. 1.

12 May 1996

During naval exercises in the northern Persian Gulf, Iran tests a new type of long-range missile, which it identifies only as "Tondar." The *Iran News* daily quoted Col. Parviz Qowski, the exercise commander, as saying that it was the first time anti-ship missiles and the Tondar were fired from sites this far north inside the Gulf. The report gave no additional information about the Tondar missile. *Jane's* suggests that since the Tondar was deployed during naval exercises, it would seem that the missile was an anti-ship missile fired from coastal batteries. The only Iranian missile to date known to Western experts by the name Tondar is the Tondar-68, a ballistic missile with a reported range of approximately 700km. That project was assisted by China and North Korea. *Jane's* suggests the possibility that the Tondar may be a modified Chinese C-801 Sardine anti-ship missile (JY-1, Silver Sword) or a more advanced C-802 (JY-2, Silver Sword). Iran has been seeking to extend the range of their C-801s for some time. North Korea recently test-fired an extended-range C-801 and is supposedly developing the long-range Nodong-2 missile with Iranian funding. Iran has recently conducted several naval maneuvers in the northern Persian Gulf, the last such exercise was a four-day exercise in December 1995, called "Raad" (Thunder). [Note: It is entirely possible that the missile tested here was named after the December exercise and has no relation to the missile program called Tondar-68. Please refer to the note on "Iran's Missile Names."]

—James Bruce, "Iran's Long-Range Tondar Causes Concern in West," *Jane's Defence Weekly*, 22 May 1996, p. 17.

13 May 1996

Iran announces that it tested a new missile called the Tondar, which it claims to have produced indigenously. The Tondar is thought to be a land-based anti-ship missile. Brig. General Ahmad Dadbin, commander of Iran's land

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forces, says Iran has "achieved the technology of missile production."

—James Bruce, "Iran Warns USA to 'Think Twice' About an Attack," *Jane's Defence Weekly*, 12 June 1996, p. 27.

14 May 1996

Rocket and missile launching units of the Second Sea Zone of Iran's Islamic Revolution Guards Corps (IRGC) conclude the second phase of four-day marine maneuvers in the northern Persian Gulf. Admiral Husayn Kargar, commander of the IRGC's marine forces in the Second Sea Zone, states that the units successfully executed their maneuvers between Bushehr and Kharg Island.

—"Iran: Second Phase of Marine Maneuvers Successfully Accomplished," IRNA (Tehran), 14 May 1996; in FBIS Document FBIS-NES-96-095, 14 May 1996; "Iran Fires Anti-Ship Missiles in Gulf War Games," Reuters, 14 May 1996; in *Executive News Service*, 15 May 1996.

15 May 1996

The English daily newspaper *Iran News* reports that Brig. General Ahmad Dadbin, commander of Iran's ground forces, said his country indigenously produces "sophisticated weapons such as ground-to-ground missiles." Dadbin also said that the Iranian Army is "in a position to export arms."

—"Iran: Ground Forces Commander On Weapons Manufacture, Export," IRNA (Tehran), 15 May 1996; in FBIS Document FBIS-NES-96-095, 15 May 1996.

16 May 1996

A report states that the M-18 was developed with the Iranians. It has a range of 1,000km and a payload of 400kg.

—Huang Tung, "China's Missile Progress," *Kuang Chiao Ching* (Hong Kong), 16 May 1996; in "Journal Reviews Development of Missile Force," in FBIS Document FTS19960516000019, 16 May 1996.

23-24 May 1996

Iran conducts the Velayat (Guardianship) military exercise involving 200,000 troops and hundreds of tanks in the Koush-e Nosrat desert south of Tehran. The commander of the exercise, General Hadi Golestaneh, says missile, artillery, engineering, and communications units are taking part in the maneuvers. The exercise coincides with a warning by General Binford Peay, commander of the U.S. Central Command, that Iran is expected to increase the range of its surface-to-surface missiles (SSMs) to make them capable of reaching targets in Europe.

—"200,000 Troops in Region's Biggest-Ever Manoevers," *Jane's Defence Weekly*, 5 June 1996, p. 15.

24 May 1996

The United States imposes sanctions on North Korea and Iran for violation of the U.S. Arms Export Control Act and the Missile Technology Control Regime (MTCR). The sanctions, effective 24 May 1996, prohibit U.S. companies from engaging in missile-technology related exports, or contracts to export with Changgwang Shinyong Company of North Korea, and with the Ministry of Defense Armed Forces Logistics and the State Purchasing Office of Iran.

—*Federal Register*, Vol. 61, No. 114, 12 June 1996, p. 29785.

June 1996

The U.S. Department of State imposes sanctions on North Korea's Changgwang Sinyong Corporation (also known as the North Korea Mining Development Trading Corporation/Bureau) for providing Iran with missiles and related

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technology and components in the mid 1990s. The Iranian Ministry of Defense Armed Forces Logistics and State Purchasing Office are also placed under sanctions.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 25.

June 1996

An Iranian military delegation secretly visits Pyongyang to negotiate a contract for the purchase of North Korean missiles. Iranian Defense Minister Mohammed Foruzandeh later leads a delegation to Pyongyang on 31 August 1996 to sign the agreement.

—Lee Yöng Chong, "Pukhan-Iran Kunsu'üijöngsö Sö'myöng," Joongang Ilbo, 3 September 1996, in KINDS, www.kinds.or.kr.

3 June 1996

Anonymous Iranian sources state that France has agreed to sell "a small number" of Exocet anti-ship missiles to Iran.

—"French Said to Supply Exocets," *Iran Brief*, 3 June 1996, p. 8.

19 June 1996

Morteza Muhammed Khan, Iran's minister of economic affairs and finance, and Anatoly Kinakh, the Ukrainian deputy prime minister, sign a cooperation agreement between their respective countries. It should be noted that Ukraine has provided Iran with assistance in the fields of electronics, satellite technology, rocket manufacture, transportation, metallurgy, and mineral extraction.

—Current Digest of the Post-Soviet Press, 19 June 1996, p. 26; *Nonproliferation Review*, Vol. 4, No. 1, Fall 1996, James Martin Center for Nonproliferation Studies, p. 162.

20 June 1996

Tokyo district court has ordered a former executive from Japan Avionics Electronics Industry to pay ¥1.25 billion for exporting illegal missile components to Iranian 1991.

—Kyodo (Tokyo), 20 June 1996, in FBIS-EAS-96-121, 20 June 1996; in *Nonproliferation Review*, Vol. 4, No. 1, Fall 1996, James Martin Center for Nonproliferation Studies, p. 162.

25 June 1996

President Rafsanjani chaired a meeting of the supreme economic council during which it was decided that Iran imports 7.3 billion rials worth of navigation control units, equipment for ground based-fight control radar stations, and laboratory equipment.

—IRIB Television First Program Network (Tehran), 25 June 1996, in FBIS-NES-69-125, 6 June 1996 (6239); in *Nonproliferation Review*, Vol. 4, No. 1, Fall 1996, James Martin Center for Nonproliferation Studies, p. 161.

30 June 1996

Naval forces from the Iranian Army and the Islamic Revolution Guards Corps (IRGC) initiate the Falaq-5 missile maneuvers in the Persian Gulf. The exercises involve "missile sites of the Khatam al-Anbia headquarters as well as missile units of the naval forces of the army and IRGC."

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—"Iran: 4-Day Naval Exercises Began in Persian Gulf," IRNA (Tehran), 30 June 1996; in FBIS Document FBIS-NES-96-129, 30 June 1996.

July 1996

Asian-based intelligence sources say China is helping Iran develop two new anti-ship missiles for domestic production. The first, known in Iran as the Karus, may be a modified or a license-built version of China's C-801/-802 surface-to-surface cruise missile. [Note: See entry for February 1996.] Iran is also producing a medium-range anti-ship missile known as the FL-10, which is believed to be a copy of China's FL-2 or FL-7 missile. Chinese technicians are thought to be in Iran as advisors supporting local development of the F-10, which is in its early stages.

—"China helping Iranian missile developments," *Jane's Defence Weekly*, 17 July 1996, p. 13, in Lexis-Nexis, www.lexis-nexis.com.

3 July 1996

The Islamic Revolution Guards Corps' (IRGC) Navy and Army missile maneuvers, Falaqh-5, end successfully. In the third and last stage of these maneuvers, installations of missile pads and the hypothetical firing of two missiles against intercepted targets are carried out successfully. Missile sites of the Khatam ul-Anbia headquarters as well as missile units of the naval forces of the IRGC army have taken part in this war exercise.

—"Missile Maneuver Ends in Persian Gulf," IRNA (Tehran), 3 July 1996; in FBIS Document FTS19960703000398, 3 July 1996.

9 July 1996

Israeli Army Chief of Staff Lt. General Amnon Shahak tells the Foreign Affairs and Defense Committee of the Israeli parliament that Hezbollah guerillas in southern Lebanon are receiving missiles from Iran with a "larger explosive device than the standard Katyusha rockets" that the group has been using against Israel. He also says that earlier in 1996, Iran had transferred five Scud-B missiles to the Hezbollah in Lebanon via Syria.

—"Iran Transfers Missiles to Hezbollah," *Iran Brief*, 5 August 1996, p. 1.

11 July 1996

North Korea has exported 370 missiles since July 1987. Between July 1987 and February 1988, North Korea exported about 100 Scud-B missiles for the first time. Beginning in 1991, North Korea exported about 100 Scud-C missiles to Iran. Total missile exports to Iran, Syria, and Libya have totaled 370. North Korea is also supporting the construction of missile assembly plants in Libya, Iran, and Syria. North Korea is also planning to export the Nodong-1 to countries in the Middle East.

—"Pukhanjae Scud Missile 3 Paek 70 Ki Arab Such'ul," *Taehan Maeil*, 12 July 1996, www.kdaily.com; "Scud Missile 370 Yödae Pukhan, Chungdongjyöge Such'ul," *Joongang Ilbo*, 12 July 1996, www.joins.com.

August 1996

The China Precision Engineering Institute (China National Precision Machinery Import & Export Corp.) and "an arm of" Iran's Defense Industries Organization reach an agreement for the sale of missile components after two years of negotiation. [Note: See entry on 2 October 1996 for more information on the CIA report.]

—Bill Gertz, "China Sold Iran Missile Technology," *Washington Times*, 21 November 1996, p. A1.

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August 1996

Israeli military attaché in Washington, DC, Maj. General Zeev Livne, says that Iran successfully tests the engines of its new long-range missile with a 1,300km range.

—Yerah Tal, "IDF Attaché—'Not too Late' to Stop Iranian Missile Plans," *Haaretz* (Tel Aviv), 7 October 1997, p. 1; in FBIS Document FTS1997100700459, 7 October 1997.

13 August 1996

Israel's Chief of Staff Lt. General Amnon Shahak informs the Foreign Affairs and Defense Committee of the Israeli parliament that Hezbollah guerillas in southern Lebanon may possess as many as 1,000 unguided rockets, most of which were airlifted from Iran via Damascus Airport in Syria. Thirty of the rockets are reported to be Iranian-produced 240mm-caliber models with a range of 40km.

—James Bruce, "Israel: Hezbollah Could Have 240mm Rockets," *Jane's Defence Weekly*, 21 August 1996, p. 3.

31 August 1996

Iranian Defense Minister Mohammed Foruzandeh and his delegation arrive in Pyongyang to sign a military cooperative agreement and to discuss the procurement of North Korean missiles and other weapons. The agreement covers North Korean exports of missiles and the provision of missile technology to Iran, as well as the testing of North Korean-produced missiles in Iran.

—Lee Yöng Chong, "Pukhan-Iran Kunsu'üijöngsö Sö'myöng," *Joongang Ilbo*, 3 September 1996, in KINDS, www.kinds.or.kr; Chang Chun Ik, *Pukhan Haek-Missile Chönjaeng* (Seoul: Sömundang, May 1999), p. 291.

Late August 1996

Iranian Defense Minister Mohammed Foruzandeh and senior military officials meet with Chinese Defense Minister Chi Haotian and Communist Party leader Jiang Zemin in Beijing to discuss defense cooperation. Iran and China will initial an agreement worth \$4.5 billion for combat aircraft, surface-to-surface missiles, missile launchers, and warships. It is not known what type of missile system Iran will receive. Iran will pay for the military acquisitions over five years with cash and oil.

—James Bruce, "Iran and China in \$4.5 billion partnership," *Jane's Defence Weekly*, 11 September 1996, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

September 1996

An Iranian ship is carrying explosives and arms to Libya in violation of UN sanctions. The *Iran Ershad* reportedly sails around the Cape of Good Hope rather than the Suez Canal. The unnamed diplomat suggests that the cargo is likely missile-related.

—"UN Decision on Sanctions a Blow to Libyan Efforts," Reuters, 15 November 1996; in Executive News Service, 15 November 1996.

September 1996

Western experts believe that Iran is supplying the Lebanese Hezbollah with Iran's indigenously developed 240mm artillery rocket with a range in excess of 40km. Parchin Missile Industries Division of the Defense Industries Organization (DIO) developed and placed the unguided multiple rocket system, Fadjr-3, in production. The Fadjr-3

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is one of a family of unguided solid-propellant surface-to-surface missile (SSM) rockets. The system obtained by Hezbollah was initially thought to be North Korean. The Fadjar has identical caliber, range, and warhead weights to that of the North Korean system.

—Christopher F. Foss, "Iran develops artillery rocket with 40km range," *Jane's Defence Weekly*, 6 November 1996, p. 23, in Lexis-Nexis, www.lexis-nexis.com.

3 September 1996

Iran affirms that an agreement has been concluded with China regarding the acquisition of "heavy and light arms." Unconfirmed reports state that the deal includes missile launchers, missiles, and other equipment. Iranian Defense Minister Mohammad Foruzandeh meets with Minister of Defense Chi Haotian in China to conclude the agreement. —"Iran Confirms Contract with China for Weapons," *Washington Times*, 4 September 1996, p. A12.

9 September 1996

Iran launches a program to develop a new ballistic missile called Zelzal-3 (Earthquake), which is capable of striking Israel and the Arab Gulf states. The new missile is reportedly based upon technology obtained from Russia, China, North Korea, and Germany, but is being designed by the Islamic Revolution Guards Corps (IRGC) engineers to meet specific Iranian requirements.

—"Special Report: The Zelal Missile Program," *Iran Brief*, 9 September 1996, pp. 1-2.

9 September 1996

Iran is placing some of its Chinese C-802s at military sites on Kishm Island in the Straits of Hormuz.

—United Press International, 9 September 1996.; Harold Hough, "Iran targets the Arabian peninsula," *Jane's Intelligence Review*, 1 October 1996, p. 458.

12 September 1996

Seth Carus, an analyst at the Center for Naval Analyses in the United States, reports to the U.S. House International Relations Committee that Iran has been working to expand its naval inventory to pose a "layered threat" to U.S. and allied forces in the Persian Gulf. Carus says that Iran's purchases of C-802 anti-ship missiles, EM52 anti-ship mines, Hudong missile patrol boats, and Russian Kilo-class submarines support his conclusion.

—Philip Finnegan and Robert Holzer, "US Confronts Middle East Challenges," *Defense News*, 16 September 1996, p. 3.

21 September 1996

The Iranian Air Force, presumably of the Islamic Revolution Guards Corps, stages 25 military exercises using tactical and operational flights as well as defense exercises and operations involving the firing of ground-to-ground missiles.

—"IRGC Deputy Commander on Planned Military Exercise," Voice of the Islamic Republic of Iran First Program Network (Tehran), 21 September 1996; in FBIS Document FTS19960921000296, 21 September 1996.

25 September 1996

South Korea's National Unification Board submits a report to the National Assembly saying that North Korea can produce approximately 100 Scud-B and Scud-C missiles annually, and has exported approximately 400 missiles to

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Iran and Syria. The report also says that North Korea has also been transferring missile production plants and missile technology to Iran and Syria. Between 1980 and 1993, arms exports accounted for approximately 30% of all North Korean exports. North Korea's missile exports are valued at about \$500 million annually.

—Yonhap News Agency (Seoul), 25 September 1996, in "Scud Missiles Reportedly Being Exported to Iran and Syria," BBC Summary of World Broadcasts, 26 September 1996, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Kyodo News Service, "N. Korea Said Capable of Making 100 Missiles a Year," Japan Economic Newswire, 25 September 1996, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Kim Yŏn Kwang, "Puk, Yŏn'gan Scud Paekki Saengsan/Kukkam Charyo," *Chosun Ilbo*, 26 September 1996, p. 2, in KINDS, www.kinds.or.kr; Kang Yŏng Chin, "Puk Missile Nyŏn 100 Yŏgi Saengsan Nŭngnyŏk," *Joongang Ilbo*, 26 September 1996, p. 15, in KINDS, www.kinds.or.kr; O Il man, "Puk, 'Scud' Yŏn 1 Paekki Saengsan/T'ongilwŏn Kukkamjaryo," *Taehan Maeil*, 26 September 1996, p. 2, in KINDS, www.kinds.or.kr; Lee Dae Kun, "Puk Scud Missile Yŏn 1 Paeg'yŏgi Saengsanŭngnyŏk/Iran Tŭng'e 4 Paekki Such'ul," *Kyunghyang Shinmun*, 26 September 1996, p. 2, in KINDS, www.kinds.or.kr; Cho Min Ho, "Puk, Missile Yŏn 100 Ki Saengsanŭngnyŏk/Arapchiyŏk 4 Paekki Such'ul/T'ongilwŏn Charyo," *Segye Ilbo*, 26 September 1996, p. 2, in KINDS, www.kinds.or.kr; Lee Hŭng U, "Scud B-C Hyŏng Missile Puk Yŏn 1 Paekki Saengsan'ganŭng/T'ongilwŏn," *Kukmin Ilbo*, 25 September 1996, p. 2, in KINDS, www.kinds.or.kr.

29 September 1996

Major General Ali Shabazi Zolqadr, Iranian Army chief of staff, says that Iran is equipped with the most modern of weapons, including tanks, cannons, planes, missiles, gunboats, and submarines.

—"The Armed Forces Are Prepared For Any Eventuality," *Kayhan International* (Tehran), 29 September 1996; in "Paper Interviews Army Chief on Military Preparedness," in FBIS Document FTS19960929000305, 29 September 1996.

October 1996

U.S. Defense Intelligence Agency says that North Korea cancels plans to sell 150 Nodong-1 ballistic missiles to Iran. The United States has been trying to prevent North Korea from selling the 1,000km-range missiles. Tehran reportedly fails to make payments for the missiles. Pyongyang reportedly agreed to the deal in 1993, and Iran has evidently not acquired a significant number of the missiles. Since the failed deal, Iran has been expanding its programs to develop its own missile capabilities. This includes seeking Russian assistance with guidance systems, engines, advanced materials, electronics, testing equipment, and other technical systems that could not be produced indigenously.

—"Iranian missile deal with N Korea falters," *Flight International*, 23-29 October 1996, p. 17; Stuart D. Goldman, Kenneth Katzman, Robert D. Shuey, and Carl E. Behrens, "Russian Missile Technology and Nuclear Reactor Transfers to Iran," CRS Report for Congress, 29 July 1998, p. 5.

2 October 1996

A top-secret CIA document entitled "Arms Transfers to State Sponsors of Terrorism" reports that China sold Iran missile technology and components, specifically gyroscopes, accelerometers, and test equipment. The document also reveals that after two years of negotiation, the China Precision Engineering Institute (China National Precision Machinery Import & Export Corp.) and "an arm of" Iran's Defense Industries Organization reached an agreement in

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August 1996 for the sale of missile components.

—Bill Gertz, "China Sold Iran Missile Technology," *Washington Times*, 21 November 1996, p. A1.

16 October 1996

Jiji Press and NHK Television in Japan report that North Korea is planning to test-launch a 1,000km-range missile in the Sea of Japan. Military representatives from Iran are present at the launch site to observe the missile's performance prior to purchase. North Korea has sent a frigate to the Sea of Japan for the test. The United States responded by sending an RC-135 reconnaissance aircraft to monitor the test, and Japan sent an escort ship to monitor the missile in its terminal phase. However, the flight-test was cancelled.

—"North Korea Preparing Test-Fire Missile: Sources," Agence France Presse, 16 October 1996, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "North Korea Preparing Test-Launch of Missile over Sea of Japan: NHK," Agence France Presse, 16 October 1996, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "N. Korea Plans Missile Test Near Japan," Jiji Press Ticket Service, 16 October 1996, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 22; "[Puk Rodong 1 Ho] II, Howiham 1 Ch'ök P'a'gyön," *Chosun Ilbo*, 20 October 1996, www.chosun.com; "Puk Nodong 1 Ho Palsashilhöm Chunbi—Mi-II Soshikt'ong," *Taehan Maeil*, 17 October 1996, www.kdaily.com; Joseph S. Bermudez, Jr., "N Korea Set for More Ballistic Missile Tests," *Jane's Defence Weekly*, 23 October 1996, p. 5.

17 October 1996

North Korea produces four-six Scud-C missiles per month and exports them to Middle Eastern countries such as Libya, Iran, and Syria. Missile exports are said to be an important source of foreign exchange for North Korea.

—"Puk Scud C Hyöng Missile Wöl 4-6 Kae Chungdong Such'ul," *Taehan Maeil*, 18 October 1996, www.kdaily.com.

November 1996

A 240mm missile with a range of more than 40km is tested during the 10-day "Victory-7" military exercises. [Note: The article most likely is referring to the Fajr-3 missile.]

—"40-K1-Range Missile Reaches Production Stage," *Saff* (Tehran), No 202, Feb-Mar 97, 1 February 1997, p. 22; in FBIS Document FTS19970615000841, 15 June 1997.

November 1996

The Iranian Navy tests a Chinese-made C-802 anti-ship missile from a Hudong fast-attack craft (FAC) during military exercises in the southern Persian Gulf near the Strait of Hormuz. Iran will probably equip up to 20 FACs with Chinese-supplied C-802 missiles.

—"Iran Tests Chinese Missile," Reuters, 9 December 1996; in Executive News Service, 9 December 1996; "Iran Test-Fires Anti-Ship Missile: Report," *Khaleej Times* (Saudi Arabia), 9 December 1996, p. 1; James Bruce, "Iranians Test-Fire C-802 Anti-Ship Cruise Missile," *Jane's Defence Weekly*, 8 January 1997, p. 13.

6 November 1996

Iran has developed a 40km-range, 240mm-caliber multiple rocket system called the Fajr-3. The Fajr-3 uses a solid propellant and was developed by the Parchin Missile Industries Division of the Iranian Defense Industries

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Organization (DIO).

—Christopher F. Foss, "Iran Develops Artillery Rocket with 40km Range," *Jane's Defense Weekly*, 6 November 1996, p. 23.

6 November 1996

Western experts believe that Hezbollah guerillas in southern Lebanon were using the Iranian Fajr-3 rocket against Israeli and militia ally forces.

—Associated Press, 6 November 1996; in "IV Quarter 1996: November," Gulf/2000 Project (New York: School of International and Public Affairs (SIPA), Columbia University, November 1996); "Hezbollah Believed to Have Missile," *Phoenix Gazette*, 6 November 1996, p. A13, in Lexis-Nexis, www.lexis-nexis.com.

27 November 1996

The Piruzi-7 (Victory-7) military exercises are held in the Blue Persian Waters. They include missile maneuvers, canon bearing, and rocket launching destroyers.

—"Main Phase of Victory-7 Maneuvers Staged in Persian Gulf," IRIB Television First Program Network (Tehran), 27 November 1996; in FBIS Document FTS19961127000644, 27 November 1996.

27 November 1996

A fighter plane fired an air-to-sea missile called Piroozi-75 (Victory) for the first time during a major military exercise in the Persian Gulf. A locally built rocket launcher called Tondar (Thunder) was also tested. An Iranian Navy official states that the Tondar was "totally designed by Iranian experts and manufactured based on advanced systems such as mobile defense and electronic warfare systems."

—Reuters, 27 November 1996; in "IV Quarter 1996: November," Gulf/2000 Project (New York: School of International and Public Affairs (SIPA), Columbia University, November 1996).

1 December 1996

Iran announces that it has assembled missile launchers and that they were presented in a recent military exercise, Piruzi-7 (Victory-7). The exercise included the launching of two missiles: an air-to-sea missile called Pirooz and a refined version of the Chinese silkworm missile with a range of 145km.

—Eytan Rabin, *Haaretz* (Tel Aviv), 1 December 1996; in "Analysts 'Very Concerned' with Iran's Military Moves, Deals," in FBIS Document FTS19961201000267, 1 December 1996.

4 December 1996

An Iranian fighter aircraft launched an advanced air-to-sea missile during the Piruzi-75 (Victory-75) military exercises in the Persian Gulf. The missile has a reported range of 145km and includes electronic countermeasures. The last time an Iranian aircraft fired such a missile was during the 1980-1988 Iran-Iraq War, when Tehran fired the last of its U.S.-supplied Harpoon anti-ship missiles from its F-14 aircraft. IRNA reports an Iranian naval official as saying that Iran tested an Iranian-built ballistic missile called the Tondar during the exercises. The Iranian Navy states that the Tondar missile was designed by Iranian experts and "manufactured based on advanced systems such as mobile defense and electronic warfare systems." Joseph Bermudez, Jr., a specialist on Chinese-Iranian military cooperation, believes that Iran developed the Tondar-68 with assistance from China. The Tondar-68 has a

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range of more than 1,000km and was first test-fired by the Iranians in March 1991 at the Salt Desert Test range near Shahroud.

—"Improved Silkworm Test-Fired," *Iran Brief*, 5 December 1996, pp. 7-8.

9 December 1996

U.S. Secretary of Defense William Perry tells China's Defense Minister Gen. Chi Haotian that weapons sales to Iran could backfire on China. Chi says he would consider the point, but that reports of Chinese arms sales are exaggerated. He says that China is interested in peace and stability. Chi says that "Some of the issues have been exaggerated, and some of these issues simply do not exist," adding that China had carefully guarded its missile exports to comply with the Missile Technology Control Regime (MTCR).

—"Perry warns China about weapons sales to Iran; reports exaggerated, Chinese general says," *St. Louis Post-Dispatch*, 10 December 1996, p. 4A, in Lexis-Nexis, www.lexis-nexis.com.

9 December 1996

For the first time, Iran has successfully fired a Chinese made HY-2 Silkworm missile from a Houdong patrol boat during a 10-day military exercise.

—Reuters, 9 December 1996, Executive News Service, *Khaleej Times* 9 December 1996, in p. 1; in *Nonproliferation Review*, Vol. 4, No. 3, Spring-Summer 1997, James Martin Center for Nonproliferation Studies, p. 136.

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1995

Early 1995

An Israeli intelligence report states that North Korea has sent 12 or more Nodong-1 missiles to Iran.

—Adel Darwish, "Israel Claims Iran Has North Korean Missiles," *Independent* (London), 2 May 1995, p. 10; in FBIS Document FBIS-TAC-95-003, 2 May 1995.

Early 1995

Iran receives at least four Scud transporter-erector launchers (TELs) from North Korea. This recent transfer is just one element of what the CIA calls a "growing cooperation between Iran and North Korea on a broad range of ballistic missile-related issues." The U.S. Senate Select Committee on Intelligence releases the written CIA comments that had been submitted as a response to questions asked at a 10 January hearing.

—Barbara Starr, "Iran gets 'Scud' TELs from North Korea," *Jane's Defence Weekly*, 13 May 1995, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

1995

Iran has possession of the Ying Ji-2 missile and reports state that North Korea and Syria may be working together with Iran on increasing the range of the Silkworm missile to 400km.

—Duncan Lennox and Barbara Starr, "Briefing: Cruise Missiles," *Jane's Defence Weekly*, 1 June 1996, pp. 19-21.

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1995

In 1995, Mr. Akrami and Mr. Lessan send an undercover agent a fax from Iran requesting an item by its classified number. The U.S. Department of Defense identified the item as a klystron tube, a piece of electronic equipment used to guide anti-aircraft missiles. Mr. Owens says that Mr. Akrami suggested that Iran would buy as many tubes as he could find, and pay for them with large amounts of opium or heroin. The men's lawyers state that there shouldn't be charges put up against them because they are "only acting as brokers for Iran."

—Anthony DePalma, "Canada Sets Bail for Iranians Held in Weapons Smuggling," *New York Times*, 16 May 1998, in Lexis-Nexis, www.lexis-nexis.com.

1995

Iran and China sign an agreement for the sale of one or two power units for the Bushehr electric power station. China is believed to have sold components of M-9 and M-11 missiles to Iran or maybe even the entire missiles.

—Aleksandr Chudodeyev and Stanislav Tarasov, "Between 'Strategic Partners' Like Two Stools. Russia's Allies Iran and China Have Begun Own Game," *Segodnya* (Moscow), 8 May 1997, p. 4; in "Implications of Closer China-Iran Ties Pondered," FBIS Document FTS19970509000257, 9 May 1997.

1995

Sources in the United Arab Emirates claim that the Islamic Revolution Guards Corps (IRGC) has deployed Silkworm anti-ship missiles. Using its B-747s, Iran imports some North Korean missile assemblies and seems to use ships to import others. Iran probably has more than 60 of the longer-range North Korean missiles, although one source reports 170. Iran aims to have several hundred such missiles by the late 1990s. Iran may also begin testing its new North Korean missiles, firing from a mobile launcher at a test site near Qom. Iran probably has missile production technology and some 200 CSS-8 short-range ballistic missiles from China. Iran ordered 10 68-ton Chinese fast-attack craft or missile patrol boats in 1992. China delivers at least five fast attack craft or missile patrol boats. It is uncertain whether they are armed with the CS-801 or the more capable CS-802 missile. Iran obtains at least 60-100 C-801 or C-802 (YF-6) anti-ship missiles from China. The C-801 anti-ship missile (also referred to as the Yinji [Hawk] or SY-2 missile) is a solid-fueled missile similar to the French Exocet, and can be launched from land, ships, and aircraft. It has a range of roughly 74km in the surface-to-surface mode, and uses J-Band active radar guidance. The CS-802 is an upgraded C-801 that was first exhibited in 1988. It uses a turbojet propulsion system with a rocket booster instead of the solid-fueled booster in the C-801. Iran has also used Chinese help to produce a group of missiles called the "Nazeat," in which the longest-range system is the Iran-130. Since the Iran-Iraq War, Iran has exhibited another large rocket called the Shahin-2.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), pp. 42, 46, 56.

1995

Iran receives four new Scud transporter-erector launchers (TELs) from North Korea.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 36.

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1995

Iran has 300km-range Scud-B and 500km-range Scud-C ballistic missiles and reportedly plans to purchase 582 of the North Korean Nodong missile with a range of 1,000km.

—Major Mary Brown et al., "Challenges to Stability, Iranian Threat," Air University Tutorial, 1994-1995, Combatant Commands Informational Series: USCENTCOM www.au.af.mil.

1995

North Korea and Syria may be cooperating with Iran to extend the range of the Silkworm cruise missile to 400km.

—Duncan Lennox and Barbara Starr, "Briefing: Cruise Missiles," *Jane's Defence Weekly*, 1 June 1996, pp. 19-21.

1995

The German Bundesnachrichtendienst (Federal Intelligence Service, BND) says that Russia delivers an RD-214 rocket engine to Iran that could help develop a 2,000km-range missile.

—Heinz Vielain, "Intelligence Service Warns: Iran Is Developing Nuclear Weapons," *Welt am Sonntag* (Hamburg), 27 April 1997, p. 4; in "BND Says Iran 'Stepped Up' Arms Program 'Considerably'," FBIS Document FTS19970428000303, 28 April 1997.

1995

An important element in Iran's quest for a nuclear arsenal is a joint venture with North Korea to develop a long-range Scud missile. Iran purchases an estimated 200 Scud-B missiles. Iran wants to improve the missile's range to 1,600km.

—Con Coughlin, "Iran plays with nuclear fire as Israel watches," *Sunday Telegraph* (London), 15 January 1995, p. 20, in Lexis-Nexis, www.lexis-nexis.com.

1995

German intelligence officials suspect that a small German airport owned by Iranians is used for arms trafficking to Iran. Mehdi Kashani, an Iranian arms dealer, and Mussa Khaber Habibollahi, a former Iranian deputy oil minister, purchased the Hartenholm civilian airport in 1993. Kashani, who lives in Madrid, was first connected to arms smuggling to Iran in 1983, when a shipment of arms bound for Iran was discovered leaving Portugal for Iran. Kashani was also a link in the Iran-Contra arms network. In 1992 the Spanish police arrested Kashani for trying to ship 200 Klystron amplifiers, which are used to help guide missiles, to the Iranian Air Force. The German intelligence officials believe that his partner, Habibollahi, oversees the Iranian government's clandestine arms acquisitions in Europe. It is believed that at least some of the arms purchases are funded through narcotics trafficking.

—Chris Hedges, "Iran flings its arms net over a small airport in Germany; Lax regulations at local flying fields have opened a door to Tehran's nuclear ambitions," *Guardian* (London), 16 March 1995, p. 12, in Lexis-Nexis, www.lexis-nexis.com.

1995

Western analysts believe that a weak economy and sanctions force Iran to scale back its military expenditures. In 1992, it was forecast that Iran was preparing for an immense conventional arms buildup. Since then, Iran has been

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forced to cancel or postpone several arms deals. The well-publicized attempt to obtain Nodong ballistic missiles from North Korea appears to have been cancelled or postponed indefinitely. China and North Korea still supply Iran with missile guidance equipment and technology, as well as shorter-range Scud-B and Scud-C missiles.

—R. Jeffrey Smith, "Projected Iranian Buildup Scaled Back, Analysts Say; Weak Economy and Western Embargo Are Cited," *Washington Post*, 18 November 1995, p. A22, in Lexis-Nexis, www.lexis-nexis.com.

January 1995

U.S. officials acknowledge that North Korean military assistance to Iran is more substantial than previously believed. Officials now confirm assertions by South Korean intelligence that Tehran has received Nodong missiles from North Korea, capable of striking Israel from Iran.

—Steve Rodan, "What the US is whispering to Israel about Iran," *Jerusalem Post*, 13 January 1995, p. 9, in Lexis-Nexis, www.lexis-nexis.com.

January 1995

A CIA report circulated to U.S. administration officials states that Iran is working on a binary nerve gas warhead and is trying to acquire the capability to deliver the CBW agents with ballistic missiles. Increased contact between Iran and North Korea, and Iran's recent \$40 billion arms-buying spree including purchases of tanks, artillery, fighters and Scud-B and Scud-C missiles from North Korea, are of concern. Iran also develops its own ballistic missiles and encourages North Korea to develop a new generation of ballistic missiles.

—James Adams, "Iran making chemical arsenal," *Sunday Times* (London), 5 February 1995, in Lexis-Nexis, www.lexis-nexis.com.

4 January 1995

The Iranians provide funds for the North Koreans to develop the Nodong missile and are working on a long-range solid-propellant missile with the assistance of the Chinese.

—Arye Egozi, "Israeli Press on CW Capabilities," *Yediot Aharonot* (Tel Aviv), 4 January 1995, p. 13; in FBIS Document FTS19970523002906, 23 May 1997.

5 January 1995

Iran negotiates the purchase of surface-to-surface missile technology from Russia. Iran's negotiation with Russia focuses on technology relevant to SS-4 missiles with a range of 2,000km. Iran has negotiated a similar transaction with North Korea for the purchase of the Nodong, a 1,000km-range missile.

—Zeev Schiff, "Iran Reportedly Negotiating Missile Deal With Russia," *Haaretz* (Tel Aviv), 5 January 1996; in FBIS Document FTS19960105000425, 5 January 1996.

7 January 1995

Iran stations anti-ship missiles on islands it occupies in the Persian Gulf that are claimed by the UAE, as well as SA-5 SAMs on the coast of Iran. [Note: The islands are Abu Musa and the Greater and Lesser Tunbs.]

—Barbara Starr, "Iranian Torpedo Firings Cause US Consternation," *Jane's Defence Weekly*, 7 January 1995, p. 3.

9 January 1995

Iran's Missile Industries Group of the Defense Industries Organization discusses the possibility of purchasing

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equipment to manufacture ammonium perchlorate, an important solid fuel ingredient, from China North Industries (NORINCO).

—"Iran Seeking Solid Rocket Fuel," *Iran Brief*, 9 January 1995, p. 8.

9 January 1995

At an Israeli Foreign Ministry staff meeting, Deputy Director-General Eitan Bentsur says that "Israel will also aim to begin a diplomatic dialogue in earnest in key world capitals regarding Iran's intentions and capabilities and efforts to obtain a nuclear arsenal, in order to enhance awareness."

—David Makovsky, "Perry: Greater dialogue needed on Iranian threat," *Jerusalem Post*, 11 January 1995, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

13 January 1995

"U.S. officials now confirm assertions by South Korean intelligence that Tehran has received the medium-range Nodong missile from North Korea."

—Steve Rodan, "What the US is Whispering to Israel about Iran," *Jerusalem Post*, 13 January 1995, p. 9, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

February 1995

Hassan Taherian, an Iranian foreign ministry official, says that "There is no missile cooperation between Iran and North Korea whatsoever." Iran is believed to have Scud-C missiles from North Korea, with a 500km range.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 36.

February 1995

U.S. Chairman of the Joint Chiefs of Staff, General John Shalikashvili, says that Iran has started to put HAWK anti-aircraft missiles on launchers on the island of Abu Musa, which Iran has apparently not done before. Joseph Nye, Assistant Secretary of Defense for International Security Affairs, says that Iran's missile deployments are a "concern to shipping." Pentagon spokesman Kenneth Bacon, however, says that the buildup, which began in October 1994, is viewed as "primarily" defensive. He says, "We don't see it as something that's designed to threaten international or US shipping in the area."

—"Missiles are a 'concern to shipping'," *Jane's Defence Weekly*, 11 March 1995, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

6 February 1995

U.S. Navy officials predict that Iran will deploy Silkworm or CS-801 Sardine anti-ship missiles on several islands near the Strait of Hormuz, including Abu Musa and the Tunb islands.

—Philip Finnegan and Robert Holzer, "Iran Arms Cache on Disputed Islands Vexes US," *Defense News*, 6 February 1995, pp. 1, 42.

14-15 February 1995

Robert Galucci, the chief U.S. negotiator in nuclear talks with North Korea, while in Israel, states that the United States will raise the issue of North Korea's cooperation with Iran in development of the Nodong surface-to-surface

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missile. Some Israeli senior officials privately complain that the United States neglects the missile issue due to its preoccupation with North Korea's nuclear program.

—David Makovsky, "US concerned over N. Korea-Iran missile cooperation," *Jerusalem Post*, 19 February 1995, p. 12, in Lexis-Nexis, www.lexis-nexis.com.

15 February 1995

Iran is negotiating with Russia the purchase of Backfire bombers, advanced anti-ship missiles, and SA-10 surface-to-air missiles. U.S. CENTCOM Commander General Binford Peay acknowledges that sales of advanced missile and nuclear technology are a primary concern of Russian arms deals with Iran.

—Barbara Opall, *Defense News*, 20-26 February 1995, pp. 1, 28, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 177.

19 February 1995

The Director General of the Iranian Foreign Ministry's Far Eastern division, Hassan Taherian, denies missile cooperation with North Korea. Taherian says "we deny this...for lack of need and also self-sufficiency in military productions, our military cooperation is very limited. It is about zero."

—"Iran Denies Missile Cooperation With North Korea," Reuters, 19 February 1995, in Executive News Service, 20 February 1995.

28 February 1995

U.S. officials say that Iran is deploying U.S.-made HAWK anti-aircraft missiles on islands at the mouth of the Persian Gulf. U.S. Army General John Shalikashvili, chairman of the Joint Chiefs of Staff, says that the missiles are placed on unidentified islands at the opening of the strait.

—"Iran places missiles on strategic gulf islands," *Toronto Star*, 1 March 1995, p. A15, in Lexis-Nexis, www.lexis-nexis.com.

March 1995

U.S. Secretary of Defense William Perry, on a six-day tour of the Persian Gulf, comments on Iran's weapons build-up at the mouth of the Persian Gulf. He says that the Iranian arsenal includes Chinese Silkworm anti-ship and HAWK anti-air missiles, as well as approximately 6,000 troops.

—"Iran masses arms near mouth of gulf; chemical weapons, troops could pinch oil, Perry says," *St. Louis Post-Dispatch*, 23 March 1995, p. 3A, in Lexis-Nexis, www.lexis-nexis.com.

March 1995

Iranian Foreign Ministry official Hassan Taherian acknowledges some small-scale deals between Iran and North Korea. Taherian, however, also says that "There is no missile cooperation between Iran and North Korea whatsoever. We deny this."

—"Flashpoints: Iran," *Jane's Defence Weekly*, 4 March 1995, p. 18, in Lexis-Nexis, www.lexis-nexis.com.

March 1995

Iran's civil and defense aviation industries, including its ballistic missile programs, reportedly employ 50 German

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scientists.

—*Intelligence Newsletter*, 16 March, 1995, p. 7, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 161.

1 March 1995

Iran has reportedly loaded Hawk surface-to-air missiles onto pre-deployed launchers on Sirri Island in the Strait of Hormuz. The deployment is in response to Israeli threats to bomb the Bushehr nuclear facility. Iran now has missiles on both sides of the only deep water channel in the Gulf, through which more than 20% of the world's oil is shipped.

—Youssef Azmeh, *Reuter*, 1 March 1995, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 161.

1 March 1995

Iran implicitly confirms a U.S. report that it had deployed anti-aircraft missiles on its islands at the entrance to the Gulf, but insists that such actions were strictly for defense. Western military sources identify the island where HAWK anti-aircraft missiles were deployed as Sirri Island. Officials also report that the buildup, which began in the fall 1994, included SA-6 surface-to-air missiles. They report that the islands being fortified are Abu Musa and the Tunb Islands, which are also claimed by the United Arab Emirates. Supposedly Iran is also deploying Silkworm missiles, HAWK missiles, and Seersucker anti-ship missiles on Qeshm.

—Laurent Maillard, "Reactions to US Claims of 'Deployed' Missiles," *Agence France-Presse*, 1 March 1995; in FBIS Document FBIS-NES-95-041, 2 March 1995, p. 64; "Iran Says Missiles Defend It Against Attack by Israel," *Washington Post*, 2 March 1995, p. A24, in Lexis-Nexis, www.lexis-nexis.com; "Iranian buildup in gulf has Pentagon worried," *Atlanta Journal and Constitution*, 23 March 1995, p. 11A, in Lexis-Nexis, www.lexis-nexis.com; David Fairhall, "Gulf Build-up 'Defensive' Says Iran," *Guardian* (London), 24 March 1995, p. 17, in Lexis-Nexis, www.lexis-nexis.com.

1 March 1995

A diplomat at the Argentine Embassy in Tel Aviv, speaking on condition of anonymity, confirms an Israeli official's charge that "Argentina started some negotiations to sell some type of nuclear products to Iran eight to 10 years ago." He says talks broke off three to four years ago because of the "political situation." An Israeli official says that Iran has established a network of front organizations throughout Europe to buy technology for its nuclear program as well as to purchase other military know-how, including missile systems. Purchases are reportedly made in the name of Sharif and Amir Kabir Universities.

—Associated Press, "Iran tried to buy nuclear weapons materials from Argentina-official," *Jerusalem Post*, 2 March 1995, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

3 March 1995

A secret Iranian government opposition organization, Babak Khorram Dia, says that the Islamic Revolution Guards Corps (IRGC) is dismantling the HAWK missiles deployed on some of the islands in the Gulf, including Abu Musa

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and Sirri islands, after the United States revealed their existence.

—Safa Haeri, "Report of Iran's Withdrawal of Missiles Deployed in Gulf," *Al-Hayat* (London), 5 March 1995, p. 4; in "Dismantling of Gulf Island Missiles Said Under Way," FBIS Document FBIS-NES-95-044, 7 March 1995, p. 48.

3 March 1995

Francois Leotard, French defense minister, denies that France exports arms to Iran and says that all the shipments made to Cyprus had legal and official authorization. Vincent Hervouet, a studio analyst, says that France indeed exported six Exocet missiles to Cyprus using a flight that took off from the air base at Chateauroux and that the plane landed in Larnaca. He adds that the deal was negotiated at the time when Michel was prime minister of France.

—"Rumors of Missile Delivery to Iran Leotard Says Missiles in Cyprus, Not Iran," LCI Television (Paris), 23 March 1995; in FBIS Document FTS19970508000801, 8 May 1997.

5 March 1995

Iran carries out its first full-scale exercises using its newly acquired Kilo-class diesel-electric submarines, following reports that it deployed Hawk anti-aircraft missiles on Sirri Island and other locations in the Gulf. Iran is also said to have deployed Chinese Silkworm and Ukrainian-supplied Sunburn missiles on Sirri Island and other locations in the Strait of Hormuz.

—James Bruce, *Jane's Defence Weekly*, 18 March 1995, p. 5, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 161.

13 March 1995

Quoting a high-ranking Israeli defense official, the daily Israeli newspaper *Yediot Aharonot* says that Syria, Iran, Libya, and other unnamed Arab countries have long- and medium-range missiles ready to launch at Israel.

—"1,000 Arab Missiles Are Aimed At Israel," *Plain Dealer* (Cleveland), 13 March 1995, p. 7A, in Lexis-Nexis, www.lexis-nexis.com.

Spring 1995

Russia reportedly supplies Iran with an RD-214 engine.

—Heinz Vielain, "Intelligence Service Warns: Iran is Developing Nuclear Weapons," *Die Welt am Sonntag* (Hamburg), 27 April 1997, p. 4; in "BND Says Iran 'Stepped Up' Arms Programs 'Considerably'," FBIS Document FTS19970428000303, 28 April 1997.

24 March 1995

Bernard Stroiazzo, a French arms dealer once commissioned by Thomson to deliver weapons to Iran in the Iran-Iraq War, says that he would not believe France exported missiles to Iran, arguing that it is difficult to adapt French missiles to U.S.-made aircraft quickly. He also undermines the reports of *L'Express*, a French magazine, that claims French missile exports to Iran, saying "it is difficult to export whole air-to-ground missile from a country like France without very clear authorization from several ministers." He adds that he was commissioned by Thomson to sell bulbs for HAWK ground-to-air missiles.

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—"T.O.," "How I Did Deals With Tehran," *Le Figaro* (Paris), 24 March 1995, p. 9; in "Rumors of Missile Delivery to Iran Arms Trafficker Gives Interview," FBIS Document FTS19970508000802, 8 May 1997.

25 March 1995

Cyprus is supposedly displaying the missiles it had received from France that were allegedly heading for Iran. French Interior Minister Charles Pasqua asks the justice ministry to begin criminal proceedings against *L'Express*, a French magazine, for alleging that one of his associates had contravened arms sanctions against Iran by arranging a shipment of French missiles to Tehran. French Prime Minister Edouard Balladur's office says that a batch of six missiles had been dispatched to Cyprus in October 1994 with a ban on their re-export. A Nicosia spokesman confirms the receipt of the missiles, but says that they are for Cyprus' self-defense. The French Defense Ministry says that the French defense attaché in Cyprus had seen all the missiles and checked that the serial numbers corresponded with those supplied by their French manufacturer.

—David Buchan, "Pasqua Aide Linked to Iran Arms," *Financial Times* (London), 23 March 1995, p. 2, in Lexis Nexis, www.lexis-nexis.com; David Buchan, "Pasqua targets missile claim," *Financial Times* (London), 24 March 1995, p. 2, in Lexis-Nexis, www.lexis-nexis.com; "Missile denial," *Herald* (Glasgow), 31 March 1995, p. 8, in Lexis Nexis, www.lexis-nexis.com.

27 March 1995

Iran supposedly receives French Exocet missiles. The missiles are shipped to Cyprus on an Algerian plane and then transferred to Iran. The Iranian, French, and Cypriot governments deny such allegations. In fact, 24 missiles were shipped to Cyprus, 5 of which are displayed at a military parade; the destination of the other 19 missiles is unknown. Cypriot authorities claim that these missiles are in stock due to national security consideration. French government representatives are able to visit these stocks. The Arab-published newspaper *Al Hayat* claims that France provided Iran with missile components for Iran's anti-air defense that were transferred in the same flight as the other missiles to Cyprus. The paper also states that the French authorities acknowledge delivery of "civil aviation inspection" equipment to Iran but refuse to use the adjective "military" to qualify the equipment.

—"A.B.," "Missiles: The Mystery Persists," *Le Figaro* (Paris), 27 March 1995, p. 9; in "Rumors of Missile Delivery to Iran Issue 'Not Completely Closed'," FBIS Document FTS19970508000803, 8 May 1997.

Spring 1995

Iranian Foreign Affairs Minister Velayati neither confirms nor denies information that Iran received guidance systems from China to increase the precision of its Scuds.

—Paula A. DeSutter, *Denial and Jeopardy Deterring Iranian Use of NBC Weapons* (Washington, DC: National Defense University Press, 1997), p. 53.

April 1995

Western intelligence agencies claim that Iran and Libya plan to co-develop long-range ballistic missiles. Libya reportedly has offered \$31 million for material and technical information that Iran has obtained from China, North Korea, and other countries. Libya is believed to be developing a 600 mile-range surface-to-surface missile.

—*International Security Digest*, April 1995, cited in *Times*, 1 April 1995, cited in "Ballistic, Cruise Missile, and Missile

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Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 161.

April 1995

China reportedly helped Iran develop its Oghab (Eagle) missile and a Scud-B production line.

—Pamela Pohling Brown, *Strategic Digest*, April 1995, pp. 493-494.

April 1995

Russian officials refuse to comment on a possible sale to Iran of an "ultra-sophisticated" submarine armed with the Igla anti-aircraft missile system.

—Stanislav Kucher and Dimitry Kulik, *Komsomolskaya Pravda*, (Moscow), 29 April 1995, p. 3, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 162.

1 April 1995

Iran and Libya agree to cooperate in the development of long-range ballistic missiles. Libya allegedly offers to pay Iran \$31 million for material and know-how that Iran receives from North Korea, China, and Western sources. This could include equipment for a liquid-fuel plant. Supposedly, the two countries will work together to increase the range of the Scud-B missile, as well as to develop Libya's Al-Fatah missile. The Western intelligence report follows a visit to Tripoli by an Iranian Ministry of Defense delegation. The intelligence sources cite past cooperation between the two countries: during the Iran-Iraq War, Libya supplied missiles to Iran in exchange for chemical weapons, which the Libyans used against Chad.

—Michael Evans, "Libya and Iran 'plan joint missile project'," *Times* (London), 1 April 1995, in Lexis-Nexis, www.lexis-nexis.com.

5 April 1995

The CIA reports that North Korea recently provided at least four Scud transporter-erector launchers (TELs) to Iran, doubling the number of TELs Iran possesses. The TELs were transferred in late-1994 and work with Scud-B and Scud-C missiles, but not the Nodong-1. The CIA report is in response to questions submitted by the U.S. Senate Select Committee on Intelligence on 10 January 1995.

—Tony Capaccio, "North Korea Has Transferred Mobile Scud Launchers To Iran," *Defense Week*, 1 May 1995, pp. 1, 14; Barbara Starr, "Iran Gets 'Scud' TELs from North Korea," *Jane's Defence Weekly*, 13 May 1995, p. 5; Paul Mann, editor, "CIA Disclosures," *Aviation Week and Space Technology*, Vol. 142, No. 19, 8 May 1995, p. 19, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

17 April 1995

Two Russian scientists reportedly collaborate by e-mail with Iran and Pakistan on nuclear- and missile-related issues. One of the scientists met with a group of Iranian scientists at a Russian nuclear research center in Dubna, Russia. The Iranians gave the scientist a Compaq computer in exchange for solving two missile guidance-related problems. The scientist continues to be paid \$300-\$500 for each problem he solves for Iran by e-mail, which he sends using the Compaq computer.

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—Alan Cooperman and Kyrill Belianinov, "Moonlighting By Modem in Russia," *US News & World Report*, 17 April 1995, pp. 45, 48.

May 1995

Iran acquires North Korean Nodong missiles. [Note: This article also refers to the Nodong as a Scud-D.] The Israelis say that with the help of Libya, Iran acquires the technology to equip the Nodong with conventional warheads that have four times the destructive power of a Scud-B missile. Iran has already acquired more than 200 Scud-B missiles from North Korea. The Iranians deny the claims and accuse Israel, the United States, and the United Kingdom of waging a propaganda war against Iran. Despite Iranian protests to the contrary, Israel insists that Iran acquires at least 12 North Korean Nodong missiles.

—Adel Darwish, "Tehran missiles 'can reach Israel'," *Independent* (London), 2 May 1995, p. 10, in Lexis-Nexis, www.lexis-nexis.com.

May 1995

Ukraine Ambassador Ivan Maydan denies accusations that Ukraine sold Iran eight SS-N-22 Sunburn anti-ship cruise missiles for \$450,000 each.

—*International Security Digest*, May 1995, cited in *Agence France Presse International News*, 14 May 1995, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 161; IRNA (Tehran) 17 May 1995, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 161.

May 1995

Reports from Moscow indicate the probability of a Russian arms deal with Iran, including the sale of S-300-PMU-1 surface-to-air missile systems, Tunguska anti-aircraft systems and project-12318 missile launchers.

—Igor Korotchenko, *Nezavisimaya Gazeta* (Moscow), 12 May 1995, p. 2, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 162.

May 1995

A senior Israeli defense official tells the Israeli daily newspaper the *Jerusalem Post* that Israel was aware of and protested Ukraine's sale of eight SS-N-22 missiles to Iran several months ago. A middleman representing a U.S. arms dealer proposed to buy the missiles from the Ukraine, but states that his deal fell through and that Iran ended up paying \$450,000 for each missile.

—Alon Pinkas, "Ukraine sold missiles to Iran despite protest," *Jerusalem Post*, 14 May 1995, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

2 May 1995

An Israeli intelligence report cites Israeli and Western intelligence sources as saying that North Korea has transferred a dozen or more Nodong-1 ballistic missiles to Iran. The missiles were shipped to Iran earlier this year.

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Also referred to as the Scud-D, the Nodong-1 is said to have a range of 1,500km.

—Adel Darwish, "Tehran Missiles 'Can Reach Israel'," *Independent* (London), 2 May 1995, p. 10, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Adel Darwish, *Independent* (London), "2 May 1995, in "Israel Claims Government Received DPRK Missiles," FBIS-NES-95-085, 2 May 1995.

2 May 1995

Israeli sources claim that Libya helped Iran with conventional warhead technology, enabling its Nodong-1 missiles to carry four times the explosives of its Scud-B.

—Adel Darwish, *Independent* (London), 2 May 1995, p. 10, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, July -October 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1996, Vol. 3, No. 2, p. 173.

12 May 1995

The Russian daily newspaper *Nezavisimaya Gazeta* reports that Iran wants to buy Russian S-300-PMU-1 anti-tactical ballistic missile systems for use as air defenses around Tehran and the Bushehr nuclear power plant.

—"Russian Eyes New Arms Sales," *Iran Brief*, 1 June 1995, p. 1.

12 May 1995

Iran intends to install air defense systems around Tehran and Bushehr as early as 1996 out of fear that sea-based Tomahawk cruise missiles from the U.S. Navy stationed in the Persian Gulf could hit these locations. The Iranians intend to turn to the Russians for the purchase of S-300-PMU-1 surface-to-air missile systems, "Tunguska" anti-aircraft complexes, project-12318 missile launchers and project 1265-E base trawlers.

—Igor Korotchenko, "A Quite Likely Deal. Iran Shows Interest in Russian Arms," *Nezavisimaya Gazeta* (Moscow), 12 May 1995, p. 2; in "New Arms Sale Deal With Iran 'Quite Likely'," FBIS Document FTS19950512000316, 12 May 1995.

22 May 1995

Iran's Falaq-3 missile forces, including members of the Islamic Republican Army and the Islamic Revolutionary Guards Corps (IRGC), begin a five-day military exercise in the Strait of Hormuz. The two units reportedly operate each other's equipment successfully.

—IRNA (Tehran), 23 May 1995, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 161.

24 May 1995

During the Fajr-4 (Dawn-4) maneuvers in Khorramshahr, the Iranian soldiers, backed by heavy artillery, armored and air defense units, missile launchers, tanks, anti-tank weapons and other sophisticated weapons, cross the artificially created obstacles and capture the positions of a hypothetical army.

—"Military Maneuvers Conclude in Khorramshahr," Voice of the Islamic Republic of Iran First Program Network (Tehran), 24 May 1995; in FBIS Document FTS19950524000330, 24 May 1995.

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29 May-2 June 1995

North Korean Foreign Minister Kim Yŏng Nam visits Tehran, and Iran offers to pay for some \$300 million worth of Scud missiles purchased from North Korea with oil. Previously, North Korea had insisted on hard currency for missile sales to Iran. U.S. Secret Service sources say Iran may have paid in the past with counterfeit \$100 bills. —"Oil for Missiles with DPRK," Iran Brief, 1 August 1995, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

30 May 1995

Iran maintains anti-vessel artillery and missiles in the islands close to the Hormuz strait, through which 90% of Gulf oil passes.

—Dr. Ibrahim al-Hadban, "Protection of U.S. Interests in Gulf as Seen by U.S. Defense Secretary William Perry," *Al Watan* (Kuwait), 30 May 1995, p. 24; in "Dual Containment Keeps Gulf Alert," FBIS Document FTS19950530000369, 30 May 1995.

June 1995

North Korea delivers approximately 20 Nodong-1 missiles and eight transporter-erector launchers (TELs) to Iran. —Duncan Lennox, "Ballistic Missiles," *Jane's Defence Weekly*, 17 April 1996, pp. 40, 43-44.

June 1995

China provided computerized machine tools and missile guidance systems to Iran, enabling Iran to improve the accuracy of its North Korean-acquired Scud missiles and to build its own similar missiles.

—Elaine Sciolino, *New York Times*, 22 June 1995, pp. A1, A7, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, pp. 161-162.

6 June 1995

Azerbaijan sells six Kub air defense missile launchers to Iran. They are in poor condition and have no spare parts. Iran has to cannibalize them to make three serviceable launchers.

—Aleksandr Sychev, "A Poor Person Fires a Secondhand 'Kalashnikov,'" *Izvestiya* (Moscow), 6 June 1995, p. 3; in "Notes on E. European Sales of Soviet Weapons," FBIS Document FTS19970423001512, 23 April 1997.

16 June 1995

U.S. officials say that China's cancellation of a visit by U.S. officials to discuss missile proliferation deprives the United States of the opportunity to directly address its concerns with China. Some intelligence reports state that China could be providing Iran with equipment, materials, and scientific know-how that Iran could use to produce its own medium-range missiles. Reportedly, Iran already has access to the Scud missile, which it purchased from China and North Korea. Iran also tries to obtain the Nodong from North Korea, in addition to trying to develop its own WMD-capable missiles.

—R. Jeffrey Smith, "Iran's Missile Technology Linked to China, Report Says," *Washington Post*, 17 June 1995, p. A14, in Lexis-Nexis, www.lexis-nexis.com.

16 June 1995

China cancels an upcoming meeting with the United States to discuss China's alleged sales of ballistic missile

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technology to Iran. One U.S. official says that China's deals with Iran may be limited to short-range rockets, which are not restricted by the Missile Technology Control Regime (MTCR). An article in *Defense News*, however, alleges that the CIA has strong evidence that China provided medium-range ballistic missile technology to Iran. A U.S. official denies having current evidence of such transfers. The Chinese Foreign Ministry also denies the report. —R. Jeffrey Smith, *Washington Post*, 17 June 1995, p. A14, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 162; *Executive News Service*, 20 June 1995, cited in Thomas Beal, UPI (Beijing), cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 162.

19 June 1995

Yitzhak Rabin, Israeli prime minister, says that Iran is supplying Hizballah with dozens, if not hundreds, of Sagger anti-tank missiles.

—"Rabin Awaiting Damascus Reply on Lebanon Attacks," *Qol Yisrael* (Jerusalem), 19 June 1995; in FBIS Document FTS19950619000512, 19 June 1995.

20 June 1995

Brigadier General Rahim Savafi says that as part of the Ashura military exercises, the Iranian forces camped 100,000 troops, along with modern armored equipment including 500 main battle tanks, personnel carriers, artillery, Katyusha and other instruments such as surface-to-surface, air-to-surface, and surface-to-sea missiles.

—"Khamene'i Hails Guard Corps on Ashura Exercise General Comments on Exercise," IRNA (Tehran), 20 June 1995; in FBIS Document FTS19950620000639, 20 June 1995.

20 June 1995

The First Deputy Commander of the Islamic Revolution Guard Corps (IRGC) Brigadier General Rahim Safavi says the Ashura military exercises include Katyusha rockets, surface-to-surface missiles, and anti-ship missiles.

—IRNA (Tehran), 20 June 1995, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 161.

21 June 1995

CIA reports that China delivers important components for missile systems to Iran and Pakistan. These include dozens, perhaps hundreds, of missile guidance systems and computerized machine tools to Iran. The components could give Tehran the ability to improve the accuracy of the North Korean Scud missiles already in its arsenal and enable it to build missiles on its own.

—Elaine Sciolino, "CIA Report Says Chinese Sent Iran Arms Components," *New York Times*, 22 June 1995, pp. A1, A7, in Lexis-Nexis, www.lexis-nexis.com; Martin Fletcher, "CIA arms sales report deepens US-China strains," *Times* (London), 23 June 1995, in Lexis-Nexis, www.lexis-nexis.com.

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21 June 1995

Responding to the CIA's allegations that China transferred missile guidance systems and computerized machine tools to Iran, Chinese Foreign Ministry spokesman Chen Jian says that the report is groundless.

—Reuters, 21 June 1995; in "II Quarter 1995: June," Gulf/2000 Project (New York: School of International and Public Affairs [SIPA], Columbia University, June 1995).

24 June 1995

Iran, Pakistan, and China deny CIA allegations that China exported M-11 missiles to Iran and Pakistan in contravention of the Missile Technology Control Regime (MTCR).

—"Khamene'i Hails Guard Corps on Ashura Exercise General Comments on Exercise," IRNA (Tehran), 20 June 1995; in FBIS Document FTS19950620000639, 20 June 1995.

24 June 1995

The Korea Trade Promotion Corporation says it erroneously reported that Iran obtained North Korean missiles in exchange for oil. A spokesman for the organization hoped that the report would not jeopardize positive Iranian-South Korean relations.

—*Korea Times* (Seoul), 25 July 1995, p. 8, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, July-October 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1996, Vol. 3, No. 2, p. 173.

30 June 1995

U.S. Vice President Al Gore announces that Russia pledges to curb the spread of conventional weapons by ending its own arms deliveries to Iran and restricting sales of ballistic missile technology on the world market.

—Richard Boudreaux, "Russia Agrees to Stop Selling Arms to Iran," *Los Angeles Times*, 1 July 1995, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

3 July 1995

U.S. intelligence reports claim that China has provided advanced missile guidance systems and other sensitive technology to Iran, which could be used to improve the accuracy of Iran's Scud and other missiles.

—Evan S. Medeiros, *Arms Control Today*, July-August 1995, p. 24, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, July -October 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1996, Vol. 3, No. 2, p. 173.

6 July 1995

The fast-flying aircraft of the Iranian Air Force, accompanied by sea helicopters, fire missiles and repeated shelling during a 57,000-strong parade and inspection ceremony, staged in the Persian Gulf.

—"Second Stage of Victory-6 Maneuvers Continues," IRIB Television First Program Network (Tehran), 6 July 1995; in FBIS Document FTS19950706000348, 6 July 1995.

7 July 1995

Western intelligence sources report that China plans to supply Iran with nuclear reactors, scientific and technical training, and expertise and components for missile production.

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—Aluf Ben, "Maneuvering Between Giants," *Haaretz* (Tel Aviv), 7 July 1995, p. B1; in "Commentary Views Defense Relations With PRC," FBIS Document FBIS-NES-95-133, 12 July 1995, p. 46.

9 July 1995

During Piruzi-6 (Victory-6) maneuvers, the Iranian armed forces engage in electronic attack and defense, intelligence gathering, monitoring of enemy units, radar deception, diverting enemy missiles, jamming of the hypothetical enemy's radar and electronic cover.

—"Victory-6' Maneuvers Carried Out in Persian Gulf TV Details 'Tactical Phase'," IRIB Television First Program Network (Tehran), 9 July 1995; in FBIS Document FTS19950709000223, 9 July 1995.

9 July 1995

The tactical phase of the Victory-6 maneuvers is successfully carried out over an area of 30,000 square kilometers, incorporating gunboats and airborne units and modern equipment. The tactical stage tests the capability of the Iranian naval forces in launching electronic warfare.

—"Victory-6' Maneuvers Carried Out in Persian Gulf ' Tactical Stage' Said 'Successful'," IRNA (Tehran), 9 July 1995; in FBIS Document FTS19950709000224, 9 July 1995.

14 July 1995

Iranian First Vice President Hasan Habibi travels to Minsk and announces that Iran "will buy conventional defensive weapons and hold consultations on some technological processes" with Belarus. A spokesman for Belarussian President Alexander G. Lukashenko calls press accounts of the deal "absolutely false."

—Sonni Efron, "Iran Reportedly Seeking Arms from Belarus," *Los Angeles Times*, 20 July 1995, p. A9, in Lexis-Nexis, www.lexis-nexis.com.

19 July 1995

Western diplomats in Minsk confirm that Belarus is negotiating weapons sales to Iran, only a month after Russia pledged to end conventional arms and air-to-ground missile deliveries to Iran. Belarussian officials deny any arms sale, and the U.S. State Department says that it was aware of the rumors but could not confirm them. One U.S. official says that the rumors appear to be false.

—Sonni Efron, "Iran Reportedly Seeking Arms from Belarus," *Los Angeles Times*, 20 July 1995, p. A9, in Lexis-Nexis, www.lexis-nexis.com.

25 July 1995

Korea Trade Promotion Corporation acknowledges its mistake in claiming that Iran is receiving missiles from North Korea in exchange for oil.

—"Iran-DPRK Missile Story Called 'Mistake'," *Korea Times* (Seoul), 25 July 1995, p. 8; in FBIS Document FTS19950725000132, 25 July 1995.

August 1995

Israeli sources say that North Korea had planned to transfer its 1000km-range Nodong missile to Iran, before recently halting development. North Korea may have provided some Nodong technology to Iran but is now believed to be helping Iran build a Scud-B and Scud-C missile production facility.

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—*Flight International*, 8/30/95-9/5-95, p. 4, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, July -October 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1996, Vol. 3, No. 2, p. 173.

16 August 1995

Former U.S. and Pakistani officials say that Iran has purchased some of the Stinger missiles provided to the Mujahideen in Afghanistan through a pro-Iranian faction and Qulbaddin Hekmetyar, an Afghan rebel leader. —"Report," ORF Television Network (Vienna), 6 June 1995; in "Documentary Describes Islamic Fundamentalist Movements," FBIS Document FTS19970417001422, 17 April 1997.

September 1995

Croatian authorities seize several crates marked as humanitarian assistance. The crates are reportedly dropped from an unmarked aircraft and contain Iranian surface-to-surface missiles (SSMs) en route to Bosnia. A U.S. expert identifies the SSMs as conventionally armed, solid-fueled, 130km-range Nazeat rockets. The Bosnians apparently purchased the rockets to acquire the capability to target Belgrade.

—"Iranian Missiles to Bosnia," *Iran Brief*, 3 March 1997, pp. 3-4.

9 September 1995

General Shahbaz, joint Chief of Staff of the Islamic Republic of Iran, says that 30 projects such as equipping one kind of fighter plane with special missiles, modernizing one type of armored personal carrier, and the design, installation, and operation of certain need systems in the area of computers have been carried out. He adds that 90 projects are under way, including designing and manufacturing Chieftain tanks, making the Cobra training helicopters operational, making a long-range air-to-ground missile, designing and manufacturing the control and heating system of one type of missile, developing electronic war, and installing standard missiles on missile launching crafts.

—"General Shahbaz Details Army Activities," *Saff* (Tehran), September-October 1995, p. 50; in FBIS Document FTS19950901000609, 1 September 1995.

12 September 1995

A U.S. Congressional Research Office report says that Iran has medium-range missiles. The report confirms several earlier reports that Iran has North Korean Nodong-1 surface-to-surface missiles with a range of 1,300km and a 1,000kg payload.

—Alon Pinkas, "Report: Israel, Iran have medium-range missiles," *Jerusalem Post*, 13 September 1995, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

24 September 1995

Admiral Ali Shamkhani, the Commander of the Iranian Navy, says that Iran is able to build Peykan-class missile launchers.

—Rahim Chukhachizadeh, "'Exclusive' interview with Admiral 'Ali Shamkhani, the commander of Iran's navy, during Holy Defense Week," *Keyhan* (Tehran), 24 September 1995; in "Navy Commander Assesses Forces' Achievements," FBIS Document FTS19950924000008, 24 September 1995.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



October 1995

The Israel Defense Force (IDF) accords great importance to monitoring Iran's efforts to acquire unconventional weapons, including long-range ballistic missiles.

—Gerald M. Steinberg, "Middle East Space Race Gathers Pace," *Jane's International Defense Review*, October 1995, pp. 20-23.

October 1995

Islamic Revolution Guards Corps (IRGC) Navy Commander Rear Admiral Ali Shamkhani announces that his forces will conduct 38 exercises in the Persian Gulf over a period of five months and hold joint maneuvers with Pakistan and "another neighboring country." The exercises will be the most intensive military exercises in the Gulf and will involve the use of cruise and anti-ship missiles.

—James Bruce, "Iran steps up Gulf exercises," *Jane's Defence Weekly*, 1 January 1996, p. 12, in Lexis-Nexis, www.lexis-nexis.com.

October 1995

The International Institute of Strategic Studies reports that Iran's 300km-range surface-to-surface missiles can hit cities in Saudi Arabia, Yemen, and the Gulf States.

—*The Military Balance 1995-1996*, Oct. 1995, pp. 281-285, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, July-October 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1996, Vol. 3, No. 2, p. 173.

6 October 1995

The Iraqi General Husayn Kamil Hasan, who defected to Jordan, says that Iran has a long-range missile program.

—Jeanne Assouly and Chritian Hoche, "Why I Fled Iraq," *Le Vif/L'Express* (Brussels), 6 October 1995, pp. 69, 70, 73; in "Husayn Kamil Discusses Reasons for Defecting," FBIS Document FTS19951006000311, 6 October 1995.

9 October 1995

Russian Ministry of Defense (MoD) officials evade questions about the possible transfer to Iran of an unexploded Tomahawk cruise missile that had failed to detonate on Bosnian Serb positions. The Russian MoD neither confirms nor denies reports that U.S. Stinger surface-to-air missiles (SAMs) and TOW-2 Hellfire anti-tank missiles (ATMs) were being transferred from Bosnia to Iran. Military hardware is transported from Bosnia to Iran via Russia. Bosnian Muslims are reportedly selling American-made Stinger anti-aircraft rockets and TOW-2 and Hellfire anti-tank rockets to Iran in exchange for submachine gun cartridges.

—Anatoliy Yurkin, "Bosnian Muslims Reportedly Selling Stingers to Iran via Russia," ITAR-TASS World Service (Moscow), 9 October 1995; in FBIS Document FTS19951009000021, 9 October 1995.

18 October 1995

Lubomir Soudek, director general of Skoda Plzen, offers the Iranian military the modernization of the T-72 tanks and ground-to-air missiles.

—Jindrich Sidlo, "Arms Manufacturers Started a New Keg," *Respekt* (Prague), No. 39, 25 September-1 October

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1995, p. 4; in "Arms Manufacturer Sponsors Iranian Exhibition," FBIS Document FTS19951018000162, 18 October 1995.

19 October 1995

The Iranian arms buildup, in particular Iran's surface-to-surface missile program, dominates the agenda at a meeting in Tel Aviv between Israeli Prime Minister and Defense Minister Yitzhak Rabin and U.S. CIA Director John Deutch.

—Alon Pinkas, "Rabin, CIA director discuss Iranian missile program," *Jerusalem Post*, 20 October 1995, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

November 1995

Iran reports that it fired a domestically built anti-ship cruise missile during the Saeqa-4 exercises in late November. The missile was launched at a sea target from near the naval base at Jask. The firing is reportedly the first operational test of "advanced missile systems" built by the Iranian Navy.

—"Iran claims cruise missile test firing," *Jane's Defence Weekly*, 9 December 1995, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

8 November 1995

Russia reports to the UN Conventional Arms Register that it has supplied 94 "missiles or missile launchers" to Iran.

—*Washington Times*, 2 December 1995, p. A6, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, November 1995-January 1996," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1996, Vol. 3, No. 3, p. 143.

23 November 1995

The Navy, the Islamic Revolution Guards Corps (IRGC), and the Air Force start missile maneuvers Saeqa-4 (Thunderbolt). These maneuvers include ground-to-sea, air-to-sea, and air-to-air missiles.

—"Military Holding Exercises, Maneuvers Missile Maneuvers in Hormuz Strait," IRNA (Tehran), 26 November 1995; in FBIS Document FTS19951126000340, 26 November 1995.

25 November 1995

Missile maneuvers Saeqa [Thunderbolt] start in the Persian Gulf with the participation of Navy, Air Force, and the Islamic Revolution Guards Corps (IRGC) Navy. These maneuvers last four days.

—"Military Holding Training Exercises, Maneuvers 'Thunderbolt' in the Persian Gulf," IRIB Television First Program Network (Tehran), 25 November 1995; in FBIS Document FTS19951125000445, 25 November 1995.

25 November 1995

Abbas Mohtaj, Navy Deputy Commander Admiral, announces that the missile maneuver that was launched 23 November will continue until 1 December 1995.

—"Military Holding Training Exercises, Maneuvers Navy Trains in Gulf, Caspian Sea," IRNA (Tehran), 25 November 1995; in FBIS Document FTS19951125000444, 25 November 1995.

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26 November 1995

Iran launches the Saeqa-4 (Thunderbolt) missile maneuvers in the Strait of Hormuz and the Sea of Oman. The statement from the Khatam al-Anbia Naval Headquarters says that the first and second phases of the Saeqa-4 missile maneuvers are in progress. During the maneuvers the surface-to-sea, air-to-sea, air-to-air missile units, and attack boats will conduct exercises to enhance closer coordination in joint operations and combat preparedness. [Note: The article translates "Saeqa" as "Righteous."]

—"Missile Maneuvers in Hormuz Strait," IRNA (Tehran), 26 November 1995, p. 72; in FBIS Document FBIS-NES-95-227, 27 November 1995.

27 November 1995

Senior U.S. Navy officials report that Iran is increasing its integrated naval capabilities, combining submarines, anti-ship missiles, mines, and anti-aircraft capabilities to constitute a threat to other Persian Gulf states and the U.S. Navy. Iran wants to deploy Chinese C-802 anti-ship cruise missiles on its five Chinese *Huadong* patrol ships.

—Philip Finnegan and Robert Holzer, "Iran Steps Up Mine, Missile Threat," *Defense News*, 27 November 1995, p. 1.

28 November 1995

Iran tests the CS (C)-802 anti-ship missile near the Jask naval base in the Straits of Hormuz during the Saeqa-4 (Thunderbolt-4) military exercises.

—Anthony H. Cordesman, *Iran's Evolving Conventional Military Forces, Working Draft* (Washington, DC: Center for Strategic and International Studies, 28 February 1996), p. 54.

29 November 1995

The *Jomhuri Eslami* newspaper reports that Iran fires a land-based cruise missile at a sea target close to the port of Jask to test the first "advanced missile systems" manufactured by Iran's Navy. Units from Iran's Navy, Army, and the Islamic Revolution Guards Corps (IRGC) participate in the test, which is part of the Saeqa-4 (Thunderbolt-4) military exercises "near the mouth of the Gulf."

—"Iran Holds Missile Exercise at Mouth of Gulf," Reuters, 29 November 1995; in Executive News Service, 29 November 1995.

29 November 1995

The Thunderbolt (Saeqa) maneuver conducted in the Persian Gulf and the Sea of Oman ends. Some advanced missiles made by Iranian experts were used in these maneuvers.

—"Navy Concludes Missile Exercises in Gulf," Voice Of the Islamic Republic of Iran First Program Network (Tehran), 29 November 1995; in FBIS Document FTS199511290000679, 29 November 1995.

December 1995

Croatian and Western officials say the smuggling of Iranian arms to Bosnia ends. Senior Croatian officials and Western diplomats say that Iran and Croatia signed a secret military cooperation agreement in December 1995, including an Iranian proposal to deliver surface-to-surface missiles to Sarajevo and Zagreb. During the war, Croatia allows Iran to smuggle weapons through Croatian territory to the Muslim-led government in Sarajevo. In return, the Croats take up to one-third of all arms and munitions for their own use. U.S. officials are distressed to learn

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that Iran had offered to supply Zagreb and Sarajevo with surface-to-surface missiles during the war.

—Chris Hedges, "A Secret Arms Deal Between Iran and Croatia Comes to Light," *New York Times*, 24 April 1996, p. A4, in Lexis-Nexis, www.lexis-nexis.com.

December 1995

Iran says that it fired its domestically built CS-802 anti-ship missile during exercises in the Strait of Hormuz and the Gulf of Oman.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 42.

December 1995

Middle East sources claim that China has sold Iran missile navigation components, technical information on propulsion and production equipment.

—*Flight International*, 13-19 December 1995, p. 14, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, November 1995-January 1996," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1996, Vol. 3, No. 3, p. 143.

December 1995

Iran and Croatia sign a secret military cooperation agreement, including an Iranian proposal to deliver surface-to-surface missiles to Sarajevo and Zagreb.

—Chris Hedges, "A Secret Arms Deal Between Iran and Croatia Comes to Light," *New York Times*, 24 April 1996, p. A4, in Lexis-Nexis, www.lexis-nexis.com.

21 December 1995

Iran's Islamic Revolution Guards Corps (IRGC) initiates missile and artillery defense exercises codenamed "Ya Aba Abdallah al-Husayn" at a location in proximity to Qom. IRGC commander Major General Mohsen Rezai says Iran has "rebuilt and renovated" its anti-aircraft missiles without foreign assistance. A missile that can identify a target at a range of 270km before shooting it down is used during the exercises.

—"IRGC Tests Missiles, Artillery in Exercises," IRIB Television First Program Network (Tehran), 21 December 1995; in FBIS Document FBIS-NES-95-245, 21 December 1995.

22 December 1995

IRNA reports that the "Raad" (Thunder) vessel-missile maneuver will be held in the Persian Gulf between 51' and 25'30" longitudes by the land-to-sea missile units and the missile frigates of the Islamic Revolution Guards Corps (IRGC). Colonel Parviz Qousi, acting commander of the Raad maneuver, says that the exercise hopes to demonstrate the missile unit capabilities and combat readiness. The exercise includes long-range missile frigates, dozens of fast missile frigates, dozens of heavy- and medium-weight combat and support frigates, four land-to-sea and defense missile units, and radar and monitoring sites.

—"Naval, Missile Military Maneuvers in Persian Gulf," IRNA (Tehran), 22 December 1995; in FBIS Document FTS19951222000297, 22 December 1995.

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24 December 1995

The second phase of the Raad missile maneuvers launched by the Islamic Revolution Guards Corps (IRGC) missile fleet ends in the northern part of the Persian Gulf. This phase focused on surface and air shooting and installation sites as well as refueling at sea.

—"Naval, Missile Military Maneuvers in Persian Gulf Second Phase Ends," IRNA (Tehran), 24 December 1995; in FBIS Document FTS19951224000113, 24 December 1995.

25 December 1995

Colonel Ghowsi says that the ground-to-sea missile units and missile and rocket launching boats of the Islamic Revolution Guards Corps (IRGC) have returned safely to their bases after accomplishing their missions.

—"Third Phase of Military Maneuvers in Gulf Ends," IRNA (Tehran), 25 December 1995; in FBIS Document FTS19951225000195, 25 December 1995.

26 December 1995

Rear Admiral Ahmadiyan, acting commander of the Islamic Revolution Guards Corps (IRGC) naval forces, says that the forces have built speedboats equipped with a number of Thunder-class frigates with long-range missile launchers.

—"IRGC Naval Commander Outlines Forces' Achievements," IRIB Television First Program Network (Tehran), 26 December 1995; in FBIS Document FTS19951226000560, 26 December 1995.

26 December 1995

Iran's Islamic Revolution Guards Corps (IRGC) announces that the fourth and final phase of the Raad (Thunder) missile maneuvers has ended successfully. The commanders who assessed all their stages describe the maneuvers as successful.

—"IRGC Maneuvers 'Successfully' End in Persian Gulf," IRNA (Tehran), 26 December 1995; in FBIS Document FTS19951226000558, 26 December 1995.

30 December 1995

Iran denies that it ever bought long-range missiles from North Korea. Minister for Defense and Armed Forces Logistics Mohammad Foruzandeh says "Iran's policy is to ignore unfounded Western allegations." Foruzandeh says that if Iran had purchased the missiles, they would have revealed the acquisition to the public. Western experts believe, however, that Iran is not only trying to buy 1,000km-range Nodong missiles from the North Korea, but is also working to jointly produce them.

—"Iran Denies Long-Range Missile Purchase From DPRK," Xinhua News Agency (Beijing), 30 December 1995, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

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1994

Early 1994

Croatia's President Franjo Tudjman informs American diplomats that Tehran is offering to supply rifles, ammunition, mortars, anti-tank weapons, and shoulder-launched surface-to-air missiles (SAMs) through Croatia to Bosnia.

—"The Iranian Connection," *New York Times*, 14 April 1996, p. 18, in Lexis-Nexis, www.lexis-nexis.com.

1994

The International Institute for Strategic Studies (IISS) said in 1994 that Iran had received 20 M-7s from China.

—Bates Gill, "Chinese Arms Exports to Iran," *MERIA Journal*, Vol. 2, No. 2, May 1998, 8 June 2001, www.biu.ac.il.

1994

North Korea begins mass production of the Nodong missile, with a capacity of 30-50 missiles a year. It appears that North Korea will be looking to test the missile in Iran, Libya, or Syria.

—Kim Yong Il, "Puk Nodong 1 Ho Missile Yangsan—Chaknyönputo 30-50 Ki Saengsan," *Joongang Ilbo*, 17 May 1995, www.joins.com.

1994

North Korea begins to acquire Silkworm (HY-2) anti-ship missiles from China. North Korea later develops a modified version with an extended range of 160km, and exports it to countries in the Middle East such as Iran and Iraq. The export price for the North Korean modified version is said to be \$300,000-400,000 in 1994.

—Kim Chong Tu, "Silkworm Missile Iran/Kuso Kaebalhan 'Styx' Kaeryanghyöng," *Kyunghyang Shinmun*, 2 June 1994, p. 2, in KINDS, www.kinds.or.kr.

1994

North Korea reportedly begins delivery of 965km-range ballistic missiles to Iran. [Note: This delivery is mentioned in the 4 October 1993 chronology entry, but its veracity has not been confirmed.]

—James Kraska, "Iran Flexes Maritime Muscles in Gulf," *Defense News*, 4 October 1993, pp. 25-26.

1994

Israeli experts estimate that Iran has at least 250-300 Scud missiles and at least 8-15 launchers on hand in 1994, although some U.S. experts believe the total is much smaller.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), p. 56.

1994

To date, there is no technical data available on the Mushak-120 and Mushak-160 missiles. Because Iran plans to quickly produce a large number of these two missiles, they are presumed to be of a simple design and easy to maintain. Because of their range, they probably have a guidance system, though likely a simple and inexpensive type such as a simple inertial system; this system can be made of parts from dual-use items intended for civilian use and are purchased on the open market. The Mushak-200 was produced in 1989 and is "probably propelled by

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a solid-fuel rocket, and has a simple inertial guidance system." The Defense Industries Organization (DIO) supposedly makes Iran's Oghab and Shahin-1 and -2 missiles. The Ran missile that was displayed at the arms exhibit in Tehran in 1988 has not been mentioned since. Iran's Nazeat seems to be similar to China's WS-1 artillery rocket, but there hasn't been any hard evidence that the two are related. The Shahin-2 "relies upon clusters of small rockets, rather than a single, large rocket motor." Iran's factories have been able to make indigenous artillery rockets and short-range missiles; Iran is capable of assembling and making missiles of foreign design, such as the North Korean Scud-Mod. B. With North Korea's help, Iran designs and makes its own ballistic missiles with ranges from 700-1,000km and farther.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 61-65.

1994

| | Nazeat | Oqab (Eagle) | Shahin-2 (Falcon 2) |
|------------------------|-----------|--------------|---------------------|
| Caliber (mm) | 355 | 230 | 333 |
| Length (m) | 5,900 | 4,820 | 3,870 |
| Total weight (kg) | 950 | 360 | 580 |
| Warhead (kg) | 150 | 70 | — |
| Number of nozzles | 1 | 1 | 7 |
| Thrust (kN) | 110 | 75 | 220 |
| Propellant weight (kg) | 400 | 138 | 175 |
| Burning time (secs) | 10 | 3.6 | 1.8 |
| Maximum range (km) | 90 | 45 | 20 |
| Storage temperature | -30/+60 C | -30/+60 C | +60 C |

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—"Baghdad and Ankara Draw Out New Exhibitors," *International Defense Review*, June 1989, pp. 857-859 and "Iran Moves Into Marketing," *International Defense Review*, June 1989, p. 846; in Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), in William C. Potter and Harlan W. Jencks, eds., p. 63.

1994

Iran's Sanam and TsAGI (Russia's Central Aerohydrodynamic Institute) make their first contacts.

—Ivan Safranchuk; Dmitriy Yevstafyev, ed., "Scientific Notes No. 8: The Nuclear and Missile Programs of Iran and Russian Security – The Framework of Russian-Iranian Collaboration," *Nauchnyye Zapiski* (Moscow), 5 May 1999, vol. 8, pp. 1-36; in "Russia, Iran Nuclear Program Cooperation," FBIS Document FTS19990701001333, 1 July 1999.

1994

Islamic Revolution Guards Corps (IRGC) Commander Mohsen Rezai leads the Iranian delegation to the Iranian-North Korean talks about weapons cooperation, which is extended to include development of new weapons systems including missiles such as the Nodong.

—Paula A. DeSutter, *Denial and Jeopardy Detering Iranian Use of NBC Weapons* (Washington, DC: National Defense University Press, 1997), pp. 23-24.

1994

A report states that Iran has 200 C-801 missiles. Supposedly China may have provided technology and know-how to Iran, so that they can indigenously build the C-801. The Iranian form of the C-801 is called the Tondar.

—Bates Gill, "Chinese Arms Exports to Iran," *MERIA Journal*, Vol. 2, No. 2, May 1998, 8 June 2001, www.biu.ac.il.

1994

The Islamic Revolution Guards Corps (IRGC) is armed with CSS-N-2 (HY-2) Silkworm anti-ship missiles. The Naval Guards are armed with small launches equipped with anti-tank guided missiles and portable anti-tank guided missiles. This group has three to five operational land-based anti-ship missile units with three to six Silkworm launchers each, and a total of 50-60 missiles, some of which are deployed. There are reports that Iran is working on a version of the Silkworm with a range of up to 400km. The Guards are forming at least one new unit using Chinese-supplied C-801 anti-ship and ship-to-ship missiles. Reportedly, Iran seeks to acquire longer-range anti-ship cruise missiles from the People's Republic of China or from the former Soviet Union. Some sources claim that Iran has already bought eight Soviet-made SS-N-22 "Sunburn" or "Sunburst" anti-ship missile launch units from Ukraine or Russia and has deployed them near the Straits of Hormuz. Iran may also be interested in the development of the North Korean intermediate-range ballistic missile (IRBM) called the Taepodong-1 or Taepodong-2, which was detected by U.S. intelligence earlier this year. This missile has an estimated maximum range of 1,000-1,200 miles (2,000km), and a liquid-fueled missile, but seems to have two stages. Unlike the Nodong, it must be carried in stages to a site where it is assembled. The Nodong transporter may be able to carry both stages of the Taepodong, but some experts feel that a special transporter is needed for the first stage of the Taepodong.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), pp. 46, 59.

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1994

Since 1989, China has delivered small numbers of SA-2 surface-to-air missiles (SAMs) and Russia has delivered SA-5 and SA-6 SAMs to Iran. Iran's ground-based air defenses also include a relatively small number of Rapier and I-HAWK SAMs. Iran's Navy fleet includes 10 missile patrol boats, while its coastal defenses have HY-2 Silkworm and YJ-1 anti-ship missiles mainly deployed near the Strait of Hormuz. Iran hopes to acquire 10 Hegu class missile patrol boats from China that will reportedly be armed with the YJ-1 anti-ship missile. It has acquired commercial satellite imagery for military purposes and is developing a military reconnaissance satellite with China's help. This program is probably a derivative of the China-Brazil Earth Resources Satellite (CBERS), which is expected to be ready for launch next year and will produce 20-meter resolution images. This will make Iran capable of locating and identifying large, fixed targets from its borders, assessing the effects of air and missile strikes against area targets, and tracking or targeting maritime traffic in the Persian Gulf. Iran has six SA-10 batteries on order from Russia. The SA-10 is a highly capable long-range all-altitude SAM that can engage several targets simultaneously, including tactical ballistic missiles, low-altitude aircraft, and cruise missiles. Iran's military industries are run by the Ministry of Defense's Defense Industrial Organization, which oversees 240 factories employing 45,000 people engaged in the development of surface-to-surface and surface-to-air missiles, anti-tank missiles, as well as other military hardware.

—Michael Eisenstadt, *Déjà vu All Over Again? Iran's Military Build up* (Washington, DC: Institute for National Strategic Studies, 3 February 1994), pp. 13, 15-18, 21.

1994

Iran receives 94 air-to-air missiles and launchers from Russia.

—"Iran 'reveals' arms deals," *Jane's Defence Weekly*, 7 February 1996, p. 15, in Lexis-Nexis, www.lexis-nexis.com.

1994

German intelligence and *Flight International* report that Iran is developing a range of ballistic missiles and a cruise missile derived from the Russian SSN-2 Styx anti-ship missile. Tehran has access to Styx technology via the Silkworm, the 80km-range Chinese-built version of the Styx. Four Silkworm launch emplacements exist on the mid-Gulf island of Abu Musa. These same documents report that Tehran is also involved in the development of a solid-fueled missile and enhanced-performance Scud ballistic missile systems. The liquid- and solid-fueled missiles "closely follow Western systems." Four agencies are identified as being active in missile development: Defense Industries Organization, Military Industries Organization, Shahid Hemat Industrial Group, and Shahid Bagheri Industrial Group. Tehran's aim is to become self-sufficient in producing missiles. Iran also produces its own remotely piloted vehicles (RPVs) and is working on new models. Although these are now used as targets and for surveillance, Western officials are anxious about their potential use as delivery systems for chemical and biological warheads.

—Alan George, "Iran Uses Styx Technology in Cruise Missile Development," *Flight International*, 16 November 1994, in Lexis-Nexis, www.lexis-nexis.com; "Iran Manufacturing Own Scud-Bs," *Flight International*, 23 November 1994, in Lexis-Nexis, www.lexis-nexis.com.

1994

Development of the Shahab-3 is launched.

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—Steve Rodan, "Israel in Iranian Missile Range by 1999," *Jerusalem Post*, 1 October 1997, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

1994

Russian arms sales to Iran paint an alarming picture for the West. By most estimates, Russia is assisting Iran's modernization of its weapons inventory with about \$1 billion per year in "assistance." Russia is supplying Iran with current-generation, state-of-the-art combat weaponry, including sophisticated MIG fighter and SU-24 fighter bomber aircraft; T-72 tanks, armored vehicles, and a factory to build them; a variety of specialized missiles and modern anti-shipping mines; two "Kilo Class" attack submarines (with a third awaiting delivery); and technology and know-how that will enable Iran to produce certain advanced weapons indigenously.

—Henry Hyde, "US Winks as Russians Sell Weapons to Iran," *Christian Science Monitor*, 6 December 1994, p. 18, in Lexis-Nexis, www.lexis-nexis.com.

January 1994

A senior Pentagon official says Iran is seeking the 120km-range C-801 anti-ship missile. Iran has concluded a deal with China to receive ten 29-meter missile boats.

—Philip Finnegan, Robert Holzer and Neil Munro, *Defense News*, 17 January 1994, pp. 1, 29, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, September 1993-January 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1994, Vol. 1, No. 3, p. 164.

January 1994

Iran spends \$2 billion per year on conventional weapons in order to become the Middle East's regional power. Recent purchases: \$3 billion in North Korean Scud-B missiles, \$4 billion in Soviet tanks, and \$5 billion in Chinese Silkworm M-11 missiles. [Note: The Chinese Silkworm is not an M-11 missile. The M-11 is a surface-to-surface missile. The Silkworm is designated as HY-2.] The Iranian Navy has 10 missile craft.

—Jack Kelley, "Iranian Fervor Fades / For many, ayatollahs' edicts chafe," *USA Today*, 4 January 1994, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

4 January 1994

The Israeli daily *Ha'aretz* reports that North Korea has indefinitely postponed the sale of Nodong intermediate-range ballistic missiles (IRBMs) to Iran. The report does not reveal when the contract was cancelled.

—Ron Kampeas, "Report: North Korea Cancels Scud-D Sales to Iran," Associated Press, 4 January 1994, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "'Puk Scud Iran P'anmae Ch'wiso'/Israel'chi Podo," *Chosun Ilbo*, 6 January 1994, www.chosun.com.

10 January 1994

Cornelius O'Brien is being investigated for his involvement in the Iran-Contra scandal. According to the Irish Gardaí Dryad Ltd., owned by the late Cornelius O'Brien, he had files and "end user certificates" issued by the Iranian deputy minister of foreign affairs for purchased ammunition. The price quoted for the sale of 800 missiles from

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Dryad Ltd. to a London arms agent is \$120 million.

—"Cork Arms Link to Iran Suggested," *Irish Times*, 10 January 1994, p. 7, in Lexis-Nexis, www.lexis-nexis.com.

12 January 1994

North Korea's Korea Central News Agency reports that Air Force Commander Cho Myŏng Rok is leading a delegation on a visit to Iran. While the report does not mention the purpose of the visit, Western and Arab sources speculate that the two countries will engage in intense discussions about possible Nodong-1 test-launches in Iran. Diplomatic sources also speculate that the North Koreans will likely visit military and nuclear facilities. [Note: The North Korean delegation remains in Iran until mid-February.]

—KBS-1 Radio Network (Seoul), 24 February 1994, in "Military Delegation Reportedly Returns from Visit to Iran," BBC Summary of World Broadcasts, 26 February 1994, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

Mid-January 1994

Iran's TharAllah military exercise is carried out in the Straits of Hormuz and the Gulf of Oman, directed by the Khatam ol-Anbia missile command headquarters. Surface-to-sea missile units, radar teams, and air and sea forces of the Islamic Revolutionary Guards Corps (IRGC) participate in the exercise.

—Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on Terrorism & Unconventional Warfare, House Republican Research Committee, US House of Representatives, Washington, DC, 7 February 1994, p. 8.

15 January 1994

North Korean Air Force Commander Cho Myong-Nok visits Tehran to discuss Iranian development and production of North Korea's Scud-C and Nodong-2 ballistic missiles, which could use nuclear or chemical warheads. The countries also discuss starting missile tests in Iran again, after a November 1993 test was cancelled. [Note: See entry for November 1993.] This is the highest-ranking North Korean delegation to ever visit a non-communist country.

—Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on Terrorism & Unconventional Warfare, House Republican Research Committee, US House of Representatives, Washington, DC, 7 February 1994, p. 9.

February 1994

North Korean Air Force Commander General Cho Myŏng Rok, heading a 29-member delegation of military and nuclear experts, returns from Iran, where, "new agreements to intensify military and nuclear cooperation" were reached. Western and Arab diplomatic sources believe that the testing of the Nodong-2 in Iran was also discussed, and that the delegation visited the Iranian missile test site at Sharoud. Some analysts believe Iran wants to purchase as many as 150 Nodongs.

—KBS-1 Radio Network (Seoul), 24 February 1994, in "DPRK Military Delegation's Iran Visit Reported," JPRS-TND-94-007, 23 March 1994, pp. 27-28; "N. Korea's Air Force Chief Visits Iran for Closer Ties," *Washington Times*, 25 February 1994; Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 25; Joseph S. Bermudez, Jr. "An Analysis of North Korean Ballistic Missile Testing," *Jane's Intelligence Review*, April 1995, p. 190; Ed Blanche, "North

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Koreans Visit Iran To Step Up Military Cooperation," Associated Press, 24 February 1994, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

10 February 1994

Documents seized from the camps of Al-Mullah Osman Abdul Aziz's Islamic Movement of Iraqi Kurdistan in Irbil and Suleimaniya report that Abdul Aziz's movement receives \$2 million a month from Iran. The camps hold 152mm, 132mm, 130mm, and 120mm canons, Grad missiles, and Katyusha rockets.

—"Iranian Support for Islamic Kurds," *Intelligence Newsletter*, 10 February 1994, p. 7.

20 February 1994

The Iranian government has \$20-\$40 billion in arms. Over a period of five years, the government signed a \$10 billion oil-for-arms deal with Russia, bought missiles from North Korea worth \$3 billion, and Chinese missiles for \$5 billion. Iran is also involved in an ambitious program designed to produce a nuclear device by the end of the century.

—James Adams, "Pentagon Fears Debt-Ridden Iran Could Sabotage Gulf Oil Supplies," *Sunday Times*, 20 February 1994, in Lexis-Nexis, www.lexis-nexis.com.

24 February 1994

Iran's Revolution Guards commander General Mohsen Rezai denies that Iran would ever allow North Korea to test missiles on Iranian territory. He states, "We are very sensitive to having our soil and military facilities used by foreigners. Iran will never opt for such cooperation no matter how friendly the countries are."

—"General Rezai Denies DPRK To Test Missiles In Iran," *Tehran Times* (Tehran), 24 February 1994, pp. 1, 14, in JPRS-TND-94-006, 16 March 1994, pp. 27-28; Agence France Presse, 24 February 1994, in "Iranian General Denies DPRK Testing Missiles in Iran," JPRS-TND-94-007, 23 March 1994, p. 28.

25 February 1994

Iran begins missile exercises in the Strait of Hormuz.

—"Marine Warfare Tactics To Be Tested," *IRNA* (Tehran), 26 April 1994; in JPRS-TND-94-011, 16 May 1994, p. 23.

25-29 February 1994

Iran uses indigenously produced rocket fuel for the first time. The fuel is used for a test of an advanced anti-ship missile in the Strait of Hormuz during the Thamen al-A'emmeh exercise. The Navy of the Islamic Republic of Iran and the Islamic Revolution Guard Corps conduct the test "with full success" and reportedly "precisely hit the hypothetical enemy."

—Voice of the Islamic Republic of Iran First Program Network (Tehran), 29 April 1994, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, February 1994-May 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1994, Vol. 2, No. 1, pp. 180-181.

March 1994

Israeli diplomats meet with senior North Korean officials in Beijing in an effort to prevent Iran from acquiring Nodong missiles from North Korea.

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—"Allegations of 'Secret' Contacts with DPRK On Missiles to Iran," IDF Radio (Tel Aviv), 22 March 1994, in JPRS-TND-94-008, 1 April 1994, p. 34.

March 1994

Iran and Syria are co-developing a cruise missile based on Japanese and European technology.

—Security Affairs, April 1994, p. 11, cited in cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, February 1994-May 1994," *Nonproliferation Review*, James Martin James Martin Center for Nonproliferation Studies, Fall 1994, Vol. 2, No. 1, p. 181.

7 March 1994

Stinger missiles supplied by the CIA to the Mujahideen in Afghanistan turn up in Iran.

—Molly Moore, "CIA Falters in Recovery of Missiles; Blunders Alleged in Plan to Buy Back Afghan Stingers," *Washington Post*, 7 March 1994, in Lexis-Nexis, www.lexis-nexis.com.

22 March 1994

An Israeli foreign ministry spokesman denies reports that Israel is engaged in secret talks with North Korea concerning missile sales to Iran. However, reports claim that Israeli diplomats met with senior North Korean officials several weeks ago in Beijing. The contacts supposedly began about two years ago, and Israel is said to be proposing to "help raise about \$1 billion among American Jewish businessmen for civilian projects in North Korea."

—Udi Segal, "Allegations of 'Secret' Contacts with DPRK on Missiles to Iran," IDF Radio (Tel Aviv), 22 March 1994, in JPRS-TND-94-008, 1 April 1994, p. 34.

23 March 1994

Chinese Ambassador Li Daoyu denies allegations that China is a "key proliferator of destabilizing weapons and technology" to the Middle East. The Ambassador says that China does not provide Iran with M-9 ballistic missile technology or "chemical weapons precursors."

—*Security Affairs*, April 1994, p. 3, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, February 1994-May 1994," *Nonproliferation Review*, James Martin James Martin Center for Nonproliferation Studies, Fall 1994, Vol. 2, No. 1, p. 181.

April 1994

Iran enlists the aid of China and North Korea in the development and production of surface-to-surface missiles (SSMs) and rockets as part of its strategy to domestically produce lower-level technology weapons. China helps Iran establish a Scud-B missile production line in Iran and assists in the development of the Oghab rocket system. North Korea offers to co-produce the Nodong-1 missile and helps Iran develop the long-range Scud-C and other Scud-type missiles. While Iran has modified the Soviet-made Scud-B and Frog-7 SSMs, it also domestically develops and produces other rockets, missiles and multiple rocket launcher (MRL) systems. In addition to the 34km-range Oghab and its updated version, the Mushak-120 SSM, Iran also produces the Nazeat rocket family, which may include the 40km-range Raad rocket, and the 13km-range Shahin-1 and the 20km-range Shahin-2 rockets. Iran also produces the 122mm Hadid, Noor, and Arash MRLs, and the 107mm Fajr-3 and Haseb MRLs. Iran and Syria are supposedly coordinating their efforts to acquire Chinese and North Korean SSMs. Unconfirmed reports suggest

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that Iran and Libya are undertaking a joint venture in Iran to develop the German-designed 950km-range Al-Fateh missile project. Supposedly Iran receives, often through third parties, missile research and development assistance from European and Japanese companies.

—Anoushiravan Ehteshami, "Iran Boosts Domestic Arms Industry," *Jane's International Defense Review*, April 1994, pp. 72-73.

April 1994

North Korean Foreign Ministry delegation led by Pak Chung Kuk travels to Iran and Pakistan.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin James Martin Center for Nonproliferation Studies, November 1999, p. 23.

April-May 1994

Security sources state that the Irish Republican Army (IRA) has attempted to procure a large shipment of weapons from Iran to fuel its terrorist campaign into the next century. High on their list of priorities are sophisticated surface-to-air missiles such as SAM-7s and Stinger missiles. The Iranian Information Ministry has offered to meet an IRA "shopping list" in exchange for the assassination of three leading Iranian dissidents. The three people to be assassinated are former Iranian President Abolhasan Bani-Sadr, Javad, a spokesman for the Mujahideen, and Farzaneh Taidi, a prominent Iranian actress. The shopping list includes micro-communications and eavesdropping equipment; semtex explosives; eight Stinger surface-to-air missiles; 400 Colt pistols and 80,000 rounds of ammunition; 100 Uzi submachine guns and 50,000 rounds of ammunition; \$6 million in counterfeit dollar bills and \$55,000,000 in authentic bills. The IRA turned down the request. Britain publicly warns Iran to sever all ties with the IRA.

—Richard Savill, "IRA 'Wanted Iran Missiles'," *Daily Telegraph*, 30 April 1994, p. 4, in Lexis-Nexis, www.lexis-nexis.com; Robert Porter, "MI6 Targeting Iran as Main Threat to West," *Sunday Telegraph*, 1 May 1994, p. 5, in Lexis-Nexis, www.lexis-nexis.com; Safa Haeri, "Iran Tried to Hire IRA Hit-Men; Provos Turned Down Offer of Guns, Missiles, and Cash to Murder Three Dissidents in Europe," *Independent* (London), 3 May 1994, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

7 April 1994

North Korea sends its first improved Scuds that it produced in 1989 to Iran. It is sending them there instead of to the DPRK because Iran helped finance the production.

—Stefan Halper, "Picking a Path Through the Nuke Field," *Washington Times*, 7 April 1994, p. A17.

11 April 1994

Paul Beaver, publisher of *Jane's Defence Weekly*, in an interview for a Japanese feature television program entitled "Areas of Dispute in the World," reveals that North Korea and Iran have agreed to establish a Nodong-1 missile production facility in Iran under the code name "Ronda-68." [Note: The "Ronda-68" project referred to is probably the Tondar-68 project.]

—KBS-1 Radio Network (Seoul), 11 April 1994, in, "DPRK, Iran Reportedly Agree to Build Missile Plant," JPRS-TND-94-010, 5 May 1994, p. 47.

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16 April 1994

The Iranian Embassy in Ankara rejects accusations made by the Turkish newspaper *Hurriyet* that Iran is selling missiles to Armenia and printing counterfeit dollars.

—"Report of Missile Sales to Armenia Denied," IRNA (Tehran), 16 April 1994; in FBIS Document FBIS-NES-94-076, 20 April 1994, p. 66.

25 April 1994

Russian Prime Minister Victor Chernomyrdin pledges to Prime Minister Yitzhak Rabin that Russia will not sell offensive weapons to Iran. Chernomyrdin says that "there will be no transfer of offensive weaponry to Iran."

—David Makovsky, "Russian Premier Pledges Not to Sell Offensive Weapons to Iran," *Jerusalem Post*, 26 April 1994, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

26 April 1994

Iran, reportedly, has eight SS-N-22 Sunburn long-range surface-to-surface missiles (SSMs), obtained from Ukraine, which are deployed in the Strait of Hormuz with land-based HY-2 anti-ship missiles located in the southern Persian Gulf.

—James Bruce, "Iranian Exercises to Include SSM Firings," *Jane's Defence Weekly*, 30 April 1994, p. 1.

26 April 1994

Missile maneuvers start in the Strait of Hormuz as part of the Thamen al-Aemmeh exercise. Surface-to-sea missiles, warships, and electronic units of the Armed Forces along with naval units of the Islamic Revolution Guards Corps (IRGC) are involved in the exercise.

—"Missile Maneuvers Begin in Strait of Hormuz," IRNA (Tehran), 26 April 1994; in FBIS Document FBIS-NES-94-082, pp. 57-58.

27 April 1994

The Israeli Home Front Commander Major General Ze'ev Livne states that Syria is continuing to acquire Scud missiles and launchers from North Korea. He further notes that missiles launched from Iran would pose a more difficult operational dilemma for the Home Front Command.

—*Qol Yisra'el* (Jerusalem), 27 April 1994, in "General: Syria Buying Scud Missiles in North Korea," FBIS-NES-94-082, 28 April 1994, p. 41.

29 April 1994

The Thamen al-Aemmeh exercises end with all objectives "achieved." Iran's Central News Unit says Iranian-manufactured rocket fuel is used for the first time to fire an advanced anti-ship missile during the Thamen al-Aemmeh exercise. The Iranian Navy and the Islamic Revolution Guards Corps (IRGC) conduct the missile firing with "full success" and reportedly "precisely hit the hypothetical enemy."

—"New Rocket Fuel Tested in Missile Maneuvers," Voice of the Islamic Republic of Iran First Program Network (Tehran), 29 April 1994; in FBIS Document FBIS-NES-94-084, 2 May 1994, p. 100.

30 April 1994

Iran appears to have a CSS-7/M-11 missile under development. Iran is reportedly developing the Iran-700, a missile

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that is probably a version of the Chinese CSS-6 or the North Korean Scud-C.

—Duncan Lennox, "Ballistic Missiles Hit New Heights," *Jane's Defence Weekly*, 30 April 1994, pp. 24-28.

June 1994

The Director of U.S. Naval Intelligence, Rear Admiral Edward D. Sheaffer, Jr., releases a statement indicating that Iran may not yet have North Korean Nodong missiles, but could acquire the Nodong system in the future. CIA director James Woolsey says that North Korean plans to sell Iran the Nodong may not have occurred.

—Jon B. Wolfsthal and Dunbar Lockwood, *Arms Control Today*, July 1994, p. 23; Barbara Starr, *Jane's Defence Weekly*, 6 August 1994; both cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, June 1994-September 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1995, Vol. 2, No. 2, p. 133.

June 1994

Intelligence and nonproliferation sources report that since 1988, North Korea has delivered 200-300 "knock-down" kits of Scud-B missiles to Iran, where they were assembled at a plant near Isfahan. Between 1992 and June 1994, 150 completed Scud-Cs are delivered.

—Martin Sieff, *Washington Times*, 16 June 1994, p. A13; James Bruce, *Jane's Defence Weekly*, 30 July 1994, pp. 23-33; both cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, June 1994-September 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1995, Vol. 2, No. 2, p. 133.

Early June 1994

A U.S. government official states, "The North Koreans have a reputation for exporting every weapon they've ever produced. If the North Koreans put a missile with a nuclear warhead on the world market, that's the ultimate nightmare scenario." U.S. officials say that Iranian officials have been present for recent missile tests in North Korea, including the test of an anti-ship cruise missile. The tests are said to be "sales demonstrations" for the Iranian observers."

—Bill Gertz, "N. Korea as Nuclear Exporter?," *Washington Times*, 8 June 1994, pp. A1, A9; cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, June 1994-September 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1995, Vol. 2, No. 2, p. 133.

Early June 1994

Robert D. Walpole, deputy director of the CIA's Nonproliferation Center, states, "North Korea is the world's largest proliferator of ballistic missiles." Mr. Walpole says North Korea may sell the Nodong missile, which has a range of about 600 miles, to Iran and possibly to Libya.

—Thomas W. Lippman, "U.S. Hopes to Break a Pattern," *Washington Post*, 14 June 1994, p. A1.

June-July 1994

U.S. warships monitor the delivery of four or five Chinese Hegus-class fast-attack missile boats. Iran ordered 10 Hegus in 1992. The Hegus are armed with four YJ-1 "Eagle Strike" surface-to-surface missiles.

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—"Iran receives Chinese missile boats," *Jane's Intelligence Review*, 1 September 1994, p. 7, in Lexis-Nexis, www.lexis-nexis.com.

13 June 1994

Iran's ambassador to Japan, Hosayn Kazempur-Ardebili, denies a *Kyodo* news report that Iran has test-fired a North Korean missile. *Kyodo* quotes the U.S. weekly *US News & World Report*, which stated that Japan urged Iran to stop the missile test.

—"Envoy Denies Test-Firing of DPRK Missile," IRNA (Tehran), 13 June 1994.

14 June 1994

Robert Walpole, Deputy Director of the CIA's Nonproliferation Center, says that Iran will probably be the first to purchase the Nodong missile. The missile has not yet been exported, but is believed to be capable of carrying a nuclear warhead.

—Thomas Lippman, "North Koreans Would Sell Nukes, Analysts Think," *Houston Chronicle*, 14 June 1994, p. A12, in Lexis-Nexis, www.lexis-nexis.com.

14 June 1994

North Korea may test its Nodong-1 missile in Iran within 6 to 12 months because "[t]esting facilities don't exist of a full-range test [of the Nodong-1] in North Korea," and because it wants to avoid increasing the existing tension over the nuclear issue. U.S. government analysts believe that North Korea will not sell operational Nodong-1 missile systems to Iran in the foreseeable future, though sources claim that Iran is interested in acquiring both the Nodong-1 and -2 missiles.

—Martin Sieff, "N. Korean Missiles May Be Tested in Iran This Year," *Washington Times*, 16 June 1994, p. A13.

14 June 1994

Assistant Secretary of State Robert Pelletreau tells the U.S. House Foreign Affairs Committee, "North Korea has in the past delivered Scud-Bs and Scud-Cs, primarily to Iran and Syria. We're concerned about press reports and other intelligence [stating] that they might, at some point, sell the Nodong missile—with a much longer range than the Scud-B and -C."

—Martin Sieff, "N. Korean Missiles May Be Tested in Iran This Year; Pyongyang Seeks to Avoid Increasing International Criticism," *Washington Times*, 16 June 1994, p. A13.

16 June 1994

U.S. intelligence sources report that North Korea may test its Nodong-1 ballistic missile in Iran within the next 6 to 12 months.

—Martin Sieff, "N. Korean Missiles May Be Tested in Iran This Year; Pyongyang Seeks to Avoid Increasing International Criticism," *Washington Times*, 16 June 1994, p. A13; Chŏng Hae Yŏng, "Puk, Iran'sŏ Rodong 1 Ho Shihŏm Kanŏngsŏng/Mi Washington Times Podo," *Chosun Ilbo*, 17 June 1994, p. 7, in KINDS, www.kinds.or.kr; Shin Sang In, "Puk, Shinhyŏng Nodong 1 Ho Shilhŏmgyehoeok/Bba'rŏmyŏn 6 Kaewŏlhu Iran'sŏ Shilshi," *Segye Ilbo*, 17 June 1994, p. 4, in KINDS, www.kinds.or.kr.

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29 June 1994

Israeli Prime Minister Yitzhak Rabin says that Israel wants U.S. help to prevent Iran and Iraq from developing nuclear weapons and long-range ballistic missiles.

—Richard C. Barnard and Barbara Opall, "Israel Targets Iran Nuke Plans," *Defense News*, 10 July 1994, pp. 4, 29.

Mid to Late 1994

North Korea delivers either Nodong components or a small number of complete missiles to Iran.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 25-26.

July 1994

Satellite images from the French SPOT satellite show a missile site in the mountains of Bakhtaran province in western Iran. According to the imagery, construction is well underway already. The site contains several underground bunkers and facilities joined by large-radius roads, built to facilitate the movement of the Shahab-3. Exiled Iranian groups with sources inside the country say Iran plans to field a brigade of 15 Shahab-3 missiles. The missiles will be assigned to the Al-Hadid Missile Brigade. Based on the satellite imagery, it appears that the Iranian missiles will be loaded on transporter-erector launchers (TELs), which will be kept underground until needed and then deployed to pre-surveyed sites where they can be quickly launched.

—Duncan Lennox, "Iran's ballistic missile projects: uncovering the evidence," *Jane's Intelligence Review*, June 1998.

July 1994

Iran and Syria are said to be co-developing low-priced cruise missiles, with Iran providing most of the funding.

—James Bruce, *Jane's Defence Weekly*, 30 July 1994, pp. 23-33, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 177.

July 1994

Iran is reportedly funding North Korea's development of its 1000km-range Nodong missile, with the hopes of obtaining and extended-range ballistic missile capability.

—James Bruce, *Jane's Defence Weekly*, 30 July 1994, pp. 23-33, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, June 1994-September 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1995, Vol. 2, No. 2, p. 133.

July 1994

Iran acquires 12 Tu-22 Backfire bombers armed with AS-6 anti-ship missiles from Russia.

—Malcolm R. Davis, *Asia-Pacific Defence Reporter*, Sep. 1994, pp. 11-12, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 177.

July 1994

U.S. Department of Defense officials state that China is ready to deliver 10 fast-attack missile boats and an

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undisclosed number of 83km-range anti-ship missiles to Iran.

—Elaine Sciolino, "Iran's Problems Raising Doubts of Peril to US," *New York Times*, 5 July 1994, p. A1.

July 1994

United States intelligence reports say that Iranian Revolutionary Guards Corps (IRGC) members purchased an unspecified number of American-made Stinger anti-aircraft missiles in Afghanistan. The Stingers were later provided to Fuad Shukur, a representative of the Lebanese-based Islamic Jihad, which is believed to be responsible for a number of terrorist attacks against the United States and Israel. The reports indicate that the missiles from this deal did not work and may have been returned to the sellers. Iranian operatives subsequently tried to purchase more Stingers in Afghanistan, but it is not known whether they were successful.

—James Risen, "Report Says Iran Gave Terrorists U.S. Arms," *New York Times*, 12 January 2002, in Lexis-Nexis, www.lexis-nexis.com.

10 July 1994

During the G-7 summit in Naples, Italy, Boris Yeltsin offers assurances that he will consider cutting back arms sales to Iran.

—David Lauter and Carey Goldberg, "Clinton, Yeltsin Discuss Ending Iran Arms Sales; Summit: U.S. Officials are Optimistic. Cash-Strapped Russia Earns \$1 Billion a Year on Weaponry for Tehran." *Los Angeles Times*, 28 September 1994, p. A8, in Lexis-Nexis, www.lexis-nexis.com.

11 July 1994

Israeli Foreign Minister Shimon Peres tells the Knesset Foreign Affairs and Defense Committee that a reported sale of missiles from North Korea to Syria and Iran has been aborted at the last minute. North Korea denies sending missiles to Syria and Iran.

—Dan Izenberg, "Peres: North Korean Arms Sale Aborted," *Jerusalem Post*, 12 July 1994, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

30 July 1994

U.S. intelligence sources say that Iran has purchased 150 Scud-C missiles from North Korea.

—James Bruce, "Land of Crisis and Upheaval," *Jane's Defence Weekly*, 30 July 1994, pp. 23-33.

4 August 1994

Egypt's *Al-Ahram* newspaper quotes an Israeli radio broadcast as saying that North Korea has reached an agreement with Iran for the sale of Nodong-1 missiles. The report says that the United States provided this information to Israel, but the number of missiles is not revealed.

—"Rodong 1 Ho P'anmae/Puk, Iran'gwa Hap'üi," *Chosun Ilbo*, 5 August 1994, www.chosun.com.

Mid-1990s

Iran acquires about 125 C-802 cruise missiles from China. Iran ordered about 250 of the missiles, but China suspends the sales after the U.S. demands a halt to the sales in 1996. Iran and North Korea are later reported to be jointly developing a copy the missile in February 2000.

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—Kyodo News Service, 16 February 2000, in "Sankei Shimbun: DPRK, Iran Jointly Developing Missile," FBIS Document ID JPP20000217000006.

September 1994

Iran reportedly acquires 12 Tu-22 Backfire bombers armed with AS-6 anti-ship missiles from Russia.

—Malcolm R. Davis, "Russia's Big Arms Sale Drive," *Asia Pacific Defence Reporter*, September 1994, pp. 11-12.

September 1994

U.S. Central Command Chief Vice Admiral Douglas J. Katz says that Iran received five Hegu fast attack craft (FAC) from China, but without anti-ship missiles. China had offered the C-801, but Iran wants the more sophisticated C-802 missile. The five FACs delivered are the first half of a total of 10 agreed to in a 1992 deal; a delivery date for the other craft has not yet been announced. [Note: the report of anti-ship missiles not being included in this shipment contradicts with the June-July report that the ships did include missiles.]

—*Jane's Defence Weekly*, 1 Oct. 1994, p. 6, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 177.

4 September 1994

Assistant Secretary of State Robert Gallucci and Israeli Foreign Ministry Deputy Chief Eytan Bentzur discuss cooperative efforts to restrict North Korean exports of its Nodong-1 and -2 missiles to Iran.

—Yi Sang-sok, *Chungang Ilbo*, 6 Sep. 1994, p. 1, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, June 1994-September 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1995, Vol. 2, No. 2, p. 133.

19 September 1994

Islamic Revolution Guards Corps (IRGC) missile maneuvers, code-named Falaq-2, begin in the Persian Gulf and the Sea of Oman. Various sophisticated weapons, including advanced shore-to-sea missiles, are used during the maneuvers.

—"IRGC Begins Missile Maneuvers in Persian Gulf," Voice of the Islamic Republic of Iran First Program Network (Tehran), 19 September 1994; in FBIS Document FBIS-NES-94-181, 19 September 1994, p. 70.

29 September 1994

Russian President Boris Yeltsin provides assurances to President Clinton that he will restrain sales of classified Russian military technology to Iran and other countries.

—Stephen Robinson, *Daily Telegraph*, 29 Sep. 1994; James Bruce, *Jane's Defence Weekly*, 8 October 1994, p. 2, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 177.

October 1994

Jean-Charles Marchiani, a close associate of French Interior Minister Charles Pasqua, helps ship arms that are "probably" air-to-surface missiles to Iran. The weapons are supposedly shipped from an Algerian military base on a

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civilian Air Algerie aircraft to France, and then to Cyprus, where they are transferred to an Iranian aircraft. A batch of six missiles are dispatched to Cyprus with a ban on their re-export.

—David Buchan, "Pasqua Aide Linked to Iran Arms," *Financial Times* (London), 23 March 1995, p. 2, in Lexis Nexis, www.lexis-nexis.com cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, March 1995-June 1995," *Nonproliferation Review*, the James Martin Center for Nonproliferation Studies, Fall 1995, Vol. 3, No. 1, p. 161; David Buchan, "Pasqua targets missile claim," *Financial Times* (London), 24 March 1995, p. 2, in Lexis-Nexis, www.lexis-nexis.com; "Missile denial," *Herald* (Glasgow), 31 March 1995, p. 8, in Lexis Nexis, www.lexis-nexis.com.

October 1994

The French Ministry of Interior denies any transfer of air-to-ground missiles to Iran via Cyprus. The French magazine *L'Express* allegedly states that an Algerian cargo plane chartered to fly from Chateauroux, France to Boufarik, Algeria went instead to Cyprus with a shipment of air-to-ground missiles. The missiles were then put on another plane and shipped to Iran.

—"Rumors of Missile Delivery to Iran L'Express Story Summarized, Officially Denied," France-2 Television Network (Paris), 23 March 1995; in FBIS Document FTS19970508000799, 8 May 1997.

October 1994

U.S. President Bill Clinton and Russian President Boris Yeltsin agree that Russia will cease arms sales to Iran. The arms ban is not expected to have an impact on Iran's ballistic missile program, as Iran's missile program relies heavily on Chinese and North Korean support.

—James Bruce, "Russia Agrees 'Arms Sales to Iran' Ban," *Jane's Defence Weekly*, 8 October 1994, p. 2.

October 1994

The Institute of Strategic Studies in London says that China supplies large quantities of conventional weapons to Iran. In one consignment, 20 CSS-8 surface-to-surface missiles are supplied. The CSS-8 solid-fuel missile has a 150km-range and 190kg warhead. Iran is the first country other than China to have the CSS-8.

—Nick Rufford, "China Defies US with Iran Nuclear Deal," *Sunday Times*, 15 October 1995, in Lexis-Nexis, www.lexis-nexis.com; *Executive News Service*, 12 October 1994, cited in *Reuter*, 12 October 1994, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 177.

October 1994

Iran deploys anti-aircraft missiles on its islands at the entrance to the Gulf, and insists that such actions are strictly for defense. Western military sources identify the island on which HAWK anti-aircraft missiles are deployed as Sirri Island. Officials report that the buildup includes SA-6 surface-to-air missiles. They also report that the islands being fortified are Abu Musa and the Tunb Islands, which are also claimed by the United Arab Emirates. Supposedly Iran is also deploying Silkworm missiles, HAWK missiles, and Seersucker anti-ship missiles on Qeshm.

—Laurent Maillard, "Ministry Spokesman Berates U.S. Report," *Agence France-Presse*, 1 March 1995; in FBIS Document FBIS-NES-95-041, 2 March 1995, p. 64; "Iran Says Missiles Defend It Against Attack by Israel,"

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Washington Post, 2 March 1995, p. A24, in Lexis-Nexis, www.lexis-nexis.com; "Iranian buildup in gulf has Pentagon worried," *Atlanta Journal and Constitution*, 23 March 1995, p. 11A, in Lexis-Nexis, www.lexis-nexis.com; David Fairhall, "Gulf Build-up 'Defensive' Says Iran," *Guardian* (London), 24 March 1995, p. 17, in Lexis-Nexis, www.lexis-nexis.com.

October 1994

A reconnaissance satellite captures three Nodong-class missiles being assembled at an assembly site 25 miles north of Isfahan, Iran. An unidentified U.S. official says that the Iranian Nodong program with North Korea was halted in 1994 due to financial problems. This suspension was only temporary, and preparations for full-scale production and deployment of the Nodong continue.

—"U.S., Israel, Clash over 'Dual Containment'," Iran Brief, 5 December 1994, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

October 1994

In the most recent edition of "Military Balance," the International Institute for Strategic Studies reports that Iran has "around six" Scud missile launchers, fewer than previously believed.

—*Executive News Service*, 15 December 1994, cited in Reuters, 15 December 1994, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 175.

4 October 1994

In testimony before the U.S. Senate, Assistant Secretary of State Robert Pelletreau says that in recent high-level talks with North Korea, the United States has requested that North Korea stop its missile exports. Pelletreau also says that North Korea has been providing technology and exporting Scud-B and Scud-C missiles to Iran and Syria. [Note: High-level bilateral talks between the United States and North Korea to resolve the North Korean nuclear issue began on 8 July 1994, but the talks were postponed only hours later after the delegations received the news of Kim Il Sung's death. The talks resumed on 5 August 1994.]

—Chin Ch'ang Uk, "Missile Tae'oeapanmae/Mi, Puk'e Chungjich'okku/Kowigŭp Hoedamsö," *Joongang Ilbo*, 5 October 1994, p. 2, in KINDS, www.kinds.or.kr/; Lee Kyöng Hyöng, "Pukhanje Scud Chungdongsuch'ul Chedong/Mijung Missile Kŭmsuhyöpchöng'üi Taebuk Yöngnyang," *Taehan Maeil*, 6 October 1994, p. 3, in KINDS, www.kinds.or.kr.

11 October 1994

Iranian Foreign Ministry spokesman Mahmoud Mohammadi comments on Russia's decision to cease arms sales to Iran: "If the Russians intend to deprive themselves of having access to such a market, it is up to them."

—"Iran Shrugs Off Russian Ban on New Arms Sales," Reuters, 11 October 1994, in *Executive News Service*, 12 October 1994.

27 October 1994

President Clinton and Russian President Boris Yeltsin open their fifth meeting in 18 months to discuss arms sales to

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Iran. Russia may agree to phase out its \$1 billion annual arms sales to Iran. For Russia, weapons sales take on increasing importance, and Iran is a major customer, buying submarines, combat planes, and missile technology. The purchases worry the Clinton administration due to intelligence reports indicating that Iran has been pursuing nuclear technology. Earlier this summer at a meeting in Naples, Italy, Yeltsin offered assurances that he would at least consider cutting back sales to Iran. Until now, U.S. officials have seen no progress.

—David Lauter, "Clinton, Yeltsin Discuss Ending Iran Arms Sales; Summit: U.S. Officials are Optimistic. Cash-Strapped Russia Earns \$1 Billion a Year on Weaponry for Tehran," *Los Angeles Times*, 28 September 1994, p. A8, in Lexis-Nexis, www.lexis-nexis.com.

November 1994

Iran conducts missile maneuvers close to the Strait of Hormuz.

—Bakhtyar Nasser, "Iranian Submarines Alarms Neighbors," *International Review*, Autumn 1994, p. 7.

November 1994

Germany's intelligence services find that Iran is attempting to procure components for the indigenous production of Scud-B and Scud-C missiles. Iran's first indigenously produced Scud-B missiles should be operational in early 1995.

—Dietmar Seher, "Baghdad and Tehran Putting Out Feelers," *Berliner Zeitung* (Berlin), 15 December 1994, p. 2; in "Iraq, Iran Seeking Arms Technology," FBIS Document FBIS-WEU-94-243, 19 December 1994, pp. 17-18.

November 1994

The United States informs Israel that the Iranian-North Korean cooperation on surface-to-surface missiles has ceased. [Note: A few weeks later, Israel was informed by senior U.S. security officials that the cooperation had resumed.]

—David Makovsky, "Perry: Greater dialogue needed on Iranian threat," *Jerusalem Post*, 11 January 1995, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

November 1994

There is a growing international controversy over Japan's Overseas Development Aid (ODA) program for Iran. A top Iranian governmental official says that aid and restructuring of the ODA to Iran is necessary to make money more readily available for "other projects." *Asahi Shimbun Daily* explains that these other projects include "shipping guns and cash to overthrow Moslem governments, sending hitmen to murder exiled dissidents, developing missile technology, and financing Iran's global mischief."

—"Japan Continues to 'Feed Iranian Kitty'," *Jerusalem Post*, 9 November 1994, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

November 1994

A German Customs Intelligence (ZKA) document alleges that Iran is developing a cruise missile based on the Russian SSN-2 Styx anti-ship missile and a wide variety of ballistic missiles. Iran has had access to Styx technology through the purchase of Chinese Silkworm missiles. Iran has built four Silkworm sites on Abu Musa island. The document also says that Iran will be self-sufficient in producing Scud-B missiles "in the coming years," but is

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uncertain whether Iran would also produce the Scud-C. China and North Korea are said to be the most significant countries providing Iran with equipment, technology, raw materials, and manufacturing means for the development of solid- and liquid-fueled missiles.

—Alan George, *Flight International*, 16 November 1994, p. 17; *Flight International*, 23 November 1994, p. 21; both cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 175.

6 November 1994

Iran fires at least three Scud missiles across its border with Iraq into a camp used by exile MKO guerrillas. The Mujahideen report that Iran fires four Scud missiles. IRNA, quoting an Iraqi opposition group, says that at least eight explosions were heard from Asharf camp. Mohammad Mohaddessin, chairman of the foreign affairs committee of the Mujahideen-led National Council of Resistance of Iran, tells Reuters that the U.S. State Department had given "the green light" for the missile attack.

—Reuters, 6 November 1994; in "IV Quarter 1994: November," Gulf/2000 Project (New York: School of International and Public Affairs [SIPA], Columbia University, November 1994); "Iran Fires Rockets at Mojahedine Base," *Washington Times*, 7 November 1994, p. A16; "US Defense Officials," *Aviation Week and Space Technology*, 21 November 1994, p. 14.

9 November 1994

Iran fires at least three Scud missiles at the Mujahideen-e Khalq opposition group camps, the second attack in four days. The Mujahideen-e Khalq say that the missiles are launched from bases near Kermanshah. "The launching pads and nine ready-to-fire missiles remain in place at these locations."

—Reuters, 9 November 1994; in "IV Quarter 1994: November," Gulf/2000 Project (New York: School of International and Public Affairs [SIPA], Columbia University, November 1994).

14 November 1994

Intelligence sources report that Iran purchases military hardware abroad through the Iranian National Oil Co. and its Calgary-based subsidiary Kala Naft Canada, the Iran Telecommunications Corp., and the Iranian Ministry of the Interior, as well as through several research institutes and private universities. [Note: It is not clear from the article which intelligence service prepared the statement.]

—Stephen J. Hedges and Peter Cary with Eleni Dimmler and Kyrill Belianinov, "The Other Problem in the Persian Gulf," *US News & World Report*, 14 November 1994, pp. 87-88.

17 November 1994

German Customs Intelligence (ZKA) reports that Iran is making attempts to buy peripheral items, such as heating units, which, as well as being used in pesticide plants, have applications in the development of ballistic missiles. The ZKA documents also warn companies to be on their guard against Iranian approaches for chemicals that can be used to produce rocket fuel. Iran supposedly seeks fine-grained aluminum powder, ammonium perchlorate, and hydroxyl-terminated polybutadiene (HTPB). Exporters are warned to be on the alert for direct or indirect approaches from two Iranian state enterprises, believed to be acting as procurement agencies for Iran's Defense

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Industries Organization.

—"Secret German Documents on Iran," *Jane's Foreign Report*, 17 November 1994, www.janesonline.com.

18 November 1994

A U.S. District Judge sentences Iranian Jamshid Shafii to 27 months in prison and Briton Paul Murphy to 24 months in prison for a scheme to purchase 54 Stinger missiles and smuggle them to Iran through Cyprus.

—"Two Sentenced for Scheme to Export Missile," *Miami Herald*, 18 November 1994, p. B1, in Lexis-Nexis, www.lexis-nexis.com.

23 November 1994

A senior Israeli official responds to reports that Syria and Iran have begun assembly of North Korean Scud-C missiles with a 310-mile range, saying "Syria and Iran [are] also receiving the equipment to manufacture the entire missile themselves."

—*Washington Times*, 24 November 1994, p. A11, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 176.

December 1994

Iran purchases Scud-Cs from North Korea and helps finance North Korea's 1,000km Nodong-1 missile. Iran may also be financing North Korea's development of the 1,500km Nodong-2. A recent report by the U.S. Congressional Research Service finds that Iran has ordered 150 Nodongs as part of an agreement that includes co-production in Iran.

—James Hackett, "Answer to Iran's Threat," *Jerusalem Post*, 6 December 1994, p. 6, in Lexis-Nexis, www.lexis-nexis.com.

December 1994

A senior Russian Foreign Ministry official says that Russia "does not intend to cut down military deliveries to Iran in the near future."

—*Radio Rossii Network* (Moscow), 11 December 1994, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 177.

7 December 1994

Israeli Deputy Defense Minister Mordechai Gur says that North Korea and Iran may be jointly producing "long-range" missiles that could strike Israel. Gur also says, "We know the Iranians are in contact with North Korea to purchase and produce together a missile that can reach the range of 1,300km, maybe a little farther." [Note: Gur is referring to the Nodong or the Shahab-3.]

—"Gur: Iran May Be making Long-Range Missiles," *Jerusalem Post*, 8 December 1994, p. 12, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "Iran Denies Missile Cooperation With North Korea," Reuters, 19 February 1995, in Executive News Service, 20 February 1995.

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13 December 1994

Israeli Prime Minister Yitzhak Rabin, addressing journalists at the Japan Press Club, says, "It is true that North Korea has supplied ground-to-ground missiles to Syria and Iran, but it has also helped them to produce such missiles as well."

—"Rabin Says N. Korea Exports Scud Missiles to Iran," Executive News Service, 15 December 1994.

15 December 1994

Israeli Prime Minister Yitzhak Rabin says that North Korea supplies Iran and Syria with Scud surface-to-surface missiles with a range of 500km in addition to other military technologies. He says that North Korea is developing the Nodong missile with Iranian financial assistance.

—Reuters, 15 December 1994; in "IV Quarter 1994: December," Gulf/2000 Project (New York: School of International and Public Affairs [SIPA], Columbia University, December 1994).

15 December 1994

The German economics ministry reports that Iran is trying to buy weapons technology in Germany for building Scud missiles. "We have given firms a sort of 'early warning' that attempts to procure this technology are being made."

—Reuters, "Iran Said Seeking Scud Know-How in Germany," 15 December 1994; in "IV Quarter 1994: December," Gulf/2000 Project (New York: School of International and Public Affairs [SIPA], Columbia University, December 1994).

16 December 1994

Israeli Prime Minister Yitzhak Rabin says it was a mistake to hold talks with North Korea in Beijing last year in an effort to persuade North Korea to stop missile exports to the Middle East. He says that instead of trying to solve the problem, "North Korea tried to fool Israel. Rabin reveals that North Korea demanded \$1 billion to stop the sales, and he claims that Iran has provided North Korea with hundreds of millions of dollars to produce missiles with longer ranges. [Note: The talks were held in June 1993.]

—"Rabin: Earlier Talks with N. Korea over Missiles Were 'Major Mistake'," *Jerusalem Post*, 18 December 1994, p. 2, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

16 December 1994

Israel's *Ha'aretz* reports that North Korea agreed to test its Nodong missile in Iran, per an Iranian request. The missile's internal systems will be evaluated, but it will not be tested to its full 1300km range.

—Eytan Rabin and Aluf Ben, *Ha'aretz* (Tel Aviv), 16 December 1994, p. A1, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 176.

Late 1994 or Early 1995

Iran receives four or more Hwasong-6 (Scud-C) transporter-erector launchers (TELs) from North Korea, possibly via air shipment. A Nodong mobile-erector launcher (MEL) may be included.

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—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, pp. 18-19, 26.

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1993

1993

The Iranian Instrumentation Factories Plant (IFP) obtains dual-use technology and materials used for a gyroscope production plant.

—Mikhail Kirillin, "Several U.S. Firms Engaged in Developing Missile Equipment Have Links with Iranians," *Yadernyy Kontrol* (Moscow), March-April 1998, No. 2, Vol. 38, pp. 37-43; in "Iran's Missile Industry, U.S. Missile Development Firms with Iranian Links," FBIS Document FTS19980605000876, 1 March 1998.

1993

The Iranian Defense Industries Organization reportedly offers the Nazeat (Iran-130) rocket system for sale to foreign customers, as well as the Noor and Hadid 122mm rocket and the Fajr 107mm rocket.

—Dr. Andrew Rathmell, "Iran's Weapons of Mass Destruction," *Jane's Intelligence Review-Special Report*, June 1995, No. 6, p. 19; Duncan Lennox, "Iran's ballistic missile projects: uncovering the evidence," *Jane's Intelligence Review*, June 1998, No. 6, p. 24.

1993

Iran has a \$7 billion arms import plan which includes the purchase of supersonic SS-N-22 Sunburn or Sunburst anti-ship missiles and SA-10 (S-300) surface-to-air missiles. Most experts agree that Iran has succeeded in purchasing SA-5 surface-to-air missiles from Russia and other states of the former Soviet Union during 1991-1993. Evidence indicates that deliveries and orders from China included versions of the SA-2 surface-to-air missile.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), p.14.

1993

Iran takes delivery of an unspecified number of Scud-C missiles and launchers as part of a deal with North Korea. This shipment is in addition to about 250 Scud-B missiles that North Korea supplied to Iran before the Gulf War. [Note: The delivery in question may have been from the ship reported in late October 1992.]

—Jerusalem Israel Television Network, 9 February 1993, in "North Korean Scud-C Missiles Delivered," JPRS-TND-93-006, 5 March 1993, pp. 13-14.

1993-1994

Iran has ballistic missiles of the Scud variety, possibly with an extended range. Iran's Army possesses Frog-7 SSMs, more than 100 Scud-Bs, and some Scud-C SSMs, with local manufacture of SSMs reported. Iran also possesses SA-7 and HN-5 SAMs.

—"Iran: Middle East and North Africa," *Middle East Military Balance*, 1993-1994, pp.109, 115.

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January 1993

Iran has established a procurement agency for military goods in London, managed by former diplomat Jamal Haj Esmaili.

—Alan George, *Flight International*, 20 January 1993, p. 4, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, November 1992-April 1993," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1994, Vol. 1, No. 2, p. 157.

January 1993

Iranian officials travel to China to conclude a deal begun in late 1991 for the purchase of 10 Hega class fast attack missile ships. Iran is also seeking a ship armed with the Ying Ji anti-ship missile, which has a range of 40km.

—*Jane's Defence Weekly*, 13 February 1993, p. 48, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, November 1992-April 1993," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1994, Vol. 1, No. 2, p. 158.

5 January 1993

Federal agents arrest Reza Zandian of Tehran and Charles Reeger of Huntington Beach for attempting to illegally export a \$2 million IBM ES 9000 computer. The ES 9000 is IBM's most powerful computer and can be used for military purposes.

—Michael Flagg, "Two Accused of Illegal Export Attempt; Crime: The Men, One an Iranian, Allegedly Tried to Ship the Most Powerful IBM Computer to Iran," *Los Angeles Times*, 5 January 1993, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

8 January 1993

Western diplomatic sources claim that China is purchasing an unknown number of MiG-29s from Iran in exchange for Chinese missile technology and a nuclear power station.

—"Iran to Supply MiGs in Exchange for Missile Technology," *Kyodo* (Tokyo), 8 January 1993; in *Proliferation Issues*, 15 January 1993, p. 3.

12 January 1993

Iranian Revolution Guards Corps (IRGC) Commander Mohsen Rezai travels to Pyongyang from Beijing to finalize new agreements regarding weapon systems including ballistic missiles. Shortly before Rezai's departure from Iran, a member of the Iranian parliament reveals that North Korea has demanded a cash payment of \$2.4 to \$2.7 billion for the 200 to 300 Scud-B missiles delivered to Iran during the Iran-Iraq War. [Note: The number of missiles mentioned may be excessive given North Korean production capabilities and the level of Iranian Scud-B use during the two "Wars of the Cities." During that stage of the Iran-Iraq War, Iran fired approximately 91 Scud-B missiles. Also, it is unlikely that North Korea would demand a cash payment given the financial arrangements already in place with Iran.]

—Kenneth Timmerman, "Iran Seeks Missiles From China, North Korea," *Mednews*, Vol. 6, No. 8, 25 January 1993, pp. 3-4.

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13 January 1993

Israeli defense analysts claim that Iran may obtain the North Korean Nodong-1 missile when it becomes operational between 1995 and 1998. Iran and Libya both provide funding to North Korea for the Nodong missile project. Iran reportedly may try to upgrade the Nodong-1 with technology from outside sources.

—"Iran/Libya seek North Korean missile," *Flight International*, 13 January 1993, p. 14.

15 January 1993

Title XVI of the U.S. Department of Defense authorization act places Iran under the Iraq Sanctions Act of 1990 (PL 101-513). Under this act, the United States opposes, and seeks that other states oppose, transfers of goods or technology to Iran that would contribute to its acquisition of biological, chemical, or nuclear weapons, or destabilizing numbers of advanced conventional weapons.

—"Iran-Iraq Arms Non-Proliferation Act of 1992," *Arms Sales Monitor*, 15 January 1993, p. 3.

16 January 1993

Saudi and French authorities report that since 1988, Iran has spent more than \$7 billion on fighter jets, missiles, tanks, and other weapons from China, North Korea, Russia, and Eastern Europe.

—Paul Gillespie, "Iran Could Become Clinton's Obsession," *Irish Times*, 16 January 1993, p. 8, in Lexis-Nexis, www.lexis-nexis.com.

20 January 1993

Israeli Prime Minister Yitzhak Rabin warns that Iran, which is receiving Scud-C missiles and technology to develop longer-range missiles from North Korea, presents a greater threat to Israel than Iraq. Rabin adds that Iran is also working in cooperation with other countries in the Middle East and Northern Africa to manufacture its own long-range ground-to-ground missiles that could hit Israel.

—Dan Izenberg, "Rabin: Iran Potentially Greater Threat Than Iraq," *Jerusalem Post*, 21 January 1993, in Lexis-Nexis, www.lexis-nexis.com.

February 1993

The U.S. Defense Department reports that between 2000 and 2010, Syria, Iran, and China will possess cruise missiles with stealth capabilities and chemical and biological warheads.

—*Aviation Week & Space Technology*, 1 February 1993, pp. 26-72, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, November 1992-April 1993," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1994, Vol. 1, No. 2, p. 157.

February 1993

The Central Intelligence Agency reports that Iran, Syria, and Libya have already deployed precision guided cruise missiles that threaten U.S. naval forces. The CIA says, however, that Iran's missile program faces a shortage of skilled personnel, technology, materials, and financing. North Korea is becoming the main supplier of Iran and Syria's missile programs, and "is willing to sell to any country with the cash to pay."

—David Fulghum, *Aviation Week & Space Technology*, 1 March 1993, p. 25, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, November 1992-April 1993," *Nonproliferation*

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Review, James Martin Center for Nonproliferation Studies, Winter 1994, Vol. 1, No. 2, p. 157; John J. Flalka, *Wall Street Journal*, 25 Feb. 1993, p. A10, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, November 1992-April 1993," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1994, Vol. 1, No. 2, p. 158.

7 February 1993

The CIA alleges that Iran is spending \$2 billion per year on high-tech weaponry and that it will have a nuclear bomb by the end of the decade. According to these agencies, Iran is buying submarines, planes, and tanks from Russia, jet fighters and tactical missiles from China, and medium-range missiles from North Korea.

—Bob Hepburn, "Iran Resurgent: A Military Buildup and Support for Extremist Groups Have Mideast States and West Wary of Tehran," *Toronto Star*, 7 February 1993, p. F2, in Lexis-Nexis, www.lexis-nexis.com.

9 February 1993

Iran has received a number of launching pads as well as Scud-C SSMs with a range of 500km as part of a deal Iranian authorities previously signed with North Korea. Iran had received 250 Scud-B missiles before the Gulf War. —"Delivery Reportedly Taken of DPRK Scud-C," Israel Television Network, 9 February 1993; in FBIS Document FBIS-NES-93-026, 10 February 1993, p. 47; "North Korean Scud-C Missiles Delivered," Israel Television Network, 9 February 1993; in *Proliferation Issues*, 5 March 1993, pp. 13-14.

16 February 1993

Iran reportedly is working with North Korea on the development of a long-range missile. Military sources at the United Arab Emirates Arms Show identify the missile system as the North Korean Nodong-1 and claim that it could be ready for production by 1996.

—"I Quarter 1993: February," Gulf/2000 Project (New York: School of International and Public Affairs [SIPA], Columbia University, February 1993).

24 February 1993

The Army of Iran has North Korean-made Scud missiles with a 300km range and Chinese-made Silkworm missiles with an 800km range. Iran is also developing missiles domestically: the Ujab (Oghab) with a 40km range, the Thandar with a 48km range, the Nazeat with a 90km range, the Shaheen with a 130km range, the Iran with a 130km range, and the Mushak with a 160km range.

—"Iran, Iraq, Syria Busily Expanding Their Arsenals," *Jerusalem Post*, 24 February 1993, in Lexis-Nexis www.lexis-nexis.com.

24 February 1993

An unnamed Middle Eastern military source states that Iran is working with North Korea on developing a long-range missile capable of traveling 621 miles and carrying a 1760-pound conventional warhead.

—Alan Lupo, "The Iran Threat," *Boston Globe*, 24 February 1993, p. 13, in Lexis-Nexis, www.lexis-nexis.com.

25 February 1993

CIA head James Woolsey states that North Korea has agreed to sell ballistic missiles to Libya, having already sold extended-range Scud rockets to Syria and Iran.

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—"Iran Stockpiling Arms, CIA Director Testifies," *St. Louis Post-Dispatch*, 25 February 1993, p. 1C, in Lexis-Nexis, www.lexis-nexis.com.

March 1993

A group of 21 Iranian officials travels to Pyongyang, North Korea to discuss cooperation on ballistic missile programs. The discussions include Iranian involvement in North Korea's upcoming test of its Nodong missile, as well as negotiating purchase of the Nodong. The Iranian group is led by Brigadier General Hossein Mantequei, director of the Defense Industries Organization (DIO). The DIO, through a project known as "Department 140," is responsible for Iran's ballistic missile development and production activities.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 22.

March 1993

Western intelligence sources claim that Iran is providing \$500 million for North Korea's ballistic missile program, which would be capable of striking Japan with nuclear and chemical warheads. In return, North Korea will provide Iran with nuclear bombs and technical plans for nuclear weapons manufacturing. North Korea's Central News Agency denied these allegations.

—*US News & World Report*, 22 March 1993, p. 18; *Reuter* (Tokyo), 18 April 1993; *Washington Times*, 19 April 1993, p. A2; all cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, November 1992-April 1993," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1994, Vol. 1, No. 2, p. 158.

1 March 1993

A report indicates that the Chemical Industries Group handles Iran's weapons industry. U.S. intelligence sources say that Iran's Chemical Industries Group is producing solid-fuel propellant powders for Iran's ballistic missile and artillery rocket programs. The Missile Industries Group oversees all missile-related activities in Iran. Prior to the U.S. embargo in February 1988, Iran obtained ammonium perchlorate for solid-rocket propellant from the United States, Pakistan, and Holland. After the embargo, Iran is believed to have obtained its ammonium perchlorate from China through Brazil as an intermediary. According to Iranian engineers, the Nazeat-10, which is under development, is an unguided rocket variant of the Nazeat-6. Iranian engineers confirmed that production of solid- and liquid-fueled missiles is done separately. The Semnan facility jointly produces solid-fueled rockets with China and the Isfahan facility produces liquid-fueled ballistic missiles with North Korea.

—"Special Report: The Iranian Defense Industry," *Mednews*, 1 March 1993, p. 1.

1 March 1993

Iran is interested in acquiring the Russian S300V anti-missile system, which Russia claims is capable of intercepting high-altitude Scud-type ballistic missiles.

—"Iran Cancels Russian Deals," *Mednews*, 1 March 1993, pp. 4-5.

19 March 1993

Dr. Martin Navias, lecturer at the Department of War Studies at King's College, London, asserts that because North

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Korea has few allies and is so indebted to Iran, it is likely that North Korea has sold all of its secrets to Iran. He claims that the North Koreans acquired a Scud missile from Egypt in the 1980s, copied it, and sold the first products to Iran. Later agreements between North Korea and Iran include a new missile dubbed "Tondar-68."
—"N Korea given atom inspection deadline," *Daily Telegraph* (London), 19 March 1993, in Lexis-Nexis, www.lexis-nexis.com.

21 March 1993

The "most impressive" missile in the Iranian arsenal—the Nodong—has been manufactured in North Korea, and was jointly financed by Libya and Iran. North Korea reportedly received £350 million from Iran to build two secret plants for ballistic missile production. The Nodong has twice the range of the Scud-B missile.

—Con Coughlin, "Why Tehran is the Real Threat to West's Safety as Saddam Hussein Dominates the Headlines, Iran Goes Shopping to Become Middle East Superpower," *Sunday Telegraph* (London), 21 March 1993, p. 24, in Lexis-Nexis, www.lexis-nexis.com.

22 March 1993

Citing *US News & World Report*, Iran has paid North Korea \$500 million to develop ballistic missiles that could reach targets as far away as Japan.

—"US Weekly: N.Korea, Iran to Build Nuclear Weapons," *Jerusalem Post*, 22 March 1993, in Lexis-Nexis, www.lexis-nexis.com.

28 March 1993

A 21-member Iranian delegation, headed by the Islamic Revolution Guards Corps (IRGC) commander in charge of the Iranian SSM force Brig. Gen. Hossein Mantequei and officials from the Iranian Defense Industries Organization and the missile division of the IRGC, visits Pyongyang in the fifth such visit in the past year. The delegation is to observe the final tests of the Nodong-1 missile and be trained in its use. According to the People's Mujahedeen of Iran, some of the delegation will stay in North Korea for at least one month. The delegation's presence indicates that a final deal, which may include the purchase of fixed and mobile launchers, could be imminent. The delegation may also have established a timetable for the testing of Nodong-2 in Iran. U.S. officials believe that Iranian oil may be exchanged for the missiles; Iran supplies approximately 40% of North Korea's oil needs. According to the *Chosun Ilbo*, the Iranian delegation is seeking to purchase 150 Nodong missiles.

—Douglas Jehl, "Iran Is reported Acquiring Missiles," *New York Times International*, 8 April 1993, p. A9; Kevin Rafferty, "Iran and N Korea 'To Test Missile'," *Guardian* (London), 26 October 1993, p. 20; Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, pp. 24-25; "Puk Missile Nodong 1 Ho/Sajöng 1 Ch'ön km Tongpug'a Anbo 'Bisang'," *Chosun Ilbo*, 10 April 1993, <http://www.chosun.com>.

29 March 1993

According to Western intelligence sources, North Korea and Iran are engaged in a cooperative effort to develop a ballistic missile system capable of carrying nuclear and chemical warheads. Iran reportedly provided North Korea \$500 million for the missile program.

—"Iran Funds North Korea's Drive to Build Nuclear Bombs," *US News & World Report*, 29 March 1993, p. 18.

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Spring 1993

Iran receives 10 Nodong-2 surface-to-surface missiles, with a range of 1300-1500km.

—Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on Terrorism & Unconventional Warfare, House Republican Research Committee, US House of Representatives, Washington, DC, 7 February 1994, p. 3.

April 1993

Western officials report that Libya sold the design of the Al-Fatah missile to Iran. Western officials say the Al-Fatah has a range of 950km, but other sources state a range of only 500km. Iran and Libya are likely cooperating to upgrade the Al-Fatah. Iran also may be developing its own cruise missiles and long-range rockets of at least 2,000km. It is also reported that Iran's procurement agents have been showing keen interest in German satellite-launch expertise. There is reportedly also considerable Iranian interest in Japanese satellite-launch expertise and in the SSM-1 and ASM-2 subsonic, turbojet-powered missiles.

—Alan George, "Libya Sells Al-Fatah Design to Iranians," *Flight International*, April 1993, p. 4.

April 1993

Officials at the Abu Dhabi arms show state that North Korea is receiving funding from Libya and Iran for the development of the Nodong-1 liquid-propellant ballistic missile, which could be production-ready within three years.

—"Iran, North Korea Working on Long-Range Missile," *Asian Defence Journal*, April 1993, p. 91.

April 1993

North Korea and Iran are participating, with Chinese technology and assistance, in the construction of underground factories near Aleppo and Hama in Syria for the joint-production of North Korean Scud-C missiles and Chinese M-9 missiles.

—Michael Eisenstadt, "Syria's Strategic Weapons," *Jane's Intelligence Review*, April 1993, pp. 168-173.

7 April 1993

A U.S. official suggests that the March 1993 Iranian delegation to North Korea may have explored the possibility of assembling the Nodong-1 in Iran from components produced in North Korea in order to more easily conceal the delivery of the missiles. Officials say that Iran hopes to acquire up to 150 Nodong-1 missiles.

—Douglas Jehl, "Iran Is Reported Acquiring Missiles," *New York Times International*, 8 April 1993, p. A9.

8 April 1993

According to the Mujahedin-e Khalq Organization (MKO), there have been five military delegation teams sent to North Korea in the past year. The last delegation arrived in Pyongyang in March 1993 with 21 members headed by Brigadier General Husayn Mantequei of the Islamic Revolution Guards Corps (IRGC). The prominence of missile experts in the last delegation suggests that they observed the final tests of the Nodong-1 and were trained in its use. U.S. Pentagon spokesman Bob Hall says, "We are very concerned about the Iranian effort in this area to acquire this type of [Nodong-1 missile] weaponry, considered to be destabilizing in the region." The CIA has claimed that the new North Korean missile represents a threat to the stability of both Asia and the Middle East.

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The visit by a high-level Iranian military delegation to Pyongyang has prompted U.S. concern that full-scale production of the missile may be closer than previously thought. Although it has been known that Iran was seeking such a weapon from China and North Korea, the visit to Pyongyang by its top missile experts appears to indicate for the first time that a final deal was imminent. Secretary of State Warren Christopher says that the Iranian military delegation is in North Korea to complete the purchase of 150 missiles. The United States believes that the delivery of the 600-mile-range missile could begin "certainly by the end of the year," according to a Pentagon official. The Nodong-1 missile would double the range of Iranian and North Korean military payloads, putting Japan within North Korea's range and Israel within Iran's.

—Douglas Jehl, "Iran Nears Deal to Buy Israel-Range Missiles from North Korea," *Houston Chronicle*, 8 April 1993, p. 23, in Lexis-Nexis, www.lexis-nexis.com; Douglas Jehl, "Iran is Reported Acquiring Missiles," *New York Times*, 8 April 1993, p. A9; "Report of Iran-N.Korea Missile Deal Stirs Alarm," *Atlanta Journal and Constitution*, 8 April 1993, p. 2, in Lexis-Nexis, www.lexis-nexis.com; Alan Elsner, "US Concerned About North Korean Missile Sale to Iran," Executive News Service, 9 April 1993; "Iranian Missile Purchase Alleged," *Plain Dealer*, 9 April 1993, p. 7A, in Lexis-Nexis, www.lexis-nexis.com.

11 April 1993

Libyan leader Muammar al-Qadhafi sells Iran the plans to the Al-Fatah intermediate-range surface-to-surface missile. All of Libya's test launches of the Al-Fatah have failed; it is likely that Iran will try to develop the Al-Fatah as a joint venture with Libya.

—"Iran Buying Libyan Missile Plans," *Der Standard* (Vienna), 11 April 1993, p. 3; in "Iran Said to Cooperate with Libya on Missile Program," FBIS Document FBIS-NES-93-069, p. 45.

12 April 1993

U.S. intelligence sources confirm that China has sold key missile components to Iran.

—Lally Weymouth, "Thinking Out a China Policy," *Washington Post*, 12 April 1993, p. A19.

17 April 1993

North Korea denies allegation made by Western news sourced that it intends to export medium-range missiles to Iran.

—Korean Central News Agency (Pyongyang), 17 April 1993, in "Pyongyang Denies Exporting Missiles to Iran," FBIS-EAS-93-073, 19 April 1993, p. 21.

18 April 1993

North Korea denies allegations by Western intelligence that North Korea and Iran are engaged in a cooperative effort to develop a ballistic missile system capable of striking Japan with nuclear and chemical warheads. Iran is allegedly providing North Korea \$500 million for missile development in exchange for an unknown number of nuclear bombs and plans for nuclear weapons reprocessing plants. [Note: While North Korea may be able to offer some assistance in the area of nuclear weapon development, it is doubtful that it is in a position to provide any working models.]

—Charles Fenyvesi, ed., "Washington Whispers," *US News & World Report*, 29 March 1993, p. 18; "Fear of N. Korea Fuels Arms Race," *Washington Times*, 19 April 1993, p. A2.

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19 April 1993

U.S. intelligence sources confirm that Iran is now capable of delivering chemical and biological weapons using ballistic and short-range missiles due to advances in packaging technology. It is believed that anthrax and sarin warheads have been fitted to Iran's Scud-Cs or other ballistic missiles. The Semnan missile facility reportedly produces five tons of nerve gas per month, which is then shipped to the main missile assembly plant at Isfahan where it is placed in warheads and fit onto Iranian-built Scud-Bs.

—"Iran's CW Programs," *Mednews*, 19 April 1993, p. 4.

May 1993

Iran begins producing a new man-portable air-defense system (MANPADS) called the Misagh-1. The Shahid Shah Abady Industrial Complex based in Tehran developed the system. The "fire and forget" surface-to-surface missile is claimed to have the capability to engage fixed-wing and helicopter targets from all angles. The new Misagh-1 looks similar to the China National Precision Machinery Import and Export Corporation's QE-1 Vanguard. The missile is also similar in some ways to the Stinger missile. Pakistan's AQ Khan Research Laboratories also builds a similar missile system, called the Anza MK II.

—Christopher F. Foss, "Iran fields manportable SAM System," *Jane's Defence Weekly*, 3 May 2000, p. 16.

1 May 1993

North Korea is developing the Nodong-1, a missile with twice the range of the Scud-C. Iran currently possesses the 300km Scud-C, which was acquired from North Korea in 1991. American officials believe that the Nodong may be in the hands of Iran by the end of 1993. Since the end of its war with Iraq, Iran has embarked on an extensive arms-purchasing spree. Tehran's ayatollahs have spent tens of billions of dollars to buy advanced weapons from all available sources. The bulk of this money has paid for efforts to acquire weapons of mass destruction in a program that resembles that of Iraq.

—"Nuclear Weapons Must Not Spread," *St. Louis Post-Dispatch*, 1 May 1993, p. 2B, in Lexis-Nexis, www.lexis-nexis.com; Gerald Steinberg, "War and Peace: Mixed Signals from Iran," *Jerusalem Post*, 5 May 1993, in Lexis-Nexis, www.lexis-nexis.com.

8 May 1993

Iran conducts extensive naval exercises in the Persian Gulf to include live firing of missiles.

—"Submarines Included in Iranian Exercise," *Jane's Defence Weekly*, 8 May 1993, p. 11.

11 May 1993

Iran reportedly receives a delivery of eight supersonic sea-skimming cruise missiles, known as the Sunburst, from Ukraine. The purchase of the Sunburst missiles is the latest acquisition in Iran's arms procurement program aimed at making it the regional superpower. The Sunburst missiles have been purchased as part of a \$1.5 billion barter agreement between Tehran, Moscow, and Kiev. However, Ukraine's Ministry of Defense has denied any Ukrainian involvement. The disclosure of the missile deal follows the delivery to Iran last year of the first of two kilo-class diesel submarines from Russia, which the United States tried to block, and up to 100 North Korean Scud-C missiles. The scale of Iranian military purchasing is also tied to the reconstruction of the domestic arms industry, which this year showed its battlefield missile systems for the first time at an arms fair in Abu Dhabi.

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—Paul Beaver, "Iran Missiles Could Control Tanker Route," *San Diego Union-Tribune*, 11 May 1993, p. A1, in Lexis-Nexis, www.lexis-nexis.com; "Iranian Beefing Up Their Arms Muscle," *Star Tribune* (Minneapolis), 16 May 1993, p. 19A, in Lexis-Nexis, <http://www.lexis-nexis.com>; "Kiev Denies Rumor of Arms Sales to Iran," *Demokratychna Ukrayina* (Kiev), 18 May 1993, p. 2; in JPRS-TND-93-015, 24 May 1993, p. 27.

23 May 1993

Officials claim that Washington expresses concern to Russia, Ukraine, and other countries about the potential sale to Tehran of submarines, advanced anti-ship missiles, and other conventional arms. Washington also plans to renew a Bush administration initiative—rebuffed by Japan and Western Europe—to halt sales to Iran of "dual-use" technologies capable of both civilian and military application.

—Jeffery Smith and Daniel Williams, "White House to Stop Up Plans to Isolate Iran, Iraq; Administration to Try 'Dual Containment'," *Washington Post*, 23 May 1993, p. A26, in Lexis-Nexis, www.lexis-nexis.com.

24 May 1993

Israeli diplomatic sources reveal that China has "sworn" to Israel that it is not selling missiles to Iran or Syria.

—"China Makes Missile Pledge to Israel," *Interavia Air Letter*, 24 May 1993, p. 5; in Dialog Databases, www.dialog.com.

29 May 1993

A delegation of the Islamic Revolution Guards Corps (IRGC) travels to North Korea to watch the first launch of the Nodong-1 missile. The Nodong is a liquid-fueled missile with a range of 1,000 to 1,300km.

—Konstantin Eggert, "'Meteor' for the Ayatollahs. Iran Needs Ballistic Missiles in Order To Become a World Power," *Izvestiya* (Moscow), 21 October 1998, p. 5; in "Iran's Missile Program Viewed," FBIS Document FTS19981021001050, 21 October 1998.; Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 37.

29-30 May 1993

North Korea successfully launches four missiles from the Musudan-ri Test Facility in Hwadae-kun, North Hamgyŏng Province, two of which are thought to be Nodong-1 missiles. Later reports confirm that only one of the missiles was a Nodong. The missiles were reportedly fired in the direction of the Japanese Noto Peninsula at target buoys in the Sea of Japan. One missile traveled 500km; another traveled 100km; the remaining two fell short of 100km. Two North Korean naval vessels, a Najin-class frigate and a minesweeper, are positioned 30km apart about 350km off Noto, reportedly to monitor the launch. Israel's Mossad reportedly warned the United States and Japan of the test weeks in advance. Iranian and Pakistani observers are present for the tests.

—Kyodo (Tokyo), 14 June 1993, in "DA: DPRK 'Appears' to Have Tested Missile," FBIS-EAS-93-112, 14 June 1993, p. 5; David E. Sanger, "Missile is Tested by North Koreans," *New York Times*, 13 June 1993, p. 7; Kim Yong Kol, *Hankook Ilbo*, 16 June 1993, p. 4, in "Israel Makes Gesture to North Korea for Improvement of Relations," FBIS-EAS-93-114, "Possible Israeli Aid to DPRK Viewed," 16 June 1993, p. 20; "Defense Ministry: May Nodong-1 Test Successful," Yonhap News Agency (Seoul), 24 June 1993, in FBIS-EAS-93-120, 24 June 1993, p. 19; "North Korea Seen Successful in Test of Nodong-1 Missile," *Aerospace Daily*, 29 June 1993, pp. 538-539; Lee Jŏng Hun, "FROGesŏ Taepodong Kkaji: Pukhan Missile Game," *Shindonga*, August 1999, p. 203; Joseph S. Bermudez, Jr., "A History of

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Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, pp. 17, 21; Joseph S. Bermudez, Jr., "An Analysis of North Korean Ballistic Missile Testing," *Jane's Intelligence Review*, April 1995, pp. 186-189; Chang Chun Ik, *Pukhan Haek-Missile Chŏnjaeng* (Seoul: Sŏmundang, May 1999), pp. 283-286; 291.

June 1993

A meeting between senior Israeli and North Korean officials is scheduled in Beijing. Israeli officials are pressuring North Korea not to sell Iran Nodong-1 missiles, which are reportedly based on the Scud-D.

—Neal Sandler, "Israel voices concern over missile for Iran," *Jane's Defence Weekly*, 24 July 1993, p. 7, in Lexis-Nexis, www.lexis-nexis.com.

June 1993

Iranian Revolution Guards Commander General Mohsen Rezai holds talks with North Korean defense chiefs in Pyongyang, and urges closer ties between the two nations. [Note: This visit is most likely the same as that mentioned on 16 June 1993.]

—"Alarm Sounded Over Missile Plans Involving Tehran and North Korea," *Mideast Mirror*, Vol. 7, No. 237, 7 December 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

8 June 1993

Japan's *Sankei Shimbun* quotes Itamar Rabinovitch, Israel's ambassador to the U.S., as saying that North Korea's Nodong missile has a range of 1,300km and that North Korea is exporting the missile to Iran. Rabinovitch claims the Nodong can be modified to extend the range from 1,000km to 1,300km. [Note: This report does not explain how the range is extended. It does not say if it is simply from a reduction in the payload, or other modifications.]

—"Pukhan, Nodong 1 Ho Missile Sajŏnggŏri 1 Ch'ŏn 3 Paek KM Ro Yŏnjang," *JoongAng Ilbo*, 8 June 1993, www.joins.com.

9 June 1993

European nations agree to consider economic sanctions against the Tehran regime to force it to abandon clandestine nuclear, chemical, and missile weapon programs. After a meeting with the 12 EC foreign ministers, Secretary of State Warren Christopher states to a news conference, "Iran must understand that it cannot have normal commercial relations...on the one hand while trying to develop weapons of mass destruction on the other." Christopher specifically has called for a ban on the sale of dual-use technology that has both civilian and military applications.

—Norman Kempster, "U.S., EC to Study Sanctions Aimed at Iran Arms Buildup; Diplomacy: Europeans Get Briefing From Christopher. Talk of Tehran's Programs Gives Foreign Ministers a Break From Bosnia," *Los Angeles Times*, 10 June 1993, p. A8, in Lexis-Nexis, www.lexis-nexis.com.

10 June 1993

Recent American intelligence reports estimate that North Korea is expected to begin delivery of new ballistic missiles with a range of 600 miles in about six months.

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—Elaine Sciolino, "U.S. Asks Europe to Ban Arms-Linked Sales to Iran," *New York Times*, 10 June 1993, p. A5, in Lexis-Nexis, www.lexis-nexis.com.

19 June 1993

Israel wants Pyongyang to abandon its plans to sell Iran a newly developed missile, the Nodong-1, whose 1,000km range brings Israel within Iran's reach. According to an Israeli Foreign Ministry official, an Israeli delegation will meet with North Korean officials in the next few days to try to convince them not to sell medium-range missiles to Iran. Israel's Industry and Trade Minister Micha Harish states, "The purpose of establishing diplomatic relations with North Korea is to prevent its sale of surface-to-surface missiles to Iran."

—Abraham Rabinovich, "Israel Appears Suddenly as New Player on North Korean Scene," *Straits Times* (Singapore), 19 June 1993, p. 20, in Lexis-Nexis, www.lexis-nexis.com; "Israel Meets North Koreans to Discuss Missile Sale to Iran," *Jerusalem Post*, 24 June 1993, in Lexis-Nexis, www.lexis-nexis.com; Michael Parks, "Fearing Its Foes May Buy N. Korean Missiles, Israel Gets Down to Business; Jerusalem Hopes Economic Incentives Will Dissuade Pyongyang From Arms Sales," *Los Angeles Times*, 26 June 1993, p. A3, in Lexis-Nexis, www.lexis-nexis.com.

22 June 1993

Al-Sharq Al-Awsat, a Saudi paper based in London, reports that there is a tripartite deal between Iraq, Iran, and North Korea in which Iran will transship Iraqi oil to North Korea through the Iranian port of Bandar Abbas. The deal is worth \$120 million, and its proceeds are to be divided equally between Iran and Iraq. The Iranian portion will be transferred to the North Korean firm Changgwang Shinyong, and is to finance the purchase of "long-range" missiles from North Korea. Iranian Deputy Defense Minister Ahmad Wahedi is handling the Iran-North Korean negotiations with the assistance of the head of the defense ministry's missile department, Montaqi, and the Islamic Revolution Guards Corps (IRGC) representative in Pyongyang, Tabaqi. The Iranian foreign ministry advisor is conducting negotiations between Iraq and Iran. Under the agreement, North Korea is to receive 15,000 barrels of crude oil per day.

—Walid Abi-Murshid, "In Three-Way Trade Operation, Korean Missile Deal for Iran to Be Financed by Iraqi Oil Exports," *Al-Sharq Al-Awsat* (London), 17 June 1993, p. 1, in FBIS-NES-93-118, "DPRK Missiles for Iran in Secret Deal with Iraqi Oil," 22 June 1993, p. 53.

25 June 1993

In Beijing, Israeli Foreign Ministry Deputy Director-General Eitan Bentsur meets with North Korean officials in an attempt to dissuade them from concluding a reported deal to provide Iran with 150 Nodong-1 missiles in exchange for oil and cash. The meeting reportedly ends with the North Korean officials demanding cash for compliance. [Note: There are additional reports that place Bentsur in Pyongyang at about this time performing the same mission. It is uncertain whether this visit was in conjunction with, or confused with the Beijing visit.]

—Asher Wallfish, "Israel 'Cannot Ignore Missile Sales to Iran'," *Jerusalem Post*, 30 June 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Jon B. Wolfsthal, "U.S. Prods Israel to Halt Talks With North Korea on Missile Sales," *Arms Control Today*, September 1993, p. 24; Clyde Haberman, "Israel Again Seeks a Deal With an Outcast," *New York Times*, 11 July 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Leslie Susser, "Peres: Korea-Bound?," *Jerusalem Post*, 15 July 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com;

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Steve Rodan, "All Eyes Are On Israel's North Korean Connection," *Jerusalem Post*, 25 March 1994, p. 3B, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

27 June 1993

Deputy Director General of Israel's Foreign Ministry meets with a ranking official of the North Korean Communist Party to discuss Israel's concerns that North Korea might sell missiles to Iran that could reach Israel.

—"Israeli Media Report N. Korea Missile Tests," *Los Angeles Times*, 4 July 1993, p. A14.

29 June 1993

Israeli Prime Minister Yitzhak Rabin states, in front of the Knesset Foreign Affairs and Defense Committee, that Iran poses a greater danger to the world than Iraq. Rabin also voices his regret that Russia and China are each selling two nuclear reactors to Iran and that North Korea's has already sold Scud-3 medium-range missiles to Iran.

—Asher Wallfish, "Iran Greater Threat Than Iraq," *Jerusalem Post*, 29 June 1993, in Lexis-Nexis, www.lexis-nexis.com.

30 June 1993

An Associated Press dispatch from Seoul, South Korea, states that North Korea has been earning \$1 billion a year from missile sales to Iran, even though North Korea denies this fact.

—Asher Wallfish, "Israel 'Cannot Ignore Missile Sales to Iran'," *Jerusalem Post*, 30 June 1993, in Lexis-Nexis, www.lexis-nexis.com.

1 July 1993

Aero Systems Inc. of Miami is fined \$160,000 after pleading guilty to two federal charges of selling missile and fighter jet parts to Iran from 1984-1986.

—"Aero Systems is Fined \$160,000 for Selling Fighter Parts to Iran," *Miami Herald*, 1 July 1993, p. C1, in Lexis-Nexis, www.lexis-nexis.com.

11 July 1993

Iran may possess an unexploded U.S. cruise missile, which was fired over Iran at an Iraqi industrial site in January 1993.

—"II Quarter 1993: July," Gulf/2000 Project (New York: School of International and Public Affairs [SIPA], Columbia University, July 1993).

14 July 1993

The 21-member Iranian delegation of April 1993 was to sign a contract for the purchase of 150 Nodong-1 missiles, which reportedly have a circle of equal probability (CEP) of 2,000m. [Note: the 150 missiles conflicts with the 30, July report of 100 missiles.] The missile was originally designed with a range of 1,000km in 1991, but, at Iranian request, this was increased to 1,300km so that the missile could reach Israel. Iran reportedly supplied financial support to extend the range. According to the *Joongang Ilbo*, the Iranian delegation signed a contract with North Korea for the purchase of 150 Nodong missiles and part of the delegation is still in North Korea.

—Yonhap News Agency (Seoul), 14 July 1993, in "Iran Said to Place Order for 150 DPRK Missiles," FBIS-EAS-93-134,

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15 July 1993, p. 18; "Pukhan Nodong 1 Ho Pan'gyöngmyöngjungbömwi 2 Ch'ön M—Sankei Shinmun Podo," *Joongang Ilbo*, 15 July 1993, www.joins.com.

19 July 1993

The *Wall Street Journal* reports that North Korea is assisting Libya establish a Scud production facility near Tripoli known as the "Central Repair Workshop." The report also says that North Korea is selling Scud-B and Scud-C missiles to Iran, Libya, and Syria.

—Robert S. Greenberger, "Washington Insight: North Korea's Missile Sales in Mideast, Along With Nuclear Issue, Raise Concern," *Wall Street Journal*, 19 July 1993, p. A6.

30 July 1993

When questioned, State Department officials do not confirm the report that Syria received a delivery of missiles from Iran and transported them from Damascus to Hizbullah forces in Lebanon as recently as two weeks ago.

— H. Kuttler, "US Denies Cease-Fire Efforts State Department Underlines Need for Halt to Hostilities," *Jerusalem Post*, 30 July 1993, in Lexis-Nexis, www.lexis-nexis.com.

30 July 1993

Israel failed to persuade North Korea to refrain from selling Tehran 100 Nodong-1 missiles capable of reaching Tel Aviv from western Iran. [Note: the 100 missiles conflicts with the 14, July report of 150 missiles.] The Iranian purchase of these missiles will cost \$1 billion. [Note: South Korea has claimed that North Korea has been earning \$1 billion yearly on missile sales to Iran. The source is not clear on how many years the transactions have been occurring, but implies more than one year. See entry for 30 June 1993.]

—Douglas Davis, "N. Korean Missile Sales to Iran not Prevented," *Jerusalem Post*, 30 July 1993, in Lexis-Nexis, www.lexis-nexis.com.

4 August 1993

The second Russian-built kilo-class diesel-electric submarine arrives in Iran at the Persian Gulf port of Bandar Abbas. Another submarine has been there since late 1992. The submarines are armed with 18 torpedoes and possibly missiles. The complete transaction costs Iran \$750 million.

—"Second Sub for Iran," *Washington Post*, 4 August 1993, p. A12, in Lexis-Nexis, www.lexis-nexis.com.

8 August 1993

Syria receives Scud-C missiles from North Korea via Russian aircraft, and that Iran may also have received Scud-Cs in this fashion. [Note: Rabin says the shipment was on 8 August, but it is not clear if this could be the 5 August 1993 delivery of MAZ 543 transporter-erector launchers (TELs) to Syria or if this is a second delivery.]

—KBS-1 Radio Network (Seoul), 15 August 1993, in "DPRK Shipped Scuds to Syria on Russian Airplanes," JPRS-TND-93-027, 26 August 1993, p. 9; "Pukhan, Nodong 1 Ho Syria'e Such'ul"—Rabin Israel Ch'ongni P'ongno," *Joongang Ilbo*, 16 August 1993, www.joins.com; "Iran Will Soon Have Korean Missiles Able to Hit Israel: Report," *Agence France Presse*, 20 December 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

15 August 1993

Israeli Prime Minister Yitzhak Rabin announces that Russian planes have transported Scud-C missiles from North

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Korea to Syria, and possibly Iran, during the previous week. In recent discussions with North Korea, Israel attempted to persuade the DPRK to halt its sale of long-range missiles to countries like Iran and Syria.

—"Claims Scuds Sent to Syria, Possibly Iran," IDF Radio (Tel Aviv), 15 August 1993; in FBIS Document FBIS-NES-93-156, 16 August 1993, p. 32.

15 August 1993

Some senior government officials of Israel state their conviction that Pyongyang will agree to a "package deal" including a commitment not to sell Nodong-1 intermediate-range missiles to Iran. The same officials note, "We see the issue of North Korean participation in the NPT [Non-Proliferation Treaty] as being totally unrelated to its sale of missiles to Iran."

—David Makovsky, "Israel Faces Hour of Decision on N.Korea Talks Could Lead to Canceling of Missile Sale to Iran, Israeli Officials Believe," *Jerusalem Post*, 15 August 1993, in Lexis-Nexis, www.lexis-nexis.com.

16 August 1993

At the behest of the United States, Israeli Prime Minister Yitzhak Rabin announces that Israel will break off discussions with North Korea designed to halt the sale of North Korean missiles to Iran and Syria. Foreign Minister Shimon Peres had told the Knesset Foreign Affairs and Defense Committee that North Korea wants \$500 million to stop the sales.

—Dan Izenberg and Batsheva Tsur, "Israel Heeds US Request To Stop Talks With N. Koreans on Missile Shipments," *Jerusalem Post*, 17 August 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Jon B. Wolfsthal, "U.S. Prods Israel to Halt Talks With North Korea on Missile Sales," *Arms Control Today*, September 1993, p. 24.

9 September 1993

Arab and Kurdish opposition sources in London report that Iraq has sold large amounts of arms and ammunition to Iran, including missiles and chemical weapons, in exchange for foreign currency.

—"Chemical Weapons, Missiles Allegedly Sold to Iran," *Voice of the Iraqi People*, 9 September 1993; in JPRS-TND-93-030, 27 September 1993.

20 September 1993

An Israeli press report quotes Russian Deputy Foreign Minister Anatoliy Adamishin in response to questions regarding the use of Russian aircraft to transport North Korean missiles to Iran. During the interview, Adamishin said, "To my knowledge there were no ballistic missiles...you cannot check them all, but to my knowledge there were no military equipment [*sic*] in these flights."

—Jack Katzenell, *Qol Yisra'el* (Jerusalem), 20 September 1993, in "Russia Did Not Transport Missiles from DPRK to Iran," JPRS-TND-93-032, 12 October 1993, p. 34.

October 1993

Japanese Foreign Minister Tsutomu Hata meets with Iranian Foreign Minister Ali Akbar Velayati in New York. Although Velayati denies any Iranian involvement in North Korea's missile program, Hata claims that the Iranian presence at the May 1993 North Korean missile test indicates that they were involved. Hata warns Velayati that

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Iran will find itself isolated if it persists in this relationship with North Korea.

—Lally Weymouth, "Shadow Over Japan," *Washington Post*, 1 November 1993, p. A17.

4 October 1993

Iran signs a long-term deal with China worth \$5 billion, which covers the sale of M-11 missiles with a 965km range. China reportedly has also delivered significant numbers of HY-2 Silkworm anti-ship missiles and is also assisting Iran with its indigenous defense industry. It is also reported that Iranian engineers are developing the 40km-range Oghab, 40km-range Tondar-68, 90km-range Nazeat, 100-300km-range Shaheen-2, 130km-range Iran-130, and the 160km-range Mushak. Iran reportedly has also made deals with North Korea worth \$3 billion, which includes 170 Scud-B missiles. In 1994, North Korea will also begin to deliver 965km-range ballistic missiles to Iran.

—James Kraska, "Iran Flexes Maritime Muscles in Gulf," *Defense News*, 4 October 1993, pp. 25-26.

6 October 1993

Israel has embarked on a five-year secret project to develop and deploy an Anti-Tactical Ballistic Missile (ATBM) system. The move was prompted by Israeli concern over Iran's acquisition of the Nodong missile.

—Steve Rodan, "Secret Project for Enhanced Arrow Launched," *Jerusalem Post*, 6 October 1993, pp.1, 2; in JPRS-TND-93-034, 27 October 1993, pp. 29-30.

22 October 1993

The Saudi Arabian newspaper *Al-Sharq al-Awsat* reports that Iran and North Korea are planning a test of the Nodong-2 missile in the Lut desert in southeastern Iran in late October. A North Korean military delegation is currently in Iran to prepare for the Nodong-2 test. The Iranians have a missile-testing site at a large military complex at Sharoud, east of Tehran. The missile-testing site is linked to a monitoring facility south of Tabas. Iran reportedly has negotiated the purchase of 150 Nodong-1 missiles, which they expect to receive by the end of 1993. [Note: The first shipment of at least 12 missiles did not actually occur until May 1995; see entry for 2 May 1995.]

The Nodong-2, also known as the Scud-E, is an improved version of the Nodong-1 and has a range of 1,500-2,000km. For the past few years, Iran has been funding the development of the Nodong-1, and also appears to be funding the Nodong-2, according to *Al-Sharq al-Awsat*.

—"IV Quarter 1993: October," Gulf/2000 Project (New York: School of International and Public Affairs (SIPA), Columbia University, October 1993); "Iranians, N.Koreans Set to Test Missile," *Plain Dealer*, 23 October 1993, p. A6, in Lexis-Nexis, www.lexis-nexis.com.; Yomirui Shimbun, "Paper: N. Korea, Iran to Test Missile; With Range of About 2,000 Kilometers," *Daily Yomiuri*, 24 October 1993, in Lexis-Nexis, www.lexis-nexis.com.

23-30 October 1993

Iran conducts a week-long "Missile War Game" named Sa'eqeh-3 (Lightening-3) in a 1000km area around the Straits of Hormuz. The exercise aims to "establish command, control, communication, and intelligence distribution between Tehran and its main strategic headquarters, including the activation of missiles on orders from Tehran." The Khatam ol-Anbia 1 strategic headquarters is activated to coordinate Iran's surface-to-surface ballistic missile units. The communication system successfully reacted to a simulated missile launch. Shore to sea missile units from the Islamic Revolutionary Guards Corps (IRGC) and the Navy participate in the exercises on Abu Mussa, Kishm and other islands off Hormuzgan Province. This is the first of a regular set of IRGC exercises involving the regular

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military. Offensive and defensive chemical weapons units are also employed in the exercise.

—Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on Terrorism & Unconventional Warfare, House Republican Research Committee, US House of Representatives, Washington DC, 7 Feb. 1994, pp. 2-4.

26 October 1993

North Korea denies claims in the Western press that it intends to test a ballistic missile in Iran stating, "It is inconceivable that the DPRK, making consistent efforts for world peace and security, intends to conduct a missile launching test in a far-off foreign country."

—Kevin Rafferty, "Iran and N Korea 'To Test Missile'," *Guardian*, 26 October 1993.

26 October 1993

Not much is known in the West about the Nodong-2, but it is understood to be a more powerful and longer-range version of the Nodong-1, a two-stage liquid-fueled weapon, based on the Soviet Scud-C. This missile can be adapted to carry nuclear or chemical warheads, has a range of about 600 miles, and can carry a 790kg payload.

—Kevin Rafferty, "Iran and N.Korea 'To Test Missile'," *Guardian*, 26 October 1993, p. 20, in Lexis-Nexis, www.lexis-nexis.com.

26 October 1993

Iran buys high-tech equipment, including powerful computers, from Germany, which also has provided a two-month training course for Iranian intelligence agents over the past two years. Officials in Europe and Washington note that German companies are the most important suppliers of components for Iraq's non-conventional weapons program, and there is widespread concern that its exports to Iran involve dual-use equipment that is destined for the development of Iran's non-conventional weapons. In 1992, German exports to Iran totaled \$5 billion.

—Douglas Davis, "Iran Tests Missile Capable of Hitting Israel," *Jerusalem Post*, 26 October 1993, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

26 October 1993

Pentagon officials say that China, Iran, and India are attempting to incorporate U.S. navigation technology, such as global positioning system (GPS) computer components, into their newest missiles.

—Lisa Burgess and Neil Munro, *Defense News*, 29 Nov. 1993, pp. 8, 10, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, September 1993-January 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1994, Vol. 1, No. 3, p. 164.

28 October 1993

North Korea denies claims made in the Western press that it intends to test a ballistic missile in Iran, stating, "It is inconceivable that the DPRK, making consistent efforts for world peace and security, intends to conduct a missile launching test in a far off foreign country." The Islamic Republic News Agency (IRNA) also denies these claims.

—Kevin Rafferty, "Iran and N Korea 'To Test Missile'," *Guardian* (London), 26 October 1993, p. 20; Korean Central

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News Agency, 28 October 1993, in "Japanese, U.K. Reports on DPRK Missile Test in Iran Denied" ["Groundless Rumor of 'Missile Launching Test'—KCNA Headline], JPRS-TND-93-035, 10 November 1993, p. 13.

Late October 1993

Iran may have deployed North Korean Scud-C missiles during the Saeqer-3 (Thunderbolt-3) military exercises. —Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 36.

November 1993

China sold SS-2 missiles to Iran and attempted to sell a Silkworm missile variation to Iran and other Gulf states. —"US Moves to Shore-Up China Ties," *Arms Trade News*, November 1993, pp. 1-2.

November 1993

The scheduled test of a Nodong missile in Iran is postponed due to problems with the missile telemetry equipment. [Note: See entry for 22 October 1993.] The test was to have been part of the Saeqer-1 "Missile War Game" involving Iran's "national communication system to order the firing of a ballistic missile acquired specifically as a platform for nuclear warheads." A U.S. Task Force on Terrorism and Unconventional Warfare says that the test is cancelled because of North Korea's concerns over increased U.S. monitoring of the Persian Gulf. Iran and North Korea are worried that the United States would learn about their "strategic assets already functioning in Iran." —"N. Korea's Air Force Chief Visits Iran for Closer Ties," *Washington Times*, 25 February 1994; Ed Blanche, "North Koreans Visit Iran To Step Up Military Cooperation," Associated Press, 24 February 1994, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on Terrorism & Unconventional Warfare, House Republican Research Committee, US House of Representatives, Washington, DC, 7 February 1994, p. 7.

November 1993

Syria and Iran are reportedly cooperating to develop a cruise missile with Chinese and North Korean technology as well as technology from Germany and other European nations. The development of the missile is centered on Iranian Ministry of Heavy Industries plants.

—Paul Beaver, "Flash Points," *Jane's Defence Weekly*, 11 December 1993, p. 18.

Mid-November 1993

The Islamic Revolutionary Guards Corps (IRGC) and Iran's regular military co-conduct the Val-Fajr 1 and Nasr 1 military exercises. Val-Fajr 1 involves the Iranian Air Force, and takes place around Bandar Abbas. Nasr 1 is a naval exercise in the northern Persian Gulf, operating under the Fat'h command center in Ahwaz. The exercises are intended to develop stronger cooperation between the IRGC and the military. [Note: See entry for 23-30 October 1993. These exercises are significant as they signal stronger ties between the IRGC and the military, which traditionally have operated independent of each other. The IRGC is believed to maintain control of Iran's ballistic missile arsenal.]

—Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force

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on terrorism & Unconventional Warfare, House Republican Research Committee, US House of Representatives, Washington, DC, 7 February 1994, p. 4.

11 November 1993

South Korea's KBS-1 Radio cites the Russian newspaper *Izvestiya* as having reported that North Korea has provided Iran with the technology to manufacture Nodong-1 missiles in exchange for Western technology and equipment. —KBS-1 Radio Network (Seoul), 12 November 1993, in "DPRK Reportedly Transfers Missile Technology to Iran," JPRS-TND-93-037, 8 December 1993, p. 22.

12 November 1993

The *Times* of London reports that Iran is assembling Scud-C missiles supplied by North Korea, and funding the development of the Nodong-1. The report also claims that Iran and Syria are cooperating on the development of a cruise missile.

—Michael Evans, "Iran and Syria 'Plan Missile'," *Times* (London) 12 November 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

12 November 1993

Iran and Syria are said to be cooperating to develop a cruise missile using technology obtained from Japan and Europe. Syria has not developed a large-scale defense manufacturing industry, and is increasingly cooperating with Iran. Intelligence sources claim that Iran's procurement agency recently sought remotely piloted vehicles, or components to assemble them, perhaps to adapt as cruise weapons. Iranian agents are reported to have been trying unsuccessfully to buy components from British suppliers. German companies, however, are said to be increasing their sales of dual-use, high-technology equipment to Tehran. Experts at the Dubai aerospace exhibition claimed that it would be possible to develop the guidance system of remotely piloted vehicles with satellite-linked navigation to produce a relatively accurate cruise missile. According to reports in Tehran, Iran's Heavy Industries Ministry has earmarked more than \$2 billion to acquire sophisticated machine tools for high-precision weapons manufacture. Tehran is already building its own tactical surface-to-surface missiles and assembling Scud-C ballistic missiles supplied by North Korea.

—Michael Evans, "Iran and Syria 'Plan Missile'," *Times* (London), 12 November 1993, in Lexis-Nexis, www.lexis-nexis.com.

13 November 1993

Iran denies claims made in the *Times* of London on 12 November 1993 that it is financing the North Korean production of the Nodong-1. Iran also denies allegations that it is jointly producing an advanced cruise missile with Syria.

—"Iran Denies Report on Missile Production," Moneyclips, 15 November 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "Iran Denies Missile Production," Xinhua General Overseas News Service, 13 November 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Islamic Republic News Agency (Tehran), 13 November 1993, in "Report on Missile Production Denied," FBIS-NES-93-21815, November 1993, p. 75.

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20 November 1993

North Korea and Libya sign a special agreement on "Economic, Scientific, and Technical Cooperation" in Misrata, the location of Libya's surface-to-surface missile development plants. Part of the agreement is to provide North Korea and Iran with access to Libya's missile launch sites in Misrata and Sabha. Missile tests from these sites target an impact site near Gat, 500km from Sabha and 1000km from Misrata. North Korea may be increasing missile cooperation with Libya because Pyongyang is "becoming increasingly apprehensive about U.S. monitoring of their activities in Iran, and especially of the various planned missile test launches." [Note: See entry for November 1993, when a planned test in Iran of North Korea's Nodong missile was cancelled.]

—Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on terrorism & Unconventional Warfare, House Republican Research Committee, US House of Representatives, Washington, DC, 7 February 1994, p. 7.

23 November-3 December 1993

A Czech business delegation led by the General Director of Skoda Plzen, Lubomir Soudek, meets with Riza Amoralahi, head of Iran's nuclear energy department. In this meeting, Skoda reportedly offers to sell Iran weapons, including a new generation of anti-aircraft missiles. However, the Czech Republic has denied that Skoda signed such an agreement with Iran.

—Leo Pavlat, "Nuclear Reaction," *Jerusalem Post*, 16 December 1993, p. 6; William Safire, "Is It Be-Nice-To-Iran Time Again?," *Plain Dealer*, 3 January 1994, p. 7B; Jan Obrman, "Did Czechs Offer Weapons to Iran?" RFE/RL News Briefs, 10 January 1994, pp.19-20.

28 November 1993

Chinese authorities believe that a number of companies involved in channeling banned military items to Iran have worked with Hong Kong as part of Iran's weapons procurement program. Hawker Pacific, Jet Power Industrial, Seaconsar Far East, Hierax, and Faisun have all come under scrutiny for sales of weapons and aircraft parts to Iran. —"Major Conduit to Iran Severed," *South China Morning Post*, 28 November 1993, p. 6, in Lexis-Nexis, www.lexis-nexis.com.

December 1993

Middle Eastern intelligence sources claim that North Korea is expected to deliver Nodong intermediate-range ballistic missiles (IRBMs) to Iran "within months." A full test of the missile is expected to take place under North Korean supervision in the southern Iranian desert by early 1994.

—"No-Dong Delivery," *Flight International*, 8 December 1993, p. 14, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

December 1993

Iran has at least three Silkworm missile sites, with three to six missiles at each site.

—Philip Finnegan, Robert Holzer and Neil Munro, *Defense News*, 17 January 1994, pp. 1, 29, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, September 1993-January 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1994, Vol. 1, No. 3, p. 163.

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December 1993

Syria and Iran are reportedly co-developing a new cruise missile based on Chinese and North Korean technology. The project is allegedly based at Iran's Ministry of Heavy Industries factories, and utilizes German and other European technologies.

—*Jane's Defence Weekly*, 11 December 1993, p. 18, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, September 1993-January 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1994, Vol. 1, No. 3, p. 165.

December 1993

U.S. government officials believe that North Korea has postponed a missile sale to Iran. One explanation is that North Korea is doing it for diplomatic reasons in regard to U.S. demands for nuclear inspections. Another possible reason is that there have been production problems or a snag in the terms of the export contract. North Korea's Deputy Permanent Representative to the UN, Hŏ Jong, says that North Korea never had any intention of selling missiles to Iran, stating, "There is no sale. It is entirely false."

—Associated Press, "US Officials Welcome Delay In N. Korean Missile Sale," in *Christian Science Monitor*, 27 December 1993, p. 4.

1 December 1993

A Japanese Foreign Ministry official states that Japan has made repeated overtures to Iran not to assist North Korea in the testing of the Nodong missile. He suggests that Japan could suspend a yen credit of about \$38.6 million in economic aid to Iran if such a test occurs in Iran.

—"Japan Mulls Halt in Iran Loans," Jiji Press Ticker Service, 2 December 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Igor Shchogolev, "ITAR-TASS Foreign News Summary," ITAR-TASS, 1 December 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "Puk Nodong 1 Ho Shilhŏmjangso ChegongDdaen/II, Iran'e Ch'a'gwanch'wiso Kyŏnggo," *Joongang Ilbo*, 2 December 1993, p. 6, in KINDS, <http://www.kinds.or.kr>.

2 December 1993

An informed source in Iran denies Western media claims that Iran has concluded a long-range missile test treaty with North Korea. Recent U.S. and European media reports suggest that North Korea plans to sell Iran long-range Scud missiles and test the Nodong-1 missile in Iran.

—"Reports of Missile Test Agreement with DPRK Denied," Islamic Republic News Agency (IRNA), 2 December 1993, p. 46; in FBIS Document FBIS-NES-93-231.

5 December 1993

Iran will receive and test-fire the North Korean intermediate range surface-to-surface Nodong ballistic missile this month. The Nodong, which is being developed in two versions, will have a range of from 1,000-1,300km.

—David Makovsky, "North Korean Missiles 'Due to Arrive in Iran this Month'," *Jerusalem Post*, 5 December 1993, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

6 December 1993

As part of the sixth high-level delegation to North Korea in 15 months, Iranian Defense Minister Mohammad

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Fourouzndeh visits North Korea to discuss technological cooperation. The visit is for a meeting of a joint commission on economic, scientific, and technical cooperation established in 1992. According to reports, there is extensive cooperation between the two countries in the areas of nuclear, biological and chemical weapons. Fourouzndeh is allegedly seeking unmanned aerial vehicles (UAVs) and North Korean assistance in building 18 underground missile silos in Iran.

—"N. Korea's Air Force Chief Visits Iran for Closer Ties," *Washington Times*, 25 February 1994; Ed Blanche, "North Koreans Visit Iran To Step Up Military Cooperation," Associated Press, 24 February 1994, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "Alarm Sounded Over Missile Plans Involving Tehran and North Korea," *Mideast Mirror*, Vol. 7, No. 237, 7 December 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

6 December 1993

Iranian Defense Minister Mohammad Foruzandeh leads a delegation of defense officials and ballistic missile scientists to North Korea. Sources believe that Foruzandeh and North Korea discuss the possibility of joint production of the Nodong ballistic missile, along with constructing underground missile shelters at 18 sites across Iran. North Korea and Iran also discuss the co-development of chemical and nuclear weapons, with funding to be provided by Tehran.

—Hiroshi Kano, *International Review*, Autumn 1994, cited in "Ballistic, Cruise Missile, and Missile Defense Systems: Trade and Significant Developments, October 1994-February 1995," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1995, Vol. 2, No. 3, p. 175; Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on Terrorism & Unconventional Warfare, House Republican Research Committee, U.S. House of Representatives, Washington, DC, 7 February 1994, p. 6.

6 December 1993

Iran's naval buildup includes the possible purchase of Silkworm anti-ship missiles.

—Philip Finnegan, "Iran Navy Buildup Stirs US-Arab Response," *Defense News*, 6 December 1993, pp. 1, 28.

9 December 1993

North Korea and Iran sign an agreement that stipulates the co-development in Iran of nuclear capable ballistic missiles with ranges between 1500 and 3000km. North Korea agrees to build underground missile bunkers at 18 locations "to serve as Iran's doomsday military infrastructure." The agreement also aims to increase Iran's production and assembly of Scud-C missiles from North Korean supplied kits and components. Tehran agrees to provide Pyongyang with money, oil, and dual-use technology obtained in Europe and Asia. Iran is also interested in acquiring cruise missiles capable of carrying non-conventional warheads.

—Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on Terrorism & Unconventional Warfare, House Republican Research Committee, U.S. House of Representatives, Washington, DC, 7 February 1994, p. 7.

10 December 1993

American officials report that the United States warns Ukraine against selling weapons to Iran. These officials claim that the Clinton administration is worried in particular about the possible sale of missiles to Iran. Ukraine denied allegations that it sold weapons to Iran in exchange for oil.

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—"U.S. Urges Ukraine to Forgo Sales of Weapons to Iranians," *New York Times*, 10 December 1993, p. A3, in Lexis-Nexis, www.lexis-nexis.com; Aleksandr Sychev, *Izvestiya* (Moscow), 14 December 1993, p. 3, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, September 1993-January 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1994, Vol. 1, No. 3, p. 164.

Mid-December 1993

Iran's Foreign Minister, Ali Akbar Velayati, visits Libya to discuss "ways of boosting and strengthening cooperation," to establish a mutual "stance against the plots of world arrogance in the various parts of the world, including the Persian Gulf," and towards "resisting the global conspiracy against Islam." Velayati and Libyan President Qaddafi discuss ways to "make it politically difficult for the United States and its allies to threaten military intervention against states like North Korea, Libyan, and Iran." Velayati's visit comes at a period of increased North Korean-Libyan missile development cooperation. [Note: See entry for 20 November 1993.]

—Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on Terrorism & Unconventional Warfare, House Republican Research Committee, U.S. House of Representatives, Washington, DC, 7 February 1994, p. 8.

20 December 1993

An Israeli "Colonel A" says, "Iran will have [North] Korean Nodong missiles in a year which could be deployed in the west of the country and reach Israel." "Colonel A" further states, "There is no doubt that Iran is trying to obtain the capacity to produce chemical and nuclear warheads," which could be delivered by the Nodong.

—"Iran Will Soon Have Korean Missiles Able to Hit Israel: Report," Agence France Presse, 20 December 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

21 December 1993

Ukrainian arms negotiator Borys Tarasyuk denies allegations that Ukraine sold tactical missiles to Iran. Tarasyuk says that Ukraine would never engage in weapons deals with countries under UN sanctions, such as Yugoslavia, Libya, Iraq, and South Africa.

—*Reuter*, 22 December 1993, cited in *Executive News Service*, 23 December 1993, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, September 1993-January 1994," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Spring-Summer 1994, Vol. 1, No. 3, p. 165.

24 December 1993

Syria and Iran will have missile production capabilities in the not too distant future.

—David Makovsky, "Israel Said not Pushing US to Stop N.Korean Missile Sales to Iran," *Jerusalem Post*, 24 December 1993, p. A2, in Lexis-Nexis, www.lexis-nexis.com.

24 December 1993

The CIA concludes that Iran, Iraq, North Korea, and Libya have the "political support of motivation" to develop long-range missiles that could strike the United States and that all but Libya have the "technical capability" to do so

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within 15 years.

—Thomas Lippman, "ICBM Threat to U.S. is Called Slight; Iran, Iraq, N. Korea Capable but Aren't Building Such Missiles, CIA Says," *Washington Post*, 24 December 1993, p. A9, in Lexis-Nexis, www.lexis-nexis.com.

25 December 1993

Officials in Washington say that North Korea has delayed plans to sell Iran the Nodong-1 missile. The reason for the delay is unclear, but officials have a number of theories, among them diplomatic maneuvering linked to nuclear inspections, production problems, or final arrangement problems with Iran.

—Associated Press, "US Officials Welcome Delay In N. Korean Missile Sale," *Christian Science Monitor*, 27 December 1993, p. 4; "Korea (DPRK): Missile Sale Off," *Asian Recorder*, 15-21 January 1994, p. 23686.

27 December 1993

Clinton administration officials believe that North Korea has deferred plans to sell Iran new missiles. U.S. officials say that it is unclear why the sale has been put off, or for how long, but reports indicate that North Korea delayed delivery of the Nodong missiles at the request of Washington.

—"US Officials Welcome Delay in N.Korean Missile Sale," *Christian Science Monitor*, 27 December 1993, p. 4, in Lexis-Nexis, www.lexis-nexis.com; "The North Korea-Iran Threat," *Jerusalem Post*, 28 December 1993, p. 6, in Lexis-Nexis, www.lexis-nexis.com.

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1992

Early 1992

Western intelligence sources say Iran and North Korea sign a joint financial agreement for the development of the Nodong-1 missile. A Pentagon analyst speculates that North Korea will need "a substantial input of foreign technology," especially with regard to guidance technology, in order to complete development of the new missile.

—Kenneth Timmerman, "Iran's Ballistic Missile Program," *Mednews*, 21 December 1992, pp. 4-5; "Ballistic Missile Threat Evolves," *International Defense Review*, Vol. 33, No. 10, 1 October 2000, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

Early 1992

Military sources in Iran say a group of Russian experts arrive in Iran to supervise the training of the Iranian army's missile unit.

—"Arms Deal with Russia Worth \$5 Billion," *Sawt Al-Kuwayt* (London), 12 January 1992, pp. 1, 6; in FBIS Document FBIS-NES-92-011, "Defense Official Confirms Arms Deal with Russia," p. 40.

1992

Iran orders 10 Hegus from China. The Hegus are armed with four YJ-1 "Eagle Strike" surface-to-surface missiles.

—"Iran receives Chinese missile boats," *Jane's Intelligence Review*, 1 September 1994, p. 7, in Lexis-Nexis, www.lexis-nexis.com.

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1992

Iran orders ten 68-ton Chinese fast attack craft or missile patrol boats.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), pp. 42, 46, 56.

1992

A 1992 agreement between Iran and North Korea, which was signed in Tehran, states that Iran would invest \$50 million into the Nodong missile project and would receive the first 10 missiles by April 1993. [Note: The first shipment of at least 12 missiles did not actually occur until May 1995; refer to entry for 2 May 1995.] After the first shipment, Iran reportedly has agreed to pay an additional \$70 million to receive the technology needed for building a missile factory in Isfahan or Hasmanan. Senior North Korean Army officials have requested that Iran allow them to experiment with the missile in the Sharoud region of Iran. [Note: According to this source, Iran is investing \$50 million in the North Korean program. Various other sources have quoted the amount to be \$500 million; refer to entry for 22 March 1993.]

—Michael Rotem, "Report: Iran to Receive North Korean Missiles That Can Reach Israel," *Jerusalem Post*, 25 March 1993, in Lexis-Nexis, www.lexis-nexis.com.

1992

Iran purchases an estimated 200-300 Scud-B missiles from North Korea between 1987 and 1992.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), p. 56.

1992

Iran is believed to have established Scud-B and Silkworm sites on the Island of Abu Musa. Iran is also developing Scud-C missiles with the assistance of North Korea and providing financial support to the North Korean missile program, the Nodong-1.

—"Iran Prepares Missile Sites on Abu Musa," *MedNews*, 7 December 1992, p. 5; Nikola B. Schahgaldian, *Iran and the Postwar Security in the Persian Gulf* (National Defense Research Institute, RAND, 1994), p. 19.

1992

Sources indicate that Iran is planning to increase its surface-to-air missile strength from 90 major launchers to 300 and its surface-to-surface missile strength from 30 major launchers to 60. There are reports that Iran has at least two rocket and missile assembly plants, a missile test range and monitoring complex, and a wide range of smaller design and refit facilities. The largest plant, which is the center of much of Iran's advanced defense industry, is said to have been built near Isfahan by the North Koreans. Some reports say that the complex can produce liquid fuels and missile parts from a local steel mill.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), pp. 14, 58.

1992

The U.S. State Department twice imposes sanctions on North Korea's Lyongaksan Machineries and Equipment

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Export Corp. for engaging in missile proliferation activities involving Iran and Syria. Lyongaksan (or Yongasan) is part of North Korea's External Economic General Bureau, which is responsible for its international trade in munitions.

—Glenn Schloss, "Hong Kong, Pakistan: DPRK Firm Said Behind Rocket Fuel Bound for Pakistan," *South China Morning Post* (Hong Kong), p. 4; in FBIS Document FBIS-CHI-96-242, 13 December 1996.

1992

Iran and Syria reportedly sign a treaty on technical cooperation.

—John Bulloch, "Syrians Killed as Scuds Explode," *Sunday Telegraph* (London), 31 May 1992, p. 20, in Lexis-Nexis, www.lexis-nexis.com.

1992

Iran purchases eight SS-N-22 supersonic Sunburn anti-ship missiles for \$600,000 each from Ukraine. The Sunburn can perform evasive S-turns and the United States has no electronic countermeasures to defeat this missile.

—James Kraska, "Iran Flexes Maritime Muscles In Gulf," *Defense News*, 4 October 1993, pp. 25-26.

1992

Iran's Minister of Defense and Armed Forces Logistics, Akbar Torkan, claims that arms production has increased "three-fold" since 1979. In addition, "Iran has for some time been manufacturing the Nazeat, similar to the Shaheen series." Another missile project is a new variant of China's M-11 missile, possibly named the Tondar-68, with a range of 1,000km.

—"Iran Builds Its Strength," *Jane's Defence Weekly*, 1 February 1992, pp. 158-159.

1992

Iran is a transfer point for missile deliveries between North Korea and Syria.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), pp. 36-37.

1992

The German weekly magazine, *Focus*, reports that the Commonwealth of Independent State (CIS) countries supply to Iran an atom bomb, which can be dropped from an airplane, and a launcher for nuclear missiles.

—"Iran Reportedly Acquires Nuclear Arms from CIS," *Rossiyskaya Gazeta* (Moscow), 27 January 1993, p. 7; in FBIS Document FBIS-SOV-93-017, 28 January 1993, p. 6.

January 1992

During President Hashemi Rafsanjani's visit to Sudan, Iran supposedly agrees to supply Sudan with \$20 million in weapons. Included in this agreement is the transfer of HY-2 Silkworm missiles to Sudan.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 65.

January 1992

Press reports, confirmed by U.S. intelligence officials, suggest that Tehran has purchased sophisticated heavy

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weaponry, including missiles, from North Korea and China. The reports indicate that Tehran is purchasing stock from newly independent former Soviet republics. The reports suggest that Iran's rapid bid to develop militarily is tied to the rise of radicalization of six Muslim republics in Central Asia.

—Peter Ford, "Egypt Watches, Worries About Algeria and Iran," *Christian Science Monitor*, 23 January 1992, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

7 January 1992

Intelligence sources say Iran is conducting a multibillion-dollar arms buildup via secret deals with Russia, North Korea, and other nations. Iran could become the dominant power in the Persian Gulf. Iran has purchased Soviet SU-24 fighter-bombers, MiG-29 fighter planes, tanks, and other arms. Iran has a "cash-and-carry" deal with the Russian Federation and has purchased conventional weapons, missiles, and nuclear research from Russian sources.

—Jack Nelson, "Arms Buildup Making Iran Top Gulf Power," *Los Angeles Times*, 7 January 1992, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

12 January 1992

Iran is working on a long-range missile that is capable of carrying a nuclear warhead. The "top-secret" plan is to place an Iranian nuclear warhead on a variant of the Silkworm missile, which Iran obtained from China.

—Jack Anderson, "An Iranian Bomb," *Washington Post*, 12 January 1992, pp. C7-C8.

12 January 1992

The Mujahedin-e Khalq Organization (MKO), the Iraqi-based Iranian opposition group, issues a statement claiming that China helps Iran and Pakistan produce conventional and unconventional weapon systems and that China and North Korea have helped Iran build ballistic missiles with a range of 300km.

—"Government, Pakistan Set for Nuclear Cooperation," *Al-Diyar* (Beirut), 12 January 1992, p. 5; in FBIS Document FBIS-NES-92-015, p. 54.

12 January 1992

The London newspaper *Sawt al-Kuwayt* learns that Iran has received a weapons shipment from Russia, which includes missile launchers.

—"Arms Deal with Russia Worth \$5 Billion," *Sawt Al-Kuwayt* (London), 12 January 1992, pp. 1, 6; in FBIS Document FBIS-NES-92-011, "Defense Official Confirms Arms Deal with Russia," p. 40.

14 January 1992

Israeli Defense Minister Moshe Arens is quoted as saying, "It is clear that a number of countries, specifically Iran and Libya, have medium-range missiles with chemical warfare capability and are trying to obtain nuclear capability. In the Middle East today, there must be 1,000 missiles in Iraq, Iran, Syria, Libya, and Saudi Arabia, most with a range to hit Israel."

—Richard Beston, "Israel 'Faces 1,000 Missiles'," *The Times* (London), 15 January 1992, in Lexis-Nexis, www.lexis-nexis.com.

15 January 1992

CIA Director Robert Gates testifies at a hearing of the Senate Governmental Affairs Committee on "Weapons

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Proliferation in the New World Order." Gates testifies that Iran may seek to obtain Soviet technology through contacts with Kazakhstan. Gates also testifies that Iran's principal special weapons suppliers since the Iran-Iraq War have been North Korea "for long-range Scuds and China for battlefield missiles, cruise missiles, and nuclear-related technology."

—"Subject: Weapons Proliferation in the New World Order," Testimony of Robert Gates before the Senate Government Affairs Committee; in Legislative Report, 102 Congress, 15 January 1992 (unofficial); "IRNA on US 'Propaganda' Over Arms Purchases," Islamic Republic News Agency (IRNA), 25 January 1992; in FBIS Document FBIS-NES-92-017, p. 40.

17 January 1992

Reports indicate that Iran has been buying missile technology and seeking technical expertise abroad. It is estimated that between 1991 and 1992, the former Soviet republics will have supplied Iran with \$2 billion in weapons, including the SA-5 anti-aircraft missiles. It is also reported that China is assisting Iran in the production of ballistic missiles and its nuclear program.

—Bill Gertz and Rowan Scarborough, "Arms-Happy Gulf Resists New Curbs," *Washington Times*, 17 January 1992, pp. A1, A10.

18 January 1992

SA-5 "Gammon" missiles are included in the inventory of arms that are likely to be sold to Iran by the Commonwealth of Independent States (CIS). All CIS arms sales to Iran in 1992 are expected to total more than \$1 billion, similar to the amount sold in 1991. Sales to Iran amounted to less than \$1 billion in 1990. [Note: The SA-5 system was declared operational by Iran's Air Defense forces in 1997.]

—"Arms to Iran," *Jane's Defence Weekly*, 18 January 1992, p. 71.

19 January 1992

Sudanese military sources confirm that Iran supplied Sudan with Silkworm missiles as part of a \$20 million military aid agreement. [Note: Egypt is worried over the rise of Islamic Fundamentalists in Algeria. A diplomat explains that Egypt's principal worry "is that if Algeria becomes a revolutionary Islamic state, you can expect an alliance with Iran and Sudan."]

—"Iran Supplying Silkworm Missiles, F-7 Aircraft," *Al-Wafd* (Cairo), 19 January 1992, p. 9; in *Proliferation Issues*, 14 February 1992, p. 15; Peter Ford, "Egypt Watches, Worries About Algeria and Iran," *Christian Science Monitor*, 23 January 1992, p. 5, in Lexis-Nexis, www.lexis-nexis.com; "Iran Reportedly Supplying Arms, Missiles," *Rose Al-Yusuf* (Cairo), 19 October 1992, p. 71; in *Proliferation Issues*, 30 October 1992, p. 19.

22 January 1992

Iran is seeking to obtain M-9 missiles from China. Middle East sources report that Iran provided some financing for the missile's development.

—"Syria, Iran Want to Buy China's M-9," *Flight International*, 22 January 1992, p. 18.

22 January 1992

CIA Director Robert M. Gates, in testimony before Congress, notes recent large arms sales by China to Iran,

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including missiles and nuclear technology.

—Allison Kaplan, "CIA chief: Iraqis could revive nuclear capability," *Jerusalem Post*, 23 January 1992; "Urgent Missile on Missiles; Senators Seek to Stiffen Administration Line Toward Beijing," *Los Angeles Times*, 11 February 1992, p. B6, in Lexis-Nexis, www.lexis-nexis.com.

23 January 1992

The Russian ambassador to the UN, Yuli Vorontsov, denies reports in an Arabic magazine, *Al-Watan Al-Arabi*, that Iran has already purchased three nuclear weapons, possibly from Kazakhstan, for \$130 million-\$150 million. The source also states that Iran has hired more than 50 Soviet nuclear experts at salaries of \$5,000 a month.

—Christia Freeland, "Recruiters Target Ex-Soviet Missile Scientists," *Financial Times* (London), 24 January 1992, p. 16, in Lexis-Nexis, www.lexis-nexis.com.

24 January 1992

Foreign headhunters are recruiting specialists from Dnepropetrovsk, Ukraine, the missile-building capital of the former Soviet Union, to work in the Middle East and elsewhere. Local businessmen say rocket scientists are among those seeking to work abroad. This recruitment drive raises the issue of Soviet arms technology proliferation to countries such as Iraq, Iran, and Libya.

—Christia Freeland, "Recruiters Target Ex-Soviet Missile Scientist," *Financial Times* (London), 24 January 1992, p. 16, in Lexis-Nexis, www.lexis-nexis.com.

29 January 1992

Israeli military sources report that Iran acquired "several dozen" 500km-range Scud-C missiles from North Korea in 1991 and plans to acquire longer-range missiles.

—Hugh Carnegie, "Israel Worried Over Iran's Nuclear Plans," *Financial Times* (London), 29 January 1992, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

29 January 1992

Israel has begun to voice concern over Tehran's military ambitions, saying that it is in the early stages of developing a domestic nuclear weapons program, similar to that pursued by Iraq. This week, the Israeli defense establishment alleged publicly that unspecified German and European companies, some of whom previously cooperated with Iraqi non-conventional arms projects, are now working in Iran.

—Hugh Carnegie, "Israel Worried Over Iran's Nuclear Plans," *Financial Times* (London), 29 January 1992, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

2 February 1992

Reports indicate that an Islamic revolution is spreading to the horn of Africa, and to Sudan in particular. Along with thousands of members of the Islamic Revolution Guards Corps (IRGC) that have been sent to Sudan over the past few weeks, Iran has also sent Sudan about \$20 million worth of weapons. The weapons included in this shipment were ammunitions, bombs, machine guns, anti-aircraft batteries, and Chinese-made Silkworm missiles assembled in Iran. Iran also delivered Chinese-made F-7 fighters.

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—Safa Haeri, "Iran's Zealots Export Revolution to Africa," *Sunday Times* (London), 2 February 1992, in Lexis-Nexis, www.lexis-nexis.com.

2 February 1992

A bipartisan group of 17 U.S. senators sends a classified letter to Secretary of State James Baker about recent arms sales by China to Iran. The letter, sent by Senate Majority Leader George J. Mitchell, cites testimony by CIA Director Robert M. Gates in Congress last month that Iran has moved toward rearmament by purchasing battlefield missiles, cruise missiles, and nuclear technology from China.

—Jim Mann, "17 Senators Write Baker on China's Arms Sales; Policy: Mitchell has Warned of Mideast Instability if Iran Gets Missiles and Technology from Beijing," *Los Angeles Times*, 9 February 2001, p. A5, in Lexis-Nexis, www.lexis-nexis.com.

13 February 1992

The Associated Press reports that China recently finished arrangements to sell Iran military parts that could be used in the development of a medium-range ballistic missile. The reports do not establish whether the missile parts have already been delivered, but they do indicate that the process of gathering the parts and preparing them for shipment is underway. China has denied repeatedly that it is providing weapon technology to Iran.

—"China-Iran Arms Deal," *USA Today*, 13 February 1992, p. 4A, in Lexis-Nexis, www.lexis-nexis.com.

1 August 1991-19 February 1992

House Foreign Affairs Committee says that the Commerce Department approved 48 dual-use technology export licenses to Iran between 1 August 1991 and 19 February 1992. The approved technology, valued at \$180 million, included digital computer equipment.

—*Los Angeles Times*, 23 July 1992, p. A4, cited in "Ballistic Missiles, Cruise Missiles and Missile Defense Systems: Trade and Significant Developments (July - November 1992)," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1993, Vol. 1 No. 1, p. 110.

21 February 1992

North Korea is shipping Scud-C missiles to Syria via Iran, with a second shipment of missiles from North Korea already bound for Iran.

—"US Tracks Korean Missile Shipment," *New York Times*, 21 February 1992, p. A4.

21 February 1992

The Bush administration agrees to lift sanctions on the sale of American high-technology equipment to China in exchange for a Chinese agreement to abide by an existing international agreement restricting missile and missile technology sales.

—Jim Mann, "U.S. Lifting Sanctions on China Sales; Accord: High-Tech Exports Will be Allowed in Exchange for Beijing's Agreement to Observe a Pact Restricting Missile Shipments. Mitchell Criticizes Bush's Policy," *Los Angeles Times*, 22 February 1992, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

22 February 1992

Questions arise over whether the 21 February agreement will actually stop China from selling missile technology to

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Iran and Syria. A U.S. official states, "I think we really stopped them (from selling missile technology). Of course, I won't feel so good if in six months Iran comes out with a new missile with Chinese characteristics."

—Jim Mann, "U.S. Lifting Sanctions on China Sales; Accord: High-Tech Exports Will be Allowed in Exchange for Beijing's Agreement to Observe a Pact Restricting Missile Shipments. Mitchell Criticizes Bush's Policy," *Los Angeles Times*, 22 February 1992, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

22 February 1992

The State Department demands that North Korea halt its new shipment of missile-related equipment.

—R. Jeffrey Smith, "U.S. Orders North Korea to Stop Scud Shipment," *Washington Post*, 22 February 1992, p. A15, in Lexis-Nexis, www.lexis-nexis.com.

25 February 1992

China has built a ballistic missile plant and test range east of Tehran, while North Korea has delivered advanced Scud missiles.

—"Waking Up to the Iranian Nuclear Threat," *Wall Street Journal*, 25 February 1992.

Late February 1992

The Iranian freighter, *Iran Salam*, which is suspected of carrying North Korean missile-related cargo, is being tracked by U.S. intelligence between Singapore and the Iranian port of Bandar Khomeini.

—Bill Gertz, "Iran-Syria Deal Revealed as Scuds Near Gulf Ports," *Washington Times*, 10 March 1992, p. A3.

5 March 1992

The Wisconsin Project on Nuclear Arms Control says the Commerce Department authorized more than \$300 million in high-tech transfers to Syria and Iran in recent years. The transactions with Iran included \$600,000 in navigational radar and communications equipment that could assist in missile targeting, and \$270,000 in electronic measuring gear that could be used to develop microwave circuits for missile guidance radars.

—Miller, "Sensitive Exports: Tighter Controls Needed on Technology," *San Diego Union-Tribune*, 5 March 1992, p. B14, in Lexis-Nexis, www.lexis-nexis.com.

6 March 1992

The Bush administration in recent days has examined the military option of boarding two North Korean cargo ships heading for Iran loaded with Scud-C ballistic missiles for the arsenals of Syria and Iran. The State Department criticized the North Koreans last month for shipping the missiles, which are still on the high seas aboard two ships named the *Dae Hung Ho* and the *Dae Hung Dan*.

—"US Mulls Interdicting Arms Ships N. Korean Vessels Carrying Scud Missiles to Iran, Syria," *Atlanta Journal and Constitution*, 6 March 1992, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

7 March 1992

The *Times* reports that Washington is considering ordering U.S. naval units to stop and search two North Korean cargo ships believed to be carrying Scud missiles to Iran or Syria. White House officials say even if missiles or related equipment were found, the ships would probably be allowed to proceed because there is no embargo against Syria or Iran.

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—Jamie Dettmer, "Ship Hunt for Scuds Planned," *The Times* (London), 7 March 1992, in Lexis-Nexis, www.lexis-nexis.com.

9 March 1992

The North Korean ship *Tae Hŭng Ho*, believed to be bound for Iran, is under surveillance by U.S. warships and aircraft. The missiles and equipment are expected to be flown to Syria by Iranian cargo aircraft.

—Bill Gertz and Rowan Scarborough, "US Eyes Syria As Recipient of Scuds," *Washington Times*, 9 March 1992, pp. A1, A9.

9 March 1992

The North Korean freighter *Tae Hŭng Ho* docks at the Iranian port of Bandar Abbas with what is believed to be a load of Scud-C missiles and missile equipment. The missiles are unloaded and will allegedly be airlifted to Syria. The ship evaded a U.S. naval task force in the Arabian Sea assigned to "dissuade" the ship from delivering its cargo. A report says the shipment includes 24 missiles bound for Syria, and the contract is for North Korea to deliver 150.

—Barton Gellman, "U.S. Failed to Detect Ship," *Washington Post*, 12 March 1992, pp. A1, A23; Douglas Waller, et al., "Sneaking in the Scuds," *Newsweek*, 22 June 1992, pp. 42-46; "Increase in Egypt's 'Scuds' Leads to BAe Pull-Out," *Jane's Defence Weekly*, 5 September 1992, p. 31; Im Hang, "Pukhan Taehŭngho Sagŏn Anp'akk/Han'gye Tŭrŏnan Mi Wihyŏp," *Kukmin Ilbo*, 11 March 1992, p. 5, in KINDS, www.kinds.or.kr; "Missile Chŏkchae Pukhwamulsŏn/Iran Hang'e Iphang," *Joongang Ilbo*, 11 March 1992, p. 1, in KINDS, www.kinds.or.kr.

11 March 1992

The *Tae Hŭng Ho* departs Bandar Abbas and travels through the Suez Canal to Tartus, Syria, where it reportedly delivers manufacturing equipment for underground Scud missile factories that the United States says Syria is building in Hama and Aleppo. There are two fuel plants at Hama; one liquid-fuel plant for Scud-type missiles and one solid-fuel plant for M-9 type missiles. Other reports indicate that there is a plant near Hama dedicated to guidance systems. The *Tae Hŭng Ho* cargo off-loaded at Bandar Abbas in Iran is reportedly destined for the Syrian liquid-fuel plant.

—George Lardner Jr., "Probe Ordered in Failure to Track N. Korean Ship," *Washington Post*, 14 March 1992, p. A17; Douglas Waller et al., "Sneaking in the Scuds," *Newsweek*, 22 June 1992, pp. 42-46; Bill Gertz, "Iran-Bound Mystery Freighter Carried Parts for Missiles," *Washington Times*, 16 July 1992, p. A3; Neal Sandler, "Israeli Concern over Syrian 'Scud' Tests," *Jane's Defence Weekly*, 22 August 1992, p. 1; "Increase in Egypt's 'Scuds' Leads to BAe Pull-Out," *Jane's Defence Weekly*, 5 September 1992, p. 31.

9 March 1992

U.S. military officials report that North Korea has been supplying Syria with Scud-C missiles through Iran in a three-party project designed to help Syria attain production capability.

—Alon Pinkas, "US Set to Challenge Korean Scud Ships," *Jerusalem Post*, 9 March 1992, in Lexis-Nexis, www.lexis-nexis.com.

9 March 1992

An Iranian newspaper reports that any U.S. interception of a North Korean freighter, reportedly laden with Scud

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missiles for Iran or Syria, would be considered to be piracy.

—"Iran Newspaper Denounces U.S. 'Bullying Tactics'," *Atlanta Journal and Constitution*, 9 March 1992, p. A7, in Lexis-Nexis, www.lexis-nexis.com.

9 March 1992

The North Korean cargo ship *Dae Hung Ho*, believed to be carrying Scud missiles to Iran and Syria, evades U.S. warships and docks at the Iranian port of Bandar Abbas.

—Melissa Healy, "Suspect Vessel Eludes US Net, Docks in Iran," *Los Angeles Times*, 11 March 1992, pp. A1, A9.

10 March 1992

The destroyer *USS Ingersoll* successfully intercepts an Iranian ship, the *Iran Salaam*, in the Northern Arabian Sea. The *Iran Salaam* is believed to be carrying Scud-C missiles or missile production equipment from North Korea to the Iranian port of Bandar Khomeini.

—Bill Gertz, "N. Korean freighter arrives in Iran with Scuds for Syria," *Washington Times*, 11 March 1992, p. A3, in Lexis-Nexis, www.lexis-nexis.com.

10 March 1992

Six members of an international arms smuggling ring are arrested in Madrid, Spain. Mehdi Kashani, a civil engineer and colonel in the Iranian Army, led the smuggling ring. The group was engaged in the purchase of strategic technological equipment, including sophisticated guidance systems, for Iran.

—"Police Break Up International Arms Smuggling Ring," *Diario 16* (Madrid), 13 March 1992, p. 12; in *Proliferation Issues*, 3 April 1992, pp. 29-30; "Breakup of Missile-Trafficking Network Detailed," *Diario 16* (Madrid), 16 March 1992, p. 8; in *Proliferation Issues*, 22 April 1992, pp. 26-27.

11 March 1992

Officials report that they are unsure whether suspected missiles from the North Korean cargo ship *Dae Hung Ho* have been included in Iran's arsenal.

—Melissa Healy, "General Takes Blame For Ship that Got Away," *Los Angeles Times*, 12 March 1992, p. A4, in Lexis-Nexis, www.lexis-nexis.com.

12 March 1992

U.S. Marine General Joseph P. Hoar, commander of Central Command, takes responsibility for "letting the *Dae Hung Ho* go through" to deliver its suspected cargo of Scud missiles to Iran.

—Melissa Healy, "General Takes Blame For Ship that Got Away," *Los Angeles Times*, 12 March 1992, p. A4, in Lexis-Nexis, www.lexis-nexis.com.

12 March 1992

The *Dae Hung Ho* delivery of Scud missiles is part of a major military deal concluded during a 1991 visit by Iranian Defense Minister Akbar Torkan to Pyongyang. The deal is reportedly worth \$2.5 billion and includes 110 Scud-C missiles. The first shipment of 80 advanced Scud-B missiles delivered on 21 February, along with 30 for Syria, is also part of the deal.

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—"Navy On Alert Since Arrival of Korean Freighter," *Sawt Al-Kuwayt Al-Duwali* (London), 12 March 1992, pp. 1, 11; in *Proliferation Issues*, 26 March 1992, pp. 32-33.

13 March 1992

Police are searching for American Michael Malone in connection with an alleged plot to send 200 missile-guidance components to Iran's Air Force. Police believe the parts were sold by Tampa Helicopters, Inc. Tampa Helicopters could not be reached for comment, and police were unable to specify the relationship between the company and Malone. Police commented that Malone recently delivered a pair of Klystron amplifiers used to help guide missiles shot from F-4 Phantom II fighters to two Portuguese arms dealers.

—"Tampa Helicopters' Name Comes Up In Iran Arms Intrigue," *St. Petersburg Times*, 13 March 1992, p. B3, in Lexis-Nexis, www.lexis-nexis.com.

13 March 1992

The *Iran Salam*, which U.S. officials believe is carrying Scud missiles from North Korea, docks and unloads its cargo at the Iranian port of Char Bahar.

—"Syria Blasts U.S. Over Missile Affair," Facts on File World News Digest, 2 April 1992, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Eric Schmitt, "North Korea Ship Delivers to Iran," *New York Times*, 18 March 1992, p. A12, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

13 March 1992

A CNN broadcast reports that North Korea is assisting in the construction of Scud missile production facilities in Egypt, Iran, Libya, and Syria. North Korea is said to be supporting the construction of a "Scud-D" production facility in Libya.

—"Pukhan, Arab Kukdül'e Scud Kongjang Könsölchiwön," *Joongang Ilbo*, 14 March 1992, www.joins.com.

16 March 1992

In a U.S. federal court, Japan Aviation Electronics (JAE), agrees to plead guilty to 10 out of 22 counts of selling U.S. jet and missile parts to Iran during the Iran-Iraq War.

—"JAE Settles Export Violation Case," *Defense News*, 16 March 1992, p. 30.

16 March 1992

Stern Magazine, citing German intelligence sources, reports that Iran obtained two nuclear warheads and a medium-range delivery system from Kazakhstan, but did not have the codes necessary to fire the warheads and did not have missiles capable of carrying the warheads.

—"Iran 'Buys Bombs'," *The Independent* (London), 16 March 1992, p. 14, in Lexis-Nexis, www.lexis-nexis.com.

17 March 1992

U.S. Defense Secretary Dick Cheney says that the United States has been unable to confirm whether the North Korean ship *Tae Hŭng Ho* unloaded missiles at an Iranian port of Bandar Abbas. U.S. intelligence officials believe the ship was carrying missiles, but U.S. Navy vessels were never given permission to board the ship.

—"Cheney: U.S. Not Sure if DPRK Ship Carried Scud Missiles," *Xinhua General Overseas News Service*, 17 March

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1992, Item No: 0317103, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "Puk Missile Sön Kangje Susaekhaeya/Mi Chö'nölchi," Kukmin Ilbo, 18 March 1992, p. 2, in KINDS, www.kinds.or.kr.

18 March 1992

CIA Director Robert Gates and other U.S. officials report that Iran continues to buy Scud missiles from North Korea; is shopping for technology to extend the range of its rockets; has recently acquired sensitive gyroscopes used in missile guidance systems from China; and is otherwise broadly expanding its military capabilities. The intelligence officials suggest that Iran is building up its military capability to become the leader of the Islamic world.

—"The New Order," *Wall Street Journal*, 18 March 1992, pp. A1, A10.

18 March 1992

Defense officials report that a second North Korean ship believed to be carrying Scud missiles or components has delivered its cargo to Iran after U.S. officials conclude that they have no authority to stop it. Reportedly embarrassed by the failure to track the first ship after raising many issues of its contents, the Bush administration has quietly allowed the *Iran Salaam* to dock and unload.

—Eric Schmitt, "North Korea Ship Delivers to Iran," *New York Times*, 18 March 1992, p. A4, in Lexis-Nexis, www.lexis-nexis.com.

27 March 1992

The United States announces the imposition of sanctions on Iran and North Korea on grounds that the Iranian Ministry of Defense and Armed Forces Logistics and the North Korean firms Ryonggaksan Machineries and Equipment Export Corporation and Ch'anggwang Credit Corporation have been involved in "missile technology proliferation." The sanctions will last for two years beginning 6 March 1992.

—*Federal Register*, Vol. 57, No. 67, 7 April 1992, pp. 1167-1168.

27 March 1992

CIA Director Robert Gates reports that the Iranian government has purchased \$2 billion worth of weapons from foreign suppliers each year in a drive to again become the pre-eminent power in the Persian Gulf region. Gates estimates that the total cost of foreign-made weapons acquired by Iran between 1990-1994 will reach \$10 billion. Iran's foreign-made arsenal includes advanced warplanes, anti-aircraft missiles, and some extended range Scud missiles.

—Jeffrey Smith, "Gates Warns of Iranian Arms Drive; Tehran Buys \$2 Billion In Weapons Annually, House Panel is Told," *Washington Post*, 28 March 1992, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

29 March 1992

U.S. spy satellites record North Korea's transfer of at least 20 Scud canisters to Iran to be transhipped by plane to Syria and other Arab countries.

—Jack Anderson and Michael Binstein, "North Korea: Loose Nuclear Cannon," *Washington Post*, 29 March 1992, p. C7.

May 1992

The North Korean ship *Des Hung Ho* carries missile parts for Syria to the Iranian port of Bandar Abbas. Iran then

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flies the components to Syria. An Iranian ship and a North Korean ship bring missiles and machine tools for Syria and Iran from North Korea. It is estimated that at least 20 North Korean missiles have been transported from Iran to Syria, and production equipment has been transferred to both Iran and Syria from North Korea.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), pp. 36-37.

May 1992

North Korea is reported to have supplied Iran with Silkworm anti-ship missiles and midget submarines. The Silkworm missiles are installed in coastal sites and trailed aboard a surface unit operated by the Iranian Navy.

—"The Iranian Navy," *Jane's Intelligence Review*, May 1992, pp. 213-217.

May 1992

China is reported to have built a ballistic missile plant and a test range east of Tehran.

—"The Middle East Expands—Rivalry in South Central Asia," *Jane's Intelligence Review*, May 1992, pp. 11-12.

1 May 1992

Iranian armed forces and the Islamic Revolution Guards Corps (IRGC) deploy fighter-bombers, destroyers, missile-launching frigates, speedboats, and assault and anti-submarine helicopters on the sixth day of large-scale naval Victory-3 exercises. The exercises aim to counter the hypothetical penetration of the Straits of Hormuz region by Iran's enemies.

—"Victory-3 Naval Exercises Continue Into 6th Day," Tehran Voice of the Islamic Republic of Iran First Program Network, 30 April 1992; in FBIS Document FBIS-NES-92-085, p. 42.

22 May 1992

Iran is reportedly shopping around in Western and Asian markets for nuclear and missile technology. The principal sources have been North Korea for long-range Scud ballistic missiles, and China for battlefield missiles, cruise missiles, and nuclear-related technology.

—Michael Evens, "Fears Over Iran," *The Times* (London), 22 May 1992, in Lexis-Nexis, www.lexis-nexis.com.

31 May 1992

Four Syrian army officers are killed while working to extend the range of Scud missiles in Iran. As part of a treaty on technical cooperation that Syria and Iran have reportedly signed in 1992, a number of Syrian officers have been sent to Tehran, though Syria has never acknowledged that it is helping Iran's missile program. Iran has contracted to buy 150 Scud-D missiles from North Korea, which have a range of 1,300km and can be fitted with conventional or nuclear warheads. On 18 March, a North Korean cargo ship delivered the first missiles to the Iranian naval base at Bandar Abbas. The missiles will cost Iran \$320 million, but part of the agreement with North Korea is that Iran should also acquire technology to manufacture its own rockets.

—John Bulloch, "Syrians Killed as Scuds Explode," *Sunday Telegraph* (London), 31 May 1992, p. 20, in Lexis-Nexis, www.lexis-nexis.com.

June 1992

Director of the Yuzhonye missile complex in Dnepropetrovsk, Ukraine, tells a delegation of French officials that a

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deal with Iran is "in the works," though he would not specify which missiles Iran wants.

—"Ukraine Offers Missiles for Sale," *Defense Electronics*, June 1992, p. 18.

June 1992

A German intelligence report alleges that North Korea has sold Iran and possibly Syria components to produce Scud-C missiles.

—Michael J. Inacker, *Welt Am Sonntag* (Hamburg), 5 July 1992, p. 5, cited in *Proliferation Issues*, 19 July 1992, cited in "Ballistic Missiles, Cruise Missiles and Missile Defense Systems: Trade and Significant Developments (July - November 1992)," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1993, Vol. 1, No. 1, p. 109.

4 June 1992

In an effort to develop their missile program, Iran has received the M-11 missile from China. It is noted in the report that while the United States protested the sale of 170 Scud-B and Scud-C missiles by North Korea, the United States did not protest the Chinese missile sale.

—Arnold Beichman, "Iran's Ongoing Arms-Buying Binge," *Washington Times*, 4 June 1992, p. G3.

22 June 1992

Newsweek magazine reports that some of the Scud missiles that Iran received from North Korea were picked up by a North Korean fishing boat to be returned for repairs. Iran also reportedly received a clandestine delivery of 90 CSS-8s, short-range surface-to-surface missiles with anti-ship capability, as well as missile guidance technology from China. In addition, North Korea has allegedly pitched the sale of its Nodong-1 missile to Iran.

—"Sneaking in the Scuds," *Newsweek*, 22 June 1992, pp. 42-46.

Second Half of 1992

North Korea exports a few Nodong-1 prototypes to Iran.

—"Puk, Nodong 1 Ho Iran Chaegong/Sajönggöri 1 Ch'ön km Sugi/Mi Ŭihoe Pogosö," *Chosun Ilbo*, 17 July 1993, www.chosun.com.

July 1992

The CIA Nonproliferation Center provides information to U.S. policymakers confirming that the cargo delivered by the North Korean ship *Tae Hung Ho* consisted of missile manufacturing components, which were subsequently transferred to Syria from Tehran by Syrian aircraft. The shipment is allegedly valued at \$100 million. Other information indicates that in exchange for allowing the transshipment, Iran is to be permitted to supply weapons to Hezbollah militia in Lebanon. The deal is enabling Syria to build two missile propellant production facilities at Hamah; one plant will produce liquid fuel and the other will produce solid fuel.

—Bill Gertz, "Iran-Bound Mystery Freighter Carried Parts for Missiles," *Washington Times*, 16 July 1992, p. A3; Terrence Kiernan, "N. Korea Considers Scud Export Boost," *Defense News*, 26 April-2 May 1993, p. 3.

July-August 1992

North Korean Deputy Premier-Foreign Minister Kim Yong Nam visits Syria (27-30 July), Iran (30 July-3 August), and Pakistan (4-7 August). Missile cooperation and North Korean sales of the Hwasöng-6 and possibly Nodong missiles

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are on the agenda.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 23.

15 July 1992

Russia concludes a \$2 billion deal to sell a major arms package to Iran, including advanced combat aircraft, the SA-5 Gammon, the SA-11 Gadfly, and the SA-13 Gopher. [Note: A surface-to-surface capability was added to the Gadfly, which entered into service in 1983. See, "SA-11 'Gadfly,'" *Jane's Strategic Weapon Systems 33*, accessed via www.janesonline.com.]

—"Iran/Russia Wrap Up \$2 billion Arms Deal," *Flight International*, 15 July 1992, p. 13.

24 July 1992

Iran establishes a major missile-testing ground near its borders with the former Soviet Union and Afghanistan.

—"II Quarter 1992: July," Gulf/2000 Project (New York: School of International and Public Affairs [SIPA], Columbia University, July 1992).

Late July-Early August 1992

Syria conducts two tests of Scud-C missiles acquired from North Korea via Iran. North Korean military personnel are present in Syria for the tests. Israel claims that these tests are the last tests before the missile becomes operational.

—Bill Gertz, "Israelis Say Syrians Test-Fired New Scud," *Washington Times*, 14 August 1992, p. A25; Neal Sandler, "Israeli Concern over Syrian 'Scud' Tests," *Jane's Defence Weekly*, 22 August 1992, p. 11; "Increase in Egypt's 'Scuds' Leads to Bar Pull-Out," *Jane's Defence Weekly*, 5 September 1992, p. 31; Allison Kaplan and David Makovsky, "Rabin Blasts Proposed US Arms Sales to Saudis: PM Rejected US Deal," *Jerusalem Post*, 13 August 1992, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "Syria, Ch'oech'ömdan Missile Saengsandan'gye/Israel Chön'yök Sajöng'gwön'e," *Chosun Ilbo*, 14 August 1992, p. 5, in KINDS, www.kinds.or.kr; "Pukhanje Scud Missile/Syria, Shilhömbalsa Sönggong," *Donga Ilbo*, 14 August 1992, p. 5, in KINDS, www.kinds.or.kr.

August 1992

The Simon Wiesenthal Center issues a report stating that Western firms, including 100 in Germany, 43 in the United States, 29 in France, 22 in the United Kingdom, and 13 in Italy and Switzerland, have provided Iran with materials and technology useful in developing nuclear, chemical and biological weapons, as well as ballistic missiles.

—Michael Fitzpatrick, Reuters, 3 August 1992, cited in *Nuclear Nonproliferation Network News*, cited in "Ballistic Missiles, Cruise Missiles and Missile Defense Systems: Trade and Significant Developments (July - November 1992)," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1993, Vol. 1 No. 1, pp. 108-110.

August 1992

Kamal Kharazzi, Iran's representative to the United Nation, denies claims that Iran uses dual-use technology to produce ballistic missiles and chemical weapons. He says that Iran has no intention of developing nuclear or

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chemical weapons.

—IRNA (Tehran), 5 August 1992, cited in *Proliferation Issues*, 12 August 1992, p. 8, cited in "Ballistic Missiles, Cruise Missiles and Missile Defense Systems: Trade and Significant Developments (July - November 1992)," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1993, Vol. 1, No. 1, p. 108.

5 August 1992

Syria reportedly test-launches two advanced Scud missiles capable of hitting targets anywhere in Israel.

—Clyde Haberman, "Israel Says Syria Is Testing Advanced Scud Missiles," *New York Times*, 15 August 1992, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

8 August 1992

Iran has pledged over \$7 billion in an effort to obtain missiles, tanks, fighter jets, and nuclear technology from China, North Korea, and Russia. Iran is reportedly negotiating the purchase of SAM-5, SAM-11, and SAM-13 missiles from Russia and other Eastern European countries.

—Yousef M. Ibrahim, "Iran Said to Commit \$7 billion to Secret Arms Plan," *New York Times*, 8 August 1992, p. 3.

13 August 1992

The *Washington Times* reports that the German firm Messerschmidt-Boelkow-Blohm has provided Iran with materials to expand the range of the Silkworm missile from 400km up to 1500km.

—Arnold Beichman, *Washington Times*, 13 August 1992, p. G3, cited in "Ballistic Missiles, Cruise Missiles and Missile Defense Systems: Trade and Significant Developments (July - November 1992)," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1993, Vol. 1, No. 1, p. 108.

15 August 1992

The recently tested Syrian missiles are purchased from North Korea. However, senior Israeli officials claim that Syria is working with Iran to produce Scuds on its own, including those with chemical warheads.

—Clyde Haberman, "Israel Says Syria Is Testing Advanced Scud Missiles," *New York Times*, 15 August 1992, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

September 1992

Iran allegedly provides surface-to-surface missiles and other weapons to Sudan, to be used against rebel troops of the Sudanese People's Liberation Army.

—Tariq Hasan, *Rose Al-Yusuf* (Cairo), 19 October 1992, p. 71, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, November 1992-April 1993," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1994, Vol. 1, No. 2, p. 158.

10 September 1992

A spokesman for the Iranian Embassy in Beijing states that China is ready to dispatch 500 M-11 missiles to Iran. The deal is allegedly in response to President Bush's decision on 2 September to sell 150 F-16s to Taiwan.

—Graham Hutchings, "Sino-Iran 'Arms Link'," *Daily Telegraph* (London), 10 September 1992, p. 10, in Lexis-Nexis, www.lexis-nexis.com; Eric Chauvistre, *Pacific Research*, November 1992, pp. 17-18, cited in "Ballistic Missiles,

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Cruise Missiles and Missile Defense Systems: Trade and Significant Developments (July - November 1992)," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1993, Vol. 1, No. 1, p. 108.

October 1992

A group of Israeli officials, including Eitan Bentsur, foreign ministry deputy director general, visits Pyongyang where he is given assurances that in exchange for economic assistance North Korea will not sell missiles. North Korea invited Foreign Minister Shimon Peres to visit at this time, but he declined. North Korean representatives also reportedly request assistance in mining gold. Israel offers to help raise \$1 billion in funds for foreign investment from American Jews if North Korea would stop its plans to export Nodong missiles to Iran.

—*Korea Times*, 16 June 1993, p. 2, in "Seoul 'Concerned' With Israel-DPRK Contacts," FBIS-EAS-93-114, 16 June 1993, p. 20; Kim Yong Kol, *Hankook Ilbo*, 16 June 1991, p. 4, in "Israel Makes Gesture to North Korea for Improvement of Relations," FBIS-EAS-93-114, 16 June 1993, p. 20; Jon B. Wolfsthal, "U.S. Prods Israel to Halt Talks With North Korea on Missile Sales," *Arms Control Today*, September 1993, p. 24; Steve Rodan, "All Eyes Are On Israel's North Korean Connection," *Jerusalem Post*, 25 March 1994, p. 3B, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Abraham Rabinovich, "Surly Pyongyang warms up to Jerusalem," *Jerusalem Post*, 18 June 1993, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

October 1992

Iran allegedly decodes the firing and fusing systems from one of two nuclear warheads obtained from Kazakhstan. Work is believed to be progressing on decoding the second warhead. [Note: The veracity of this report is dubious, as most experts would agree that Iran has not acquired nuclear warheads.]

—Assad Homayoun, *Washington Times*, 5 January 1993, p. F3, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, November 1992-April 1993," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Winter 1994, Vol. 1, No. 2, p. 156.

October 1992

A group of U.S. officials visits European allies and Japan to discuss an initiative to restrict the sale to Iran of dual-use technologies that could be used to produce ballistic missiles and weapons of mass destruction.

—*Washington Post*, 10 November 1992, p. A30, cited in "Ballistic Missiles, Cruise Missiles and Missile Defense Systems: Trade and Significant Developments (July - November 1992)," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1993, Vol. 1, No. 1, p. 110.

October 1992

The Pentagon says that it is concerned that China is discussing further "nuclear missile" exports with Iran. A senior Pentagon official also says that there are indications that China is violating the Missile Technology Control Regime (MTCR) in discussing deals for the M-9 and M-11 missiles with Pakistan and Syria.

—*Jane's Defence Weekly*, 10 October 1992, p. 18, cited in "Ballistic Missiles, Cruise Missiles and Missile Defense Systems: Trade and Significant Developments (July - November 1992)," *Nonproliferation Review*, James Martin Center for Nonproliferation Studies, Fall 1993, Vol. 1, No. 1, p. 110.

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18 October 1992

Russian and Iranian sources confirm that Russia will supply Iran with an unspecified number of surface-to-air missiles as part of a weapons sale agreement.

—"Yeltsin Rejects US Warning and Supplies Iran with Advanced Weapons," *Al-Sharq Al-Awsat* (London), 18 October 1992, p. 1; in "Russia Reportedly to Supply Weapons, Equipment," FBIS Document FBIS-NES-92-203, 20 October 1992, p. 42.

23 October 1992

Reports confirm that Iran has set up eight missile launching pads for launching Silkworm missiles and modified Scud-B missiles on the disputed Abu Musa Island in the Persian Gulf. Western sources advance that Iran intends to stockpile approximately 200 Silkworm missiles and more than 800 Scud missiles by the end of 1993.

—"Amid Atmosphere of Escalation in Crisis with Emirates, Iran Moves Missiles to Abu Musa," *Al-Sharq Al-Awsat* (London), 23 October 1992, p. 1; in "Missiles Moved to Abu Musa Island," FBIS Document FBIS-NES-92-207, 25 October 1992, p. 41.; "Iraq Daily Claims Missile Launchers on Abu Musa," *Al-Jumhuriyah*, 27 October 1992, p. 1; in FBIS Document FBIS-NES-92-211, 30 October 1992, p. 35.; "Iran Prepares Missile Sites on Abu Musa," *Mednews*, 7 December 1992, p. 5.

27 October 1992

Missile exercises, codenamed Thunderbolt II, are carried out in the central and western parts of the Strait of Hormuz.

—"Missile Exercises Conducted in Strait of Hormuz," Tehran IRIB Television First Program Network, 27 October 1992; in FBIS Document FBIS-NES-92-209, 28 October 1992, p. 57.

Late October 1992

A North Korean ship, laden with as many as 100 upgraded Scud missiles, leaves North Korea and is bound for the Iranian port of Bandar Abbas. Half of the cargo reportedly is to be carried overland to Syria.

—"Washington Whispers: On Its Way," *US News & World Report*, 9 November 1992, p. 30.

Early November

Eleven Chinese technicians went to Iran to inspect work started in 1991 on a long-range Scud missile with a production goal of no fewer than 400 missiles per year.

—Rowland Evans and Robert Novak, "Iran Sizes Up Clinton," *Washington Post*, 23 November 1992, p. A21.

November 1992

North Korea supplies Iran with 220 Scud missiles, and a few early model Nodong missiles.

—"Puk, Nodong 1 Ho Iran Chaegong/Sajönggöri 1 Ch'ön km Sugi/Mi Ŭihoe Pogoso," *Chosun Ilbo*, 17 July 1993, www.chosun.com; Yonhap News Agency, 16 July 1993, in "U.S. Report on DPRK-Iran Missile Deal Cited," FBIS-EAS-93-138, 21 July 1993, p. 33.

November 1992

Iran purchases three kilo-class submarines from Russia equipped with advanced SA-16 surface-to-air missiles for \$1 billion.

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—Nikola B. Schahgaldian, *Iran and the Postwar Security in the Persian Gulf* (National Defense Research Institute RAND, 1994), p. 23; "Iran Acknowledges More Kilo Class," *MedNews*, 7 December 1992, p. 5.

8 November 1992

Joseph Alpher, a former official in Israel's intelligence service Mossad and currently deputy head of the Jaffee Center for Strategic Studies at Tel Aviv University, claims that Iran's vigorous missile program, which includes purchases from China and North Korea, is Israel's number one threat.

—"IV Quarter 1992: November," Gulf/2000 Project (New York: School of International and Public Affairs (SIPA), Columbia University, November 1992).

10 November 1992

Iran reportedly is purchasing large quantities of advanced technology equipment, including radar testing devices, navigation and avionics equipment, oscilloscopes, logic analyzers, fiber optic cables, digital switches, high-speed computers, remote sensors, and jet engines, from a variety of Western countries.

—"Technology from West Floods Iran," *Washington Post*, 10 November 1992, pp. A1, A28-A29.

11 November 1992

Russia has surpassed China as the primary arms supplier to Iran. Iran has purchased the Russian SA-5 surface-to-air missile from Russia.

—Kathy Evans, David Pallister, and Simon Tisdall, "Oil Sales to US Help to Bankroll Iranian Drive for Rearmament," *Guardian*, 11 November 1992, p. 3.

30 November 1992

Citing Gulf military reports, Kuwaiti newspaper *Al-Anba'* reports that Iranian forces prepared installations and launch pads for surface-to-surface Silkworm missiles on Abu Musa Island.

—"Silkworm Launchers Reportedly Set Up On Abu Musa," *MENA* (Cairo), 30 November 1992; in FBIS Document FBIS-NES-92-231, 1 December 1992, p. 63.

Early December 1992

Kim Tal Hyön leads a delegation to Iran for the signing of a military agreement worth several hundred millions of dollars to develop a new missile that is capable of carry nuclear warheads. The agreement stipulates that Iran will provide North Korea with \$500 million to "jointly develop nuclear weapons and ballistic missiles." The agreement also provides for missile flight tests in Iran, and the cooperation of Libya in order to obtain western electronics systems from Libya's al-Fatah program. The al-Fatah program is reported to have the support of German firms and technical experts.

—"Puk, Nodong 1 Ho Iran Chaegong/Sajönggöri 1 Ch'ön km Sugi/Mi Ŭihoe Pogoso," *Chosun Ilbo*, 17 July 1993, www.chosun.com; Yonhap News Agency, 16 July 1993, in "U.S. Report on DPRK-Iran Missile Deal Cited," FBIS-EAS-93-138, 21 July 1993, p. 33.

December 1992

North Korea invites Israeli Foreign Minister Shimon to North Korea to discuss aid in exchange for abandoning its missile program. On 14 June 1993, Peres says that he wants to visit North Korea to dissuade them from selling

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missiles to Iran.

—*Korea Times*, 16 June 1993, p. 2, in "Seoul 'Concerned' with Israel-DPRK Contacts," FBIS-EAS-93-114, 16 June 1993, p. 20.

December 1992

Reports surface that Iran is developing a new 1000km-range SRBM, the Tondar-68. It is also reported that the "Ugab," a missile similar to the Tondar-68 with a 1000-1250km-range, is under development. [Note: The Oghab artillery rocket and this entry's "Ugab" SRBM share the same name, "Eagle." However, there is no evidence beyond this report in *Jane's Intelligence Review* that the "Ugab" SRBM exists.]

—"Iran," *Jane's Intelligence Review*, 1 December 1992, in Lexis-Nexis, www.lexis-nexis.com.

5 December 1992

The Iraqi News Agency (INA) warns that it is necessary to monitor Iran's weapons buildup, particularly those related to missile deals and nuclear arms, as they threaten regional security.

—"Iraq Alarmed By Iran's Nuclear Might," UPI (Beirut), 5 December 1992, in Executive News Service, 7 December 1992.

8 December 1992

Iran and North Korea sign a military agreement worth billions of dollars to cover the development of new missile systems capable of carrying nuclear warheads. Details of the agreement are not released, but informed sources report that part of the agreement covers the development of two new missiles financed by Iran and designed and manufactured in North Korea. One missile is based on the Chinese M-11; the other missile is the M-9B.

—Amir Tahiri, "North Korea Is Iran's Main Partner in the Development of an Advanced Missile System," *Al-Sharq Al-Awsat* (London), 8 December 1992, p. 3; in FBIS Document FBIS-NES-92-239, 11 December 1992, p. 48.

21 December 1992

U.S., French, and German officials say Germany is enjoying an export "bonanza" to Iran. Germany's Federal Export Agency reports an 80% approval rate for licenses of dual-use equipment to Iran, which fall on the C-list of controlled technology. Critics of Germany's export control policy complain that much of the equipment shipped to Iraq and subsequently used in nuclear, biological, chemical, and missile applications, appear on the C-list.

—"Germany's Iran Bonanza," *Mednews*, 21 December 1992, p. 1.

Late 1992

Iran is attempting to extend the range of the Silkworm missile to 400km at a Silkworm assembly facility near Bandar Abbas. Iran began to assemble Silkworm here in 1988 under Chinese supervision.

—Kenneth Timmerman, "Iran's Ballistic Missile Program," *Mednews*, 21 December 1992, pp. 4-5.

End of 1992

Iran has an estimated 800 Scud missiles and 200 Chinese Silkworm missiles, as part of a plan to spend \$50 billion on defense over the next five years.

—Assad Homayoun, "Unsettling Signals From Iran," *Washington Times*, 5 January 1993, p. F3, cited in "Ballistic, Cruise Missile and Missile Defense Systems: Trade and Significant Developments, November 1992-April 1993,"

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Nonproliferation Review, James Martin Center for Nonproliferation Studies, Winter 1994, Vol. 1, No. 2, p. 157.

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1991

Early 1991

The Chinese 8610 surface-to-surface missiles that were shipped to Iran in 1990 are put into production. As the 8610 is similar to the HQ-2 surface-to-air missile, it can be produced at the same site in Isfahan that was established to produce the HQ-2.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 64.

1991

Iran will receive and test fire the North Korean intermediate range surface-to-surface Nodong ballistic missile this month. The Nodong, which is being developed in two versions, will have a range of between 1,000 to 1,300kms. An Iranian delegation traveled to Pyongyang in 1991 and purchased 150 Nodong missiles. It is believed that Iran's ultimate aim is to develop its own missile production facilities.

—David Makovsky, "North Korean Missiles 'Due to Arrive in Iran this Month'," *Jerusalem Post*, 5 December 1993, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

1991

Iran, along with North Korea and China, is helping Syria build Hwasong-6 (Scud-C) missile production facilities near the cities of Aleppo and Hamah.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 9.

1991

Reports claim that the Bush administration has paved the way for selling sensitive American technology to the Iran and Syria, even though they still remain on the State Department list of nations that sponsor terrorism. The administration issued a new policy in the fall of 1991 that says that licenses for sales to commercial customers in Syria and Iran would be considered on a case-by-case basis. This new policy could send an array of dual-use technology to the two nations, although a top Bush administration export official contends that restrictions remain tight and basically unchanged. A Commerce Department report sent to Congress says that the previous policy of denying exports licenses to military customers will remain in place. The same report shows that Iran and Syria now may obtain such high-tech commodities as gravity meters and magnetometers, which can be used in missile guidance systems. They also may buy computer-controlled machine tools, which shape metal with microscopic accuracy and can be used for military purposes.

—Douglas Frantz, "U.S. to OK High-Tech Sales to Iran and Syria," *Los Angeles Times*, 13 February 1992, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

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1991

The People's Mojahedeen, an Iranian opposition group, claims that in 1991, Iran buys 170 Scud missiles from North Korea and 2,000 surface-to-air missile (SAM) launching pads from Bulgaria. Iran reportedly has built ballistic missiles with a range of nearly 185 miles with help from China and North Korea. Iran is also said to have tested these missiles.

—John Hughes, "Arms Buildup in Iran Belies the Image of A 'Moderate' Regime," *Christian Science Monitor*, 6 February 1992, p. 19, in Lexis-Nexis, www.lexis-nexis.com.

1991

Syria receives Scud-C missiles and missile-production equipment worth an estimated \$250 million from North Korea. Iran has agreed to transship about \$100 worth of the missiles to Syria.

—Bill Gertz, "Iranian-Syria Deal Revealed as Scuds Near Gulf Ports," *Washington Times*, 10 March 1992, p. A3.

1991

A major military deal is concluded during a visit by Iranian Defense Minister Akbar Torkan to Pyongyang. The deal is reportedly worth \$2.5 billion and includes 110 Scud-C missiles.

—"Navy On Alert Since Arrival of Korean Freighter," *Sawt Al-Kuwayt Al-Duwali* (London), 12 March 1992, pp. 1, 11; in *Proliferation Issues*, 26 March 1992, pp. 32-33; James Kraska, "Iran Flexes Maritime Muscles in Gulf," *Defense News*, 4 October 1994, pp. 25-26.

1991

Iran makes a \$3 million loan to the Trieste International Center for Theoretical Physics. The Trieste Center is a nuclear research institution where scientists from Third World countries like India, Pakistan, and Iran may be conducting research on nuclear weapons, missile systems, and other military technologies.

—Steve Coll, "Loan from Tehran Saved Third World Nuclear Research Center," *Washington Post*, 24 December 1992, pp. A8, A10.

1991

Reportedly Iran begins negotiating the purchase of approximately \$300 million worth of Astros-2 multiple launch rocket systems from Brazil.

—"British Kit for Zulfaqr Tank," *Iran Brief*, 8 January 1996, pp. 2-3.

1991

Production of the 45km-range Fajr-3 begins.

—"Iran Builds Its Strength," *Jane's Defence Weekly*, 1 February 1992, pp. 158-159.

1991

Iran tests the North Korean Scud-C manufacturing equipment.

—Ivan Safranchuk, Dmitriy Yevstafyev, ed., "Scientific Notes No. 8: The Nuclear and Missile Programs of Iran and Russian Security – The Framework of Russian-Iranian Collaboration," *Nauchnyye Zapiski* (Moscow), 5 May 1999, Vol. 8, pp. 1-36; in "Russia, Iran Nuclear Program Cooperation," FBIS Document FTS19990701001333, 1 July 1999.

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1991

Iran starts producing the North Korean Scud-C, with a range of 550km.

—"Mideast Missile Race Detailed," *Al-Wasat* (London), 30 August 1999; in FBIS Document FTS19990903000290, 30 August 1999.

1991

An article in a widely circulated Israeli newspaper argues that Iran's recent acquisitions of nuclear and missile technology require that Israel take Iran into consideration when making defense and strategy decisions. Iran has launched a military modernization plan that emphasizes three components: tanks, Soviet-supplied MiG-29 and Sukhoi-24 aircrafts, and surface-to-surface missiles with ranges up to 1,000km.

—Alon Pinkas, "Iran looms a growing strategic threat for Israel," *Jerusalem Post*, 21 November 1991, in Lexis-Nexis, www.lexis-nexis.com.

1991

U.S. officials confirm that China is supervising the construction of HY-2 and M-type missile facilities.

—"Iran," *Jane's Intelligence Review*, 1 December 1992, in Lexis-Nexis, www.lexis-nexis.com.

1991

Sources report the orders of 170 North Korean Scud-B and Scud-Cs, and Chinese-made M-11 missiles.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), p. 56.

1991

Syria receives Scud-C missiles and missile-production equipment worth an estimated \$250 million from North Korea. Iran has agreed to transship about \$100 million worth of the missiles to Syria.

—Bill Gertz, "Iranian-Syria Deal Revealed as Scuds Near Gulf Ports," *Washington Times* 10 March 1992, p. A3.

1991

Iran reportedly purchases 2,000 surface-to-air missile (SAM) launching pads from Bulgaria.

—John Hughes, "Arms Buildup in Iran Belies the Image of A 'Moderate' Regime," *Christian Science Monitor*, 6 February 1992, p. 19, in Lexis-Nexis, www.lexis-nexis.com.

January 1991

Since January 1991, Iran receives Scud-C missile parts from North Korea.

—"The Post-War Scud Boom," *Wall Street Journal*, 10 July 1991.

January 1991

Iran acquires Scud-C missile components from North Korea.

—Lee Chae Hak, "Kkorimunŭn Pukhan Scud Such'ul/Shimsangch'anh'ŭn Taechungdong P'anmaesŏl," *Joongang Ilbo*, 13 July 1991, p. 2, in KINDS, www.kinds.or.kr.

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January 1991

The CIA, working with a "friendly" Middle Eastern intelligence agency, reports that North Korea appears to be supplying Scud missiles—some modified to carry chemical warheads—to Syria, Libya, and Iran. North Korea has agreed to build new facilities in Iran to assemble three types of Scud missiles. The CIA has reported North Korea's activities to the U.S. State Department.

—Adel Darwish, "N Korea 'selling Scuds'," *The Independent* (London), 6 April 1991, p. 10, in Lexis-Nexis, www.lexis-nexis.com.

January 1991

Iran receives shipments of an estimated 100 North Korean Scud-Mod. C (Scud-C) missiles together with the necessary equipment for them.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 57-58.

January 1991

U.S. intelligence agencies begin tracking shipments of Hwasong-6 (Scud-C) missiles en route from North Korea to Iran. Some reports later suggest that Iran acquired 60 of the missiles, but the exact number is unknown. The Hwasong-6 is known as the Shahab-2 in Iran.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 18.

January 1991

The Islamic Republic News Agency (IRNA) announces that, "... from 4 February 1991 Iran's munitions industry will launch the production of its own long-range, powerful 'surface-to-surface' missiles." [Note: This production capability is probably a reference to the facilities at Isfahan that assemble missiles from DPRK components.]

—Ed Blanche, "Iran Says It Will Start Missile Production," Associated Press, 29 January 1991, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "Iran To Mass Produce Long-Range Missiles, Launch Second Submarine," Xinhua News Agency, 29 January 1991, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

7 January 1991

The Islamic Revolution Guards Corps (IRGC) Acting Commander Rahim Yahya Safavi says that the forthcoming large-scale Fajr maneuvers are directly related to the presence of foreign military force in the Persian Gulf. SAM-2 and SAM-6 missile systems will be used for the first time during the maneuvers.

—"Plans to Use SAMs," Islamic Republic News Agency (IRNA), 7 January 1991; in FBIS Document FBIS-NES-91-005, 8 January 1991, p. 51.

21 January 1991

The Iranians finalize an agreement with the Chinese for the assembly of the M-9 missile with a range of 560km.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 26.

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29 January 1991

Iran announces the production of a longer-range missile. This missile is understood to be an upgraded version of the Scud-B and is referred to as the Scud-C or Scud PIP.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 23.

29 January 1991

Hojat al-Islam Alawi, spokesman for the Ministry of Defense and Armed Forces Logistics Says that Iran is scheduled to begin mass production of long-range surface-to-surface missiles on 4 February 1991. [Note: Mass production of long-range surface-to-surface missiles may have actually begun in March 1991.]

—"Mass Production of Long Range Missiles Planned," Islamic Republic News Agency (IRNA), 29 January 1991; in *Nuclear Developments*, 25 February 1991, p. 32.

29 January 1991

There is speculation that the long-range missile system about to enter mass production is an upgraded Scud-B with extra fuel tanks and a reduced payload.

—"Iran Builds Its Strength," *Jane's Defence Weekly*, 1 February 1992, pp. 158-159.

30 January 1991

U.S. intelligence officials say that Iraq wants to buy 100 mobile Scud launchers from Iran. The request, along with the flight of 90 Iraqi planes to Iran, reportedly has U.S. military officials perplexed. U.S. officials are unsure whether Iran is willing to sell the launchers, which were purchased from North Korea in the 1980s. Iran's ambassador to the United Nations, Kamal Kharrazi, claims that speculation about Scud launcher sales to Iraq is "baseless." Iran bought the launchers and SS-1 (Scud-B) missiles in response to Iraqi missile attacks on Iranian cities during the Iran-Iraq War.

—"Iraq reported dealing for Iran Scud launchers," *Los Angeles Times*, 30 January 1991, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

1 February 1991

Iran contacts North Korea to purchase Scud missiles. Experts conclude that Iran would either transfer the missiles to Iraq or would sell Iraq mobile missile launchers.

—"Republic Allegedly to Buy North Korean Scuds," Iran's Flag of Freedom Radio, 1 February 1991; in FBIS Document FBIS-NES-91-022, 1 February 1991, p. 51.

2 February 1991

The Iraq-based Iranian opposition group Mujahedin-e Khalq Organization (MKO) alleges that the Islamic Revolution Guards Corps (IRGC) is using test equipment bought from the German MBB Corporation to extend the Silkworm range.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 23.

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16 February 1991

Japan's Jiji News Agency reports that two Iranian aircraft arrived in Pyongyang the previous week and that each aircraft was loaded with 50 Scud missiles. The source reportedly says that the missiles were transferred to Iraq.

[Note: This report is not credible. It is not plausible that Iran would transfer missiles to Iraq at this time. Furthermore, 50 Scud missiles could not fit into one transport aircraft.]

—"Pukhan, Iran T'onghae Iraq E Scud 1 Baekki Panmae—Ilchijit'ongshin Podo," *Joongang Ilbo*, 16 February 1991, www.joins.com.

22 February 1991

Brazilian Reserve Brigadier Hugo de Oliveira proposes to the Iranian Ministry of Military Industrialization on 16 February that he advise the ministry's missile group in the development of 600km and 1,000km range missiles. Oliveira gives the names of two engineers who would assist with the project: Celso Leal Mariuzzo and Carlos Eduardo Santana.

—"Retired Officer Proposes Missile Deal with Iran," *Folha De Sao Paulo*, 22 February 1991, p. 4; in *Nuclear Developments*, 19 March 1991, p. 17.

March 1991

North Korea signs a five-year contract with Iran for the supply of 20,000 barrels of oil per day.

—"A Lonely State of Defiance," *Jane's Defence Weekly*, 8 August 1992, pp. 26-27.

March 1991

Iran is thought to have deployed Silkworm anti-ship missiles at seven sites on the north side of the Straits of Hormuz.

—"HY-2 'Silkworm' Anti-Ship Missile Detailed," *Jane's Soviet Intelligence Review*, March 1991, p. 120.

March 1991

Iran's Ministry of Defense and Logistics reports that Iran begins production of its own long-range surface-to-surface missiles, which have a range of 800km. [Note: This event may be the same one that was predicted to occur on 4 February 1991.]

—"Iranian SSMs in Production," *Defence*, March 1991, p. 6; in *Aerospace/Defense Markets & Technology*, April 1991, p. 156.

March 1991

Iran receives 24 Scud-C missiles in March 1991.

—Bill Gertz, "Ship with Scud Cargo for Syria Alters Course," *Washington Times*, 9 November 1991, p. A6; Bill Gertz, "N. Korean Missiles Likely on 2nd Ship," *Washington Times*, 10 December 1991, p. A6; Bill Gertz, "Iran-Syria Deal Revealed as Scuds Near Gulf Ports," *Washington Times*, 10 March 1992, p. A3.

March 1991

The Tondar-68 missile with a range of more than 1,000km is test-fired at the Salt Desert test range near Shahroud. The Iranians developed the Tondar-68 with the help of the Chinese.

—"Improved Silkworm Test-Fired," *Iran Brief*, 5 December 1996, pp. 7-8.

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March 1991

Iran test-fires two missiles at its testing facility in Semnan. One of the missiles has a range of over 700km and the other one over 1,000km. The two missiles are assumed to be the offspring of the Scud-C due to the fact that it has a range of 600-650km. The two missiles have been temporarily classified as the Tondar-68 for the 1,000km-range missile and Iran-700 for the 700km-range missile. Iran has yet to publicize its names for the missiles.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 59.

April 1991

North Korea begins deliveries of an estimated 60 Hwasŏng-6 (Scud-C) missiles and 12 transporter-erector launchers (TELs) to Syria via Iran. North Korea and Syria conclude an agreement for long-term deliveries that continue until at least 1995. There is also a report that North Korea has agreed to build new facilities in Iran to produce three types of Scuds.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 18; Chang Chun Ik, *Pukhan Haek-Missile Chŏnjaeng* (Seoul: Sŏmundang, May 1999), p. 277; "Ballistic Missile Threat Evolves," *International Defense Review*, Vol. 33, No. 10, 1 October 2000, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Adel Darwish, "N Korea 'Selling Scuds'," *The Independent*, 6 April 1991, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

May 1991

U.S. satellites detect an Iranian test launch of a Shahab-2/Hwasong-6 missile using a North Korean transporter-erector launcher (TEL) near the city of Qom. The missile flew 500km and landed south of Shahroud in the Dasht-e Kavir (Salt Desert). North Korea likely provided advisors or observers for the test. North Korea also helped build the missile test facility at Shahroud and a tracking station near the town of Tabas.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 18.

May 1991

China is providing Iran with help in establishing production sites around the city of Isfahan for the HY-2 Silkworm missiles and M-class missiles.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 59.

Mid-May 1991

U.S. intelligence sources report that a new ballistic missile is test-fired from a mobile launcher near the city of Qom. The test results in the missile flying for 500km and landing in the Salt Desert.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 24.

24 May 1991

U.S. satellites observe the launch of a Scud-C missile from a mobile launcher near Qom in Iran. The missile flies

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500km before impacting south of Shahroud (Emamshahr) in the Salt Desert (Dasht-e Kavir). The missile was assembled in Iran from components provided by North Korea in a series of shipments tracked by Western intelligence agencies since January 1991. Iran has thus far purchased 170 Scud-C missiles, assembling them from "knock-down kits" at the Isfahan facility. (Note: This test may have been an Iranian test of the missile, a joint Iranian-North Korean test, or an early example of North Korea making use of the larger test areas in Iran, as was later planned for Nodong in October or November of 1993. As to the 170 Scud-C missiles, it is unlikely that all 170 could have been delivered. According to production estimates, North Korea would not have been able to produce that many Scud-Cs by this time.)

—Bill Gertz, "U.S.: Iran Fired Ballistic Missile," *Washington Times*, 24 May 1991, p. A5; Steven Emerson, "The Postwar Scud Boom," *Wall Street Journal*, 10 July 1991, p. A12. Kenneth Timmerman, "Iran's Ballistic Missile Program," *Mednews*, 21 December 1992, p. 4-5; Lee Jöng Hun, "FROGesö Taepodong Kkaji: Pukhan Missile Game," *Shindonga*, August 1999, p. 203.

30 May 1991

The United States reportedly is concerned that China may have supplied a production line in the northeastern part of Iran at Isfahan for Chinese-designed short-range ballistic missiles. [Note: Isfahan is not in the northeastern part of Iran. The article probably refers to Shahroud.]

—"Iran Now Top Threat in Region," *Washington Times*, 30 May 1991, pp. A1, A11.

June 1991

Iran is focusing on greater missile accuracy rather than increased missile range.

—"Assessing Ballistic Missile Proliferation and Its Control" (Stanford: Center for International Security & Arms Control, June 1991), pp. 39-72.

Summer 1991

The North Korean ship *Mupo* departs Namp'o bound for Syria, allegedly carrying eight launchers and an additional missile shipment as part of the Syrian order for 150 Scud-C missiles.

—Bill Gertz, "Ship with Scud Cargo for Syria Alters Course," *Washington Times*, 9 November 1991, p. A6; Bill Gertz, "N. Korean Missiles Likely on 2nd Ship," *Washington Times*, 10 December 1991, p. A6; Bill Gertz, "Iran-Syria Deal Revealed as Scuds Near Gulf Ports," *Washington Times*, 10 March 1992, p. A3.

4 July 1991

Top executives of Japan Aviation Electronics (JAE) publicly apologize for illegally exporting missile parts to Iran. Koichi Kondo, senior managing director, claims that JAE had established an in-company committee in July 1987 to monitor exports, but the committee had "inadvertently overlooked" the exports of missile parts. Kondo does not explain the connection of a Hong Kong agency that placed an order for the repair of missile parts, nor a Singapore company that served as the intermediary for the exports to Iran.

—"Executive Offers Apology," *Daily Yomiuri* (Tokyo), 6 July 1991, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

4 July 1991

Kondo apologized on 4 July for the company's "mistakes," but said "only a few people" were aware that the

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components were for missiles because "flywheels are new to our company."

—Robert Thomson, "NEC unit admits military Iran deal," *Financial Times* (London), 6 July 1991, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

5 July 1991

The Tokyo Metropolitan Police Department searches the offices of Japan Aviation Electronics (JAE) on the suspicion that the firm illegally exported missile parts to Iran during the Iran-Iraq War. JAE reportedly imported broken and faulty parts for the U.S.-designed Sidewinder air-to-air missile from Iran, repaired them, and re-exported them to Iran through Singapore. Iran used the missiles for its U.S.-made F-4 fighters. JAE shipped a total of more than 1,000 parts in and out of Japan in at least 10 different shipments, police report, though they do not disclose the dates of the shipments. Japanese Foreign Ministry spokesman Sadaaki Numata confirms that an investigation is in progress and adds, "We have reason to suspect the people concerned may have gone around the law to export." There have been many cases of weapons exports to the Middle East in which Japanese companies were mentioned.

—"Japanese Firm Exported Missile Parts to Iran," *Report from Japan*, 5 July 1991, in Lexis-Nexis, www.lexis-nexis.com; "NEC, Unit Probe Reports of Arms Export to Iran," *Wall Street Journal*, 5 July 1991, p. A4; Colin Nickerson, "Japan probing sales to Iran of arms parts," *Boston Globe*, 6 July 1991, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

6 July 1991

Mr. Koichi Kondo, senior managing director of Japan Aviation Electronics (JAE), claims that JAE was paid about ¥35 million for approximately 1,500 flywheels used to enhance the guidance of Iran's Sidewinder air-to-air missiles.

—Robert Thomson, "NEC unit admits military Iran deal," *Financial Times* (London), 6 July 1991, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

6 July 1991

Japan Aviation Electronics (JAE) imported parts for U.S.-made Sidewinder missiles from Iran via Hong Kong during a one-year period from May 1983 and then shipped them back via Singapore. The company allegedly filed a false report with the Ministry of International Trade and Industry that it was exporting machinery, not missiles.

—"Missile Parts Allegedly; Exported to Iran Illegally," *Daily Yomiuri* (Tokyo), 6 July 1991, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

6 July 1991

Reports suggest that Japan Aviation Electronics' (JAE) dealings with Tehran went beyond the repair of flywheels for Sidewinder missiles. Tokyo police, acting on information provided by U.S. authorities, are seeking to establish whether JAE also sold Iran \$5 million worth of advanced aviation gyroscopes and accelerometers between 1983 and 1984. The equipment was reportedly for use in F-4 Phantom fighters. Allegations also surface to suggest that JAE was part of the Iran-Contra arms ring established secretly by the U.S. government to exchange hostages for arms to Iran.

—Colin Nickerson, "Japan arms sales linked to Iran-Contra," *Boston Globe*, 7 July 1991, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

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8 July 1991

The Japanese Ministry of International Trade and Industry (MITI) and Japanese police intensify the investigation of Japan Aviation Electronics (JAE). The investigation began after U.S. investigators tipped off MITI in February 1991 about illegal technology exports to Iran since 1984. Following a raid of its offices on 5 July 1991, JAE admits to exporting 1,500 flywheels for Sidewinder air-to-air missiles.

—"Japan Steps Up Iran Deals Probe," *Financial Times*, 8 July 1991, p. 3; "Weapons Scandal Hits Japan, Clouds Tokyo's Hope for Role in Arms Control," *Wall Street Journal*, 8 July 1991, p. A6.

9 July 1991

The gyroscopes that Japan Aviation Electronics (JAE) shipped to Iran are produced under license from a Californian firm on the condition that they be sold only to Japan's Defense Agency.

—"Gyros sent to Iran licensed only for sale to Defense Agency," *Report from Japan*, 10 July 1991, in Lexis-Nexis, www.lexis-nexis.com.

10 July 1991

Iranian exile sources say that an Iranian scientific and technical delegation travels to China and North Korea to negotiate an increase in the transfer of nuclear and ballistic missile technologies.

—Kenneth R. Timmerman, "Unmask Saddam's Nuclear Lies," *Wall Street Journal*, 24 July 1991, p. A10.

11 July 1991

During Chinese Prime Minister Li Peng's visit to Iran, he travels to Isfahan where he visits, "...the military complexes to the north and the west of the city where PRC and North Korean workers and experts are working side-by-side with the Iranians on projects to produce ballistic missiles and advanced surface-to-surface and surface-to-air missiles."

—"PRC to Supply Nuclear Technology," *Sawt Al-Kuwayt Al-Duwali* (London), 11 July 1991, pp. 1, 4; in *Proliferation Issues*, 8 August 1991, pp. 19-20; "DPRK and PRC Co-operation in the Iranian Missile Programmes," *Jane's Intelligence Review*, 1 April 1992, in Lexis-Nexis, www.lexis-nexis.com.

14 July 1991

Reacting to growing evidence that Japan Aviation Electronics (JAE) illegally conducted "more than a dozen separate transactions" in which missile parts and weapons' electronics were shipped to Iran, an official of Japan's Defense Agency notes, "The timing with the Iran-Contra diversions is remarkable, and we are wondering if it can be a coincidence." JAE shipments went through an Aero Systems front, Heirax in Hong Kong, to another firm in Singapore, and then on to Iran. Most of JAE's gyroscopes and inertial navigation systems equipment production is licensed through Honeywell.

—"Inquiry Has Japan Edgy: Was in An Arms Conduit," *New York Times*, 14 July 1991, p. 10.

15 July 1991

Iran receives MiG-29 fighter planes, as well as tanks, anti-aircraft missiles, and other equipment from the Soviet Union, as part of a deal brokered in 1990.

—"Iran Rebuilds Its Air Force in Cooperation with the USSR and Incorporates Iraqi Aircraft Which Sought Refuge in

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Its Territories During Gulf War," *Al-Hayat* (London), 15 July 1991, p. 7; in "Government Reportedly Turns to USSR for Arms," FBIS Document FBIS-NES-91-145, 29 July 1991, p. 64.

28 August 1991

Japanese authorities arrest four former Japan Aviation Electronics (JAE) executives for importing Sidewinder guidance fin flywheels from Iran via Singapore and re-exporting them to Iran for a profit of ¥35 million. Yukio Kaito, former JAE president; Keiichi Fukuizumi, a senior managing director; Yoshiharu Fukunaga, a director; and Hironobu Takahashi, head of the aircraft division, are arrested.

—"Four Arrested for Selling Missile Parts to Iran," *Kyodo* (Tokyo), 28 August 1991; in *Proliferation Issues*, 27 September 1991, p. 5.

28 August 1991

Two Iranians, Raza Amiri and Don Danesh of Ray Amiri Computer Consultants, are arrested in Newport Beach, CA, by U.S. government agents and charged with violation of export control laws. The two men allegedly diverted equipment to Iran, including portable oscilloscopes, with potential nuclear and missile applications. The Office of Export Enforcement agent Brooks D. Ohlson reports that this is one of the first cases involving the export of dual-use technologies to Iran.

—"Federal Agents Accuse Two of Export Violations," *Los Angeles Times*, 29 August 1991, p. D5; "Some Gear Legally Shipped by Firm Went to Agency Linked to Iranian Military," *Orange County Register*, 30 August 1991.

September 1991

A dissident Iranian military force, the National Liberation Army of Iran (NLA), reportedly has the capability to field some mobile missile launchers.

—"Iranian Dissidents Form Conventional Army," *International Defense Review*, September 1991, pp. 970-908.

September 1991

The U.S. State Department imposes a "determination" that the South African arms manufacturer Armscor has been "engaged in missile proliferation activities." As a result, the United States will ban dealings with Armscor for two years. Though the U.S. government has declined to disclose what particular missile sales by South Africa resulted in the ban, there is speculation that they could have involved Iraq, Israel, Chile, Iran, or Taiwan. [Note: Israel and Iran were involved in the Jericho ballistic missile project; later, serious speculation surfaced that Taiwan, South Africa, and Israel were participating on joint missile and nuclear research involving the Jericho missile.]

—David Beresford, "US ban deals big blow to South African arms maker: Unspecified sales of missiles cited in punitive embargo by Washington," *Guardian* (London), 17 October 1991, in Lexis-Nexis, www.lexis-nexis.com.

September 1991

Reports surface that Iran and Syria negotiated to produce the North Korean Scud-Mod. C (Scud-C) together. Iran will supposedly pay North Korea to build the missile factory in Syria.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 58.

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4 September 1991

Japan Aviation Electronics Ltd. (JAE) is indicted in Washington, DC, for conspiring with a Miami company to ship \$7 million in outlawed military equipment to Iran during its war with Iraq. The 22-count indictment also names three JAE executives, Aero Systems Inc., and two former Aero Systems executives. U.S. Attorney Jay Stephens says that JAE repaired U.S.-designed aviation gyroscopes and navigation equipment used in F-4 fighters and their missiles received from Hong Kong subsidiaries of Aero Systems, and shipped them to Singapore subsidiaries of Aero Systems for reshipment back to Iran. The indictment says that JAE knew the components were bound for Iran when it agreed to repair and export them from Japan. JAE faces up to \$22 million in fines and could be barred from U.S. contracting on charges of violating the Arms Export Control Act and International Traffic in Arms Regulations. —"Japan Aviation Electronics Indicted in US Over Missile Parts," *Report from Japan*, 6 September 1991, in Lexis-Nexis, www.lexis-nexis.com.

12 September 1991

Raza Amiri and Don Danesh are indicted in Los Angeles federal court for illegally exporting \$60,000 worth of electronic equipment, which included oscilloscopes, logic analyzers, and pulse generators, to the Iran Telecommunications Research Center and the Iran Telecommunications Manufacturing Company. Federal prosecutors allege that from April 1989 to October 1990, the two unnamed accomplices exported sensitive high-tech electronic equipment to destinations in Iran, including the Ministry of Defense, the Iran Telecommunications Research Center, and the Iran Telecommunications Manufacturing Co.

—Christina Lee, "Owner of Newport Beach firm, manager indicted; Exports: They are accused of shipping to Iran electronics that can be used in missile guidance and nuclear weapons," *Los Angeles Times*, 13 September 1991, p. D5, in Lexis-Nexis, www.lexis-nexis.com.

21 September 1991

North Korea has sold 300 Scud missiles to Iran, 20 Scud missiles to Syria, and Libya has signed a contract for the purchase of an unspecified number of missiles. (Note: There is also a report claiming that the 20 Scud missiles were actually delivered to Iran, but this is probably the same delivery).

—KBS-1 Radio Network (Seoul), 21 September 1991, in JPRS-TND-91-016, 29 October 1991, p. 19; "Pukhan, Iran E Scud Missile 1 Baekki Konggŭp—Egypt Shinmun," *Joongang Ilbo*, 23 September 1991, www.joins.com.

Late September 1991

Israeli intelligence say that Syria and Iran finalize an agreement for increased military cooperation, which may be part of Syria's ongoing efforts to acquire North Korean missile technology during a visit by Syrian Chief of Staff General Hikmat Shihabi to Tehran. The agreement may result in the Iranian financing of the construction of a surface-to-surface missile joint development and production center in Syria.

—"Syria and Iran Pool SRBM Resources," *Flight International*, 16-22 October 1991, p. 15.

October 1991

Iran agrees to buy 20 Scud-Cs from North Korea.

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—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 24.

October 1991

Iranian businessman Hussein Ali Kazemi, known to have acted as an agent of the Iranian air force, is a major shareholder in a Tehran-based firm, Dorin. In 1987, Dorin discussed supplying Silkworm missiles to Iran with the London firm, Alcon Services UK. A spokesman for Kazemi's London firms insists that they have never engaged in armaments deals with Iran.

—"Iran Has Maintained London Arms Office," *Flight International*, October 1991, p. 5.

October 1991

Western intelligence officials report that Syria and Iran are negotiating to buy factories to manufacture a new generation of ballistic missiles from China. At the same time, intelligence officials say that Syria and Iran have purchased new ballistic missiles from North Korea, including the Scud-B and Scud-C, which has a range of 500km. Iran has ordered about 20 Scuds from North Korea; some of the missiles may have already been delivered, with more on the way.

—James Adams, "Syria and Iran shop around for missile factories," *Sunday Times* (London), 13 October 1991, in Lexis-Nexis, www.lexis-nexis.com.

October-November 1991

North Korea reportedly supplies Iran with 170 Scud missiles.

—"Government, Pakistan Set for Nuclear Cooperation," *Al-Diyar* (Beirut), 12 January 1992, p. 5; in FBIS Document FBIS-NES-92-015, p. 54.

1 October 1991

Ha'aretz, citing "unidentified but reliable" American sources, reports that North Korea is going to "set up" a Scud-C production facility in Syria for joint production. Iran is to finance the facility's construction.

—"Iran, Syria Reportedly Will Build Missiles Together," Associated Press, 1 October 1991, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "Syrian Commander, in Iran, Denounces U.S.-Kuwait Pact," Associated Press, 1 October 1991, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

13 October 1991

Western intelligence sources indicate that North Korea has exported 20 Scud missiles to Iran, some of which have already arrived and are fully assembled. It reports that missiles bound for Syria will arrive in the near future.

Analysts say that North Korea is exporting the missiles to help alleviate its foreign exchange shortage.

—KBS-1 Television Network, 13 October 1991, in "DPRK Scuds Said To Arrive in Iran," FBIS-EAS-91-199, 15 October 1991, pp. 26-27.

15 October 1991

China denies a *Sunday Times* (London) report that it is negotiating to build missile factories for Iran.

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—"Spokesman Denies Missile Deal with Iran, Syria," *Agence France Presse*, 15 October 1991; in *Proliferation Issues*, 29 October 1991, p. 4.

21 October 1991

The Chinese Foreign Ministry denies a 16 October *Washington Times* report that Iran was seeking to acquire M-11 missiles from China.

—"Iranian Nuclear Collaboration Denied," *Renmin Ribao Overseas* (Beijing), 21 October 1991, p. 1; in *Proliferation Issues*, 29 October 1991, pp. 3-4.

21 October 1991

The Egyptian government-controlled newspaper *Al-Ahram* reports that North Korea has provided 300 Scud missiles to Iran.

—"North Allegedly Sold Scuds to Iran, Syria," KBS-1 Radio Network (Seoul), 21 September 1991; in *Proliferation Issues*, 29 October 1991, p. 19.

30 October 1991

Gary Milhollin, director of the Wisconsin Project on Nuclear Arms Control, says that the Chinese are supplying M-9 and M-11 ballistic missiles under a 10-year military technology transfer agreement between Iran and China signed in 1990. His comments come as Chinese President Yang Shangkun arrives in Tehran on an official visit.

—Simon Tisdall, "China 'helps Iran to make N-bombs'," *Guardian* (London), 31 October 1991, in Lexis-Nexis, www.lexis-nexis.com.

November 1991

Iran orders 120 Scud-Cs from North Korea.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 24.

November 1991

U.S. Congressional sources report that Iran is financing a longer range north Korean missile, dubbed Nodong-1, with a range of 1000km.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 24.

November 1991

U.S. Secretary of State James Baker reports that China has agreed not to sell the M-11 missiles to Iran as was previously planned.

—Bates Gill, "Chinese Arms Exports to Iran," *MERIA Journal*, Vol. 2, No. 2, May 1998, in www.biu.ac.il.

9 November 1991

A North Korean freighter, registered as *Mupo*, is scheduled to deliver 12 Scud-C missiles and six mobile launchers to Iran's port of Bandar-e Abbas this weekend. The missiles and launchers reportedly belong to Syria. Pressure from the United States and Egypt's refusal to allow the freighter to use the Suez Canal have forced the *Mupo* to

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alter its course. The Israelis have complained about a joint Iranian-Syrian cruise missile program. Israeli officials have told the United States that Iran financed a North Korean-designed missile site in Syria for Scud-Cs with a range of 900km.

—Adel Darwish, "Missiles head for Iran," *The Independent* (London), 9 November 1991, p. 15, in Lexis-Nexis, www.lexis-nexis.com.

26 November 1991

The United States-China Act of 1991 conference bill passes in the U.S. House of Representatives by a vote of 409-21. The legislation directs that the president may not extend China's most favored nation status (MFN) for another year if, among other criteria, China transfers to Syria or Iran "ballistic missile or missile launchers" for the M-9 or M-11 systems.

—"Conditioning China's MFN Status on Non-Proliferation," *Arms Sales Monitor*, November/December 1991, pp. 4, 5.

Late 1991-Fall 1992

A U.S. Task Force on Terrorism and Unconventional Warfare says that Iran purchases nuclear warheads from Kazakhstan toward the end of 1991. Two of the warheads are compatible with Scud missiles, and become functional in late January 1992, as does a nuclear bomb specified for a MiG-27. The status of a nuclear artillery shell is uncertain. In late 1992, Iran agrees to purchase four more nuclear warheads from Kazakhstan. North Korea helped modify these warheads for use on the Nodong 1. [Note: This report is highly dubious. The authors do not reference any sources, and note the document "is intended to provoke discussion and debate." Most analysts agree that Iran has not yet acquired nuclear weapons, although strong evidence indicates they are seeking such a capability.]

—Yossef Bodansky and Vaughn S. Forrest, "Iran, North Korea, and the Threat of the New Korean War," Task Force on Terrorism and Unconventional Warfare, House Republican Research Committee, U.S. House of Representatives, Washington, DC, 7 February 1994, p. 13.

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1990

Early 1990

Iran reportedly receives 20 North Korean Scud-B missiles.

—Steven Emerson, "The Postwar Scud Boom," *The Wall Street Journal*, 10 July 1991, p. A12, in Lexis-Nexis, www.lexis-nexis.com.

1990

North Korea sells Iran 170 Scud missiles. Iran is possibly manufacturing Nodong-1 missiles under North Korean license.

—*Jane's Defence Weekly*, 5 September 1992, p. 31, cited in "Ballistic Missiles, Cruise Missiles and Missile Defense

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Systems: Trade and Significant Developments (July-November 1992)," *Nonproliferation Review*, Center for Nonproliferation Studies, Fall 1993, Vol. 1 No. 1, p. 109.

1990

Iran is able to produce local versions of North Korean Scud-B missiles.

—Duncan Lennox, "Co-operation boosts missile proliferation," *Jane's Intelligence Review*, January 2002, p. 41.

1990

Iran reportedly purchases 130-150km-range CSS-8 (converted SA-2) surface-to-surface missiles from China.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 39.

1990

Sales to Iran by the Commonwealth of Independent States (CIS) amount to less than \$1 billion.

—"Arms to Iran," *Jane's Defence Weekly*, 18 January 1992, p.71.

Early 1990s

Iran shifts away from purchasing to indigenously producing missile systems. Iran develops its own longer-range versions of North Korea's Nodong missile, with North Korean, Russian, and Chinese assistance. One of the Chinese firms helping Iran is Great Wall Industries. The Russian companies include the Russian Central Aerohydrodynamic Institute, which supplies Iran's Shahid Hemmat Industrial Group (SHIG) with wind tunnels, technical equipment, and software for designing and testing missiles. Other Russian companies that allegedly help Iran's missile programs include the arms-exporter Rosvoorouzhnie, rocket engine manufacturer NPO Trud, the Bauman Institute, and Polyus (Northstar), a laser test and manufacturing equipment firm.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 39.

Early 1990s

American and Israeli officials say that in the early 1990s, Iran began efforts to acquire Russian missile technology, including fuel and oxygen turbo-pumps, special steels to lighten missile airframes, wind tunnels for aerodynamics tests, and ablative materials designed to withstand high temperatures. It is not known how much of this technology Iran possesses.

—Michael Dobbs, "A Story of Iran's Quest for Power: A Scientist Details The Role of Russia," *Washington Post*, 13 January 2002, in Lexis-Nexis, www.lexis-nexis.com.

Early 1990s

For several years following the end of the Gulf War, Iran allows North Korea to access wreckage from BGM-109 Tomahawk missiles that landed in Iran or that it had obtained from Bosnia. North Korea is likely unable to obtain sufficient design or operational knowledge from the missiles, but examining the wreckage "may have provided some insight into possible counter-measures or served as a design catalyst."

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Nonproliferation Studies, November 1999, p. 33.

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1990-1991

Jane's Defence Magazine (Yearbook 1990-1991) reports that the Ministry of Defense of Iran develops a missile named Oghab (Eagle). It looks like a Chinese 272mm rocket, but is made indigenously in Iran. It has "a length of 4.82 metres, diameter of 230mm, with a body weighing 360kg and its warhead weighing 70kg. (It contains high explosives.)" A tripod launching system is used to launch this missile. The launchers have two pads on which to put the missiles.

—Staff Colonel Yaqub Aslan, "World Strategic Rockets and Missiles: Iran's Surface to Surface Missiles," *Saff* (Tehran), No. 229, 22 May-21 June 1999; in "Saff on Iran's Surface-to-Surface Missiles," FBIS Document FTS19990904000330, 4 September 1999.

1990-1991

Iran supposedly begins its indigenous manufacture of the Silkworm missile after China ends its supply of complete missile systems to Iran. These are believed to be produced at a facility in Isfahan, overseen by the Chinese.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: the New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 60.

1990-1991

The U.S. Commerce Department approves the sale of \$59 million worth of high-technology equipment to Iran, including computers, gyroscopes, and oscilloscopes. A separate list indicates that, during the same period, the U.S. government rejected \$1.49 billion worth of contracts.

—Keith Bradsher, "US Allowed Some High-Tech Sales to Iran in '90," *New York Times*, 31 January 1992, p. A3.

January 1990

Iranian Defense Minister Ali Akbar Torkan reaches an agreement with the Chinese for the transfer of production technology of a wide variety of systems including the M-11, referred to as Tondar-68 and M-9.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 27.

20 February 1990

Said Asefi Inanlou, an Iranian who masterminded a scheme to smuggle sophisticated U.S. military hardware to Iran, is sentenced to three years in federal prison. Inanlou says that he was motivated by patriotism: "When I did this act, I didn't think I was doing anything wrong. I was helping my country." Inanlou acted in cooperation with Franklin and Edgardo Agustin, who received 13 and 18 years of federal prison time, respectively. Inanlou is the last of seven defendants to be sentenced for their participation in a scheme to steal parts for the F-14 Tomcat fighter, including inertial navigation aids and guiding mechanisms for the Phoenix air-to-air missile for shipment to Iran. U.S. Customs agents claim that the ring operated between January 1981 and July 1985. Investigators have traced 26 shipments made by the Agustins to Inanlou, but only eight of those shipments were seized.

—H.G. Reza, "Iranian given three years in the theft scheme; Crime: Surprise greets sentence for mastermind of plot to smuggle sophisticated US military hardware to his homeland," *Los Angeles Times*, 21 February 1990, p. B1, in Lexis-Nexis, www.lexis-nexis.com.

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March 1990

Iranian Defense Minister Akbar Torkan states that the Fajr-3 missile with a 45km range is now in large-scale production.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 64.

2 March 1990

The Fajr-3 missile is tested and is ready for mass production. The missile is reported to be of the rapid reaction type and covers a 45km area.

—"Fajr-3 Missile Reaches Mass Production Stage," *Tehran International*, 3 March 1990; in FBIS Document FBIS-NES-90-046, 8 March 1990, p. 51.

28 March 1990

Western military experts report that a large contingent of Chinese ballistic missiles has been transported to Tianjin port, in all probability to be shipped to the Middle East. The experts place Iran and Iraq at the top of the possible recipient list. On 25 and 26 March, two convoys of missiles, launchers, and other equipment were transported at night across Beijing under police escort and bound for the port of Tianjin. A Western expert estimated the number of missiles, lashed onto a flatbed truck and covered by tarps, at more than 24. Experts suggest that because many of the missiles bore markings, with shipment specifications in Chinese giving the dimensions of each load, the missiles were intended for export. The consignment is believed to have included short-range M-1B surface-to-surface missiles and anti-aircraft missiles, most likely the SA-2. A diplomat in Beijing claims, "They certainly weren't big tubes of toothpaste." A Chinese foreign ministry spokesman, Li Zhaoxing, argues, "Don't believe in rumors." The convoys apparently originated in an armaments factory west of Beijing.

—Andrew Higgins, "Chinese poised to resume missile exports," *The Independent* (London), 29 March 1990, p. 11, in Lexis-Nexis, www.lexis-nexis.com.

Late March 1990

U.S. intelligence reveals that China is ready to supply Iran with at least 50 of its 8610 short-range, surface-to-surface missiles. The missile's range is 120-130km. The 8610 seems to be the surface-to-surface version of its HQ-2 surface-to-air missile.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 64.

May 1990

China delivers 48 of its 8610 short-range surface-to-surface missiles to Iran.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 64. [Note: It was reported in late March 1990 that China was ready to supply Iran with at least 50 short-range, surface-to-surface missiles.]

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October 1990

Mohammad Danesh and Reza Amiri of a Newport Beach, California computer consulting firm, end their exports of a portable oscilloscope and other sensitive electronic equipment to Iran. These exports began in April 1989.

—Cristina Lee, "Pair Charged with Illegal Exports to Iran," *Los Angeles Times*, 13 September 1991, p. D2, in Lexis-Nexis, www.lexis-nexis.com; Cristina Lee, "Executive Gets Prison Term for Exports to Iran; Courts: Computer Consulting Firm Manager Shipped Restricted Equipment and Misled Customs Officials About It. His Employer Faces Sentencing Next Month," *Los Angeles Times*, 26 August 1992, p. D5, in Lexis-Nexis, www.lexis-nexis.com.

29 November 1990

Despite denials of missile cooperation between Iran and North Korea, Islamic Revolution Guards Corps (IRGC) Commander Mohsen Rezai meets with a senior North Korean delegation, headed by Oh Jin U, in Tehran. The two countries forge an agreement for Iran to purchase North Korea's Scud-C missiles and for North Korea to provide assistance in converting a missile maintenance site in eastern Iran to be used for the assembly of the Scud-C. North Korea is exporting the missiles through its Lyongaksan Import Corporation.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 57-58; Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 36, www.csis.org.

December 1990

Iran sends officials to North Korea for on-site training in the production and launching of ballistic missiles, while North Korea sends technical advisors to Iran to rework a missile maintenance facility into a missile production factory. Since January 1991, Iran has also been receiving Scud-C missile parts from North Korea.

—"The Post-War Scud Boom," *Wall Street Journal*, 10 July 1991, p. A12.

December 1990

In Iran, North Korean technical experts start the conversion of a missile maintenance facility into a missile assembly and production site. At the same time, members of Iran's military are trained in North Korea in making and operating the Scud-C.

—Steven Emerson, "The Postwar Scud Boom," *Wall Street Journal*, 10 July 1991, p. A12.

27 December 1990

The air force unit of the Islamic Revolution Guards Corps (IRGC) adds the SAM-6 surface-to-air missile to its arsenal. In a brief speech, IRGC Deputy Commander Rahim Yahya Safavi states that the Iranian combat units are to be protected by SAM-6 anti-aircraft missiles.

—"Air Force Adds SAM-6 Missiles to Arsenal," Islamic Republic News Agency (IRNA), 27 December 1990; in FBIS Document FBIS-NES-90-250, 28 December 1990, p. 37.

Late 1990

In Semnan, 175km east of Tehran, the building of a launch range and test site appears to have been completed.

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—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 59.

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1989

1989

A defense and economic agreement with the Soviet Union includes industrial cooperation to make Iran self-sufficient in ballistic missile production, among other areas. Iran is reportedly working on a new variant of China's M-11, named the Tondar-68. In addition, production of the Fajr-3 was expected to start in 1991. Iran has been manufacturing the Nazeat (Iran-130) for some time.

—"Iran Builds Its Strength," *Jane's Defence Weekly*, 1 February 1992, pp. 158-159.

1989

China and Iran discuss the possible Iranian purchase or joint production of M-9s and M-11s. Iran is interested in purchasing the CSS-2.

—"Bombs From Beijing: A Report on China's Nuclear and Missile Exports," Wisconsin Project on Nuclear Arms Control, May 1991.

Late '80s-Early '90s

Iran is said to be "the primary financial backer" for a number of North Korean missile projects, including improvements to the Hwasong-5, the development of new missiles based on Scud technology, and the evolution of these missiles to longer range systems. The modified Scuds became known as the Nodong, and serve as the basis for North Korea's Taepodong-1 and Taepodong-2 missiles and a space launch vehicle.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Nonproliferation Studies, November 1999, p. 15.

1989

The Mushak-200 is produced and it is "probably propelled by a solid-fuel rocket and has a simple inertial guidance system." The Ram missile is displayed at the arms exhibit in Tehran.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," in William C. Potter and Harlan W. Jencks, eds. *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), pp. 61-65.

1989

Because Iran helps finance the production of the improved Scuds, North Korea is reportedly sending the Scuds to Iran instead of to the DPRK military.

—Stefan Halper, "Picking a Path Through the Nuke Field," *Washington Times*, 7 April 1994, p. A17.

1989

The Military Weapons Exhibition of 1989 in Libreville, Gabon displays the Iran-130. *Jane's Defence Magazine*

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(Yearbook 1990-1991) describes this weapon as a surface-to-surface missile with a length of 5.9m, a diameter of 255mm, and a solid weight of 950kg. Its warhead weighs about 150kg and has a range of 90km. Its engine uses solid fuel, which creates a thrust of 1127KN. The Iran-130 was delivered to the Iranian forces and used during the eight-year Iran-Iraq War. The Iran-130, of which there are several types, reportedly has no guidance system. This weapon is currently under further development.

The Shahin missile also is on display at the Military Weapons Exhibition of 1989. This missile is described as having a length of 3.78m, a diameter [caliber] of 333mm, and a weight of 580kg. The warhead weighs 180kg and contains high explosive material. The missile has a range of 20km. Its engine reportedly uses solid fuel and has 22424KN thrust power. However, Staff Colonel Yacub Aslan notes that this thrust power estimate is questionable.

—Staff Colonel Yaqub Aslan, "World Strategic Rockets and Missiles": "Iran's Surface to Surface Missiles," *Saff* (Tehran), No. 229, 22 May-21 June 1999; in "Saff on Iran's Surface-to-Surface Missiles," FBIS Document FTS19990904000330, 4 September 1999.

1989

Iran starts negotiations with the Chinese for manufacturing the Chinese M-11 short-range missile with a range of 280km at the Isfahan missile production site.

—Kenneth R. Timmerman, *Weapons of Mass Destruction: The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 26.

1989

Wahid-e-Mashachekh, the missile sub-unit of the Islamic Revolution Guards Corps (IRGC), is in charge of the ballistic missile program in 1989. Also this year, the Ministry of Defense and the IRGC come together to form the Ministry of Defense Armed Forces Logistics, and all the industrial compounds are combined to form the Defense Industry (DIO).

—Mikhail Kirillin, "Several U.S. Firms Engaged in Developing Missile Equipment Have Links with Iranians," *Yadernyy Kontrol Dossier* in *Yadernyy Kontrol* (Moscow), March-April 1998, No. 2, Vol. 38, pp. 37-43; in "Iran's Missile Industry, U.S. Missile Development Firms with Iranian Links"; in FBIS Document FTS19980605000876, 5 June 1998.

1989

Iran buys 150-200 CSS-8 missiles and 25-30 launchers from China.

—Anthony H. Cordesman, "Threats and Non-Threats from Iran," (Washington, DC: Center for Strategic and International Studies, 26 January 1995), p. 15.

1989

Iran displays three locally made remotely piloted vehicles (RPVs) intended primarily for reconnaissance, but which could have weapons applications. The propeller-driven RPVs have radio controlled guidance system and could signal an Iranian interest in land-attack cruise missiles.

—W. Seth Carus, "Iran and Weapons of Mass Destruction," 3 July 2000, <http://www.ajc.org>.

1989

News reports from the Middle East suggest that China and Iran may be planning to produce the sophisticated "M"

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family of ballistic missiles capable of carrying a nuclear warhead jointly, with Iran financing the project.

—Daniel Southerland, "China Said to Sell Missiles; Shipment Reported Bound for Middle East," *Washington Post*, 29 March 1990, in Lexis-Nexis, www.lexis-nexis.com.

1989

There are indications that China is supplying Iran with the technology to produce the 130km-range IRAN-139 missile.

—"Iran," *Jane's Intelligence Review*, 1 December 1992, in Lexis-Nexis, www.lexis-nexis.com.

3 January 1989

Iranian Prime Minister Husayn Moussavi says that Iran is nearing military self-sufficiency by building advanced fighter planes and maintaining its aging U.S.-built F-4 and F-5 fighters. He also says that Iran is now able to repair U.S.-made Hawk surface-to-air missiles without outside help.

—"The World," *Los Angeles Times*, 3 January 1989, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

4 January 1989

The U.S. government drops its case against Avraham Bar-Am and 10 other people indicted in federal court in 1986 for planning to sell \$2 billion in U.S.-made weapons to Iran. Prosecutors could not produce witnesses to contradict the defendants' claim that they believed their plan to sell fighter planes, missiles, tanks, and spare parts to Iran was officially sanctioned by the U.S. government. Prosecutors said that Cyrus Hashemi, the government's sting operative, would have contradicted the defendants' claim that they had the U.S. government's blessing, but Hashemi died in the summer of 1986.

—"Arms-sale charges against 11 dropped," *San Diego Union-Tribune*, 5 January 1986, p. A4, in Lexis-Nexis, www.lexis-nexis.com.

12 January 1989

U.S. Customs agents charge a British businessman, Charles Caplin, with conspiring to purchase nerve gas bombs for \$5 million for export to Iran. Charges are brought against Caplin in Newark, New Jersey, where Customs agents arrested a Korean-born U.S. businessman, Juwhan Yun, on charges of conspiring to export nerve gas and TOW and Stinger missiles. Yun had just returned from London, where he was asked by Caplin and two other associates to purchase 500 individual 500lb bombs [125 tons] containing the sarin nerve agent. Yun was to pay \$5 million for the bombs and re-sell them to Iran.

—Leonard Doyle, "Briton on nerve gas plot charge," *The Independent* (London), 13 January 1989, in Lexis-Nexis, www.lexis-nexis.com.

12 January 1989

Juwhan Yun, president of Komex International Corporation, described as an exporting firm that deals legally in munitions sales, has sought to buy TOW I and TOW II missiles, a Stinger missile, and Varian radar tubes. The complaint filed by U.S. Customs says that Yun was acting as an agent for a South Korean trading company, Kwang Jin Trading Company, while trying to acquire the munitions.

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—George James, "Nerve Gas Scheme Stopped in Jersey," *New York Times*, 13 January 1989, p. A14, in Lexis-Nexis, www.lexis-nexis.com.

24 January 1989

The United States stops the supply of Stinger missiles to the Mujahideen in Afghanistan. There are reports of attempted sales of these missiles by certain Mujahideen groups to Iran.

—"Kabul regains air supremacy as US halts Stinger supply," *The Times* (London), 24 January 1989, issue 63299, in Lexis-Nexis, www.lexis-nexis.com.

February 1989

Iran is represented at the SECARM arms exhibition in Libreville, Gabon.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 62.

4 February 1989

Ken Park, a Los Altos Hills businessman, has been charged with illegally exporting missile and aircraft parts that allegedly were destined for Iran. Mr. Park, who lacked valid export licenses for the machinery, stated that the shipment was for truck and tractor parts. The shipment included parts of Sidewinder and Hawk missiles, target illuminators for Sparrow missiles and fire extinguishers used on F-14 fighter planes. Some of the shipments were located last month in Singapore awaiting delivery to Iran.

—"Bay area man illegally shipped missile parts to Iran, US says," *Los Angeles Times*, 4 February 1989, p. 29, in Lexis-Nexis, www.lexis-nexis.com.

9 February 1989

CIA Director William Webster says at a Senate committee that foreign firms are helping Third World nations, such as Libya, Iran, Iraq, and Syria, to develop ballistic missiles to deliver chemical and biological weapons.

—Robert Gillette, "CIA Chief Cites Firms' Weapons Aid to 3rd World," *Los Angeles Times*, 10 February 1989, p. 13, in Lexis-Nexis, www.lexis-nexis.com.

14 February 1989

Some U.S. officials say there are indications that China has offered to sell new Silkworm anti-ship missiles to Iran. One U.S. official says that China and Iran had reached a new arms agreement last August or September, stating, "They've got a deal going. They've got people going back and forth [between the two countries]." The same official states, "It's Silkworm [missiles] and all kinds of gear." Other high-ranking U.S. officials deny that any new Silkworm missiles from China have reached Iran yet. These officials are also not aware of any new deal involving Silkworms between China and Iran.

—Jim Mann, "China Said to Offer More Missiles to Iran; 'Sheer Rumor,' Beijing Says of Reports of New Silkworm Deal," *Los Angeles Times*, 14 February 1989, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

23 February 1989

The U.S. State Department says it has "no evidence" to back up media reports that Chinese ballistic missiles were being secretly shipped to North Korea for re-export to Syria, Iran, and Libya. State Department spokesman Charles

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Redman says, "We believe the People's Republic of China understands the concerns we have expressed, and our constructive dialogue with them thus far provides a basis for optimism with regard to the proliferation of ballistic missiles and their component technology. There is no evidence that intermediate-range ballistic missiles [IRBMs] built in China have been sent to any country besides Saudi Arabia, either directly or indirectly." Satellite observation is said to have shown up "missile-shaped boxes" on the trains, heading for the Korean city of Sinuju, and then to Nampo port, from where North Korea "exports missiles and missile-support electronics to Iran, Libya, and Syria," Former White House official, William Safire, says.

—Martin Walker, "Washington acts to avoid arms row with China," *The Guardian* (London), 24 February 1989, in Lexis-Nexis, www.lexis-nexis.com.

19 March 1989

Mohsen Rezai, Commander of the Islamic Revolution Guards Corps (IRGC), visits Pyongyang and meets twice with the North Korean president Kim Il Sung. During this visit he signs a weapons cooperation agreement with North Korea.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 23.

8 March 1989

Western diplomatic sources report that China is helping Iran build a factory that will produce missiles with a range greater than 800km. Construction of the missile factory in northeastern Iran supposedly started after the UN-mediated cease fire of 20 August 1988.

—Associated Press, "China is said to help Iran with missile plant," *St. Louis Post-Dispatch*, 9 March 1989, p. 12A, in Lexis-Nexis, www.lexis-nexis.com.

9 March 1989

China is helping Iran build a plant to manufacture surface-to-surface missiles in northeastern Iran. The missiles are reported to have a range of 800km.

—"China said helping Iran to make missiles," Japan Economic Newswire (Tokyo), 9 March 1989, in Lexis-Nexis, www.lexis-nexis.com.

18 March 1989

Andrew Marks, a British citizen, is remanded to Isleworth Crown Court for trial. Marks is accused of illegally exporting Hawk missile systems to Iran between 11 June and 25 September 1985.

—"Missiles charge," *Independent* (London), 18 March 1989, in Lexis-Nexis, www.lexis-nexis.com.

19 March 1989

The U.S. Customs Service is attempting to halt the shipment of 129,730kg of ammonium perchlorate to Iran. The federal court case against Girindus Corp of Tampa, involves the 28 January 1988 shipment of 1,144 drums of the chemical bound for a buyer in Basel, Switzerland. In February, the cargo was seized in Rotterdam as it was being loaded onto an Iranian freighter. A U.S. Air Force official says that Iran may have needed the chemical to refuel Soviet rockets or for the development of its own short-range surface-to-surface missiles (SSMs). The amount

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seized would be enough to fuel approximately 300 missiles.

—"US Trying to Halt Iran Rocket Fuel," *Los Angeles Times*, 19 March 1989, pp.1, 10-11.

20 March 1989

A federal judge in Houston issues a temporary injunction requiring the government to release the 1,144 drums of ammonium perchlorate seized by the U.S. Customs Service. U.S. district court judge Sim Lake rules that the Customs Service had no legal authority to seize the shipment because ammonium perchlorate, in its pure form, is not on the list of weapons-related items requiring a special license from the U.S. State Department.

—"US Stalls Fuel Bound for Iranians," *St. Louis Post-Dispatch*, 20 March 1989, p. 11A, in Lexis-Nexis, www.lexis-nexis.com.

20 March 1989

U.S. Customs Commissioner William von Raab maintains that the shipment of ammonium perchlorate was "clearly headed for Iran." He says that the shipment was seized with the help of Dutch authorities last year because it had been transferred from an American vessel to an Iranian ship.

—Paul Houston and Norman Kempster, "Rocket fuel for Iran blocked by customs; shipment of chemical barred pending court hearing next week," *Los Angeles Times*, 21 March 1989, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

20 March 1989

Iran signs agreements with Romania and Czechoslovakia for the delivery of hundreds of tanks and missiles. Under the accord with Czechoslovakia, Iran will receive an anti-tank and anti-aircraft missile factory in Isfahan.

—"Romania, CSSR to Supply Tanks, Missiles," Agence France Presse, 20 March 1989; in FBIS Document FBIS-NES-89-053, 21 March 1989.

22 March 1989

Iran has agreed to military contracts and large weapons purchases from Eastern Bloc countries. The sources say that Czechoslovakia will supply approximately 180 Soviet T-54/55 tanks that it makes under license and build a factory in Isfahan to produce anti-tank and anti-aircraft missiles. Romania is assisting in the modernization of a tractor factory in Arak and is negotiating the possible construction of a naval base on Qeshm Island in the Strait of Hormuz.

—"The World," *Los Angeles Times*, 22 March 1989, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

23 March 1989

U.S. officials hold up a \$92 million federally financed loan for a Nevada chemical company after learning that the company was linked to the export of ammonium perchlorate seized aboard a ship bound for Iran in 1988. The seized ammonium perchlorate shipment would have enabled Iran to fuel approximately 300 missiles. The company under scrutiny is Pacific Engineering & Production Co. of Henderson, Nevada. Pacific Engineering officials deny any knowledge of how the ammonium perchlorate got to that point, saying that the chemical was sold to a U.S. company, Girindus Corp. of Tampa, Florida. Girindus Corp. officials also deny any knowledge or intent to sell the rocket fuel precursor to Iran. Girindus Corp. cites in a lawsuit seeking the return of the chemical that it had sold the ammonium perchlorate to a Swiss company, the Inter-Commerce Truehand, Handels & Franz.

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—Paul Houston, "US Freezes Company's Loan Over Chemical Bound for Iran," *Washington Post*, 24 March 1989, p. A11, in Lexis-Nexis, www.lexis-nexis.com; Paul Houston, "US Stalls Loan to Nevada Firm Over Iran Rocket Fuel," *The Los Angeles Times*, 24 March 1989, p. 7, in Lexis-Nexis, www.lexis-nexis.com.

28 March 1989

Girindus Corporation loses its bid to win the release of 1,144 drums of ammonium perchlorate, seized by Dutch police in February 1988. Girindus argues that after it sold the ammonium perchlorate to a Swiss company, it did not know of efforts to ship the chemical to Iran. U.S. Customs Service officials, however, argue in court that Girindus Corp. had prepared false shipping documents. Girindus Corp. is a subsidiary of Girindus S. A. of Switzerland.

—Michael R. Gordon, "Chemical for Iran Won't Be Released," *The New York Times*, 29 March 1989, p. A6, in Lexis-Nexis, www.lexis-nexis.com.

29 March 1989

China agrees to supply Iran with spare parts for the Scud-B missile, eight HQ-2 missile batteries (Chinese version of SAM-2), and 40 Silkworm missiles.

—"I Quarter 1989: March," Gulf/2000 Project (New York: School of International and Public Affairs (SIPA), Columbia University, March 1989).

April 1989

A test of the Mushak-200, with a range of 200km, is announced.

—Raytheon, "Strategic: Mushak 120," *Missile Systems of the World* (Raytheon, 1999), p. 456.

April 1989

U.S. citizen Mohammad Danesh illegally exports to Iran a portable oscilloscope and other sensitive electronic equipment from April 1989-October 1990 by submitting false statements to U.S. Customs officials about the exports.

—Cristina Lee, "Pair Charged with Illegal Exports to Iran," *Los Angeles Times*, 13 September 1991, p. D2, in Lexis-Nexis, www.lexis-nexis.com; Cristina Lee, "Executive Gets Prison Term for Exports to Iran; Courts: Computer Consulting Firm Manager Shipped Restricted Equipment and Misled Customs Officials About It. His Employer Faces Sentencing Next Month," *The Los Angeles Times*, 26 August 1992, p. D5, in Lexis-Nexis, www.lexis-nexis.com.

April 1989

Mohammad Danesh and Reza Amiri of a Newport Beach, California computer consulting firm begin exporting a portable oscilloscope and other sensitive electronic equipment to Iran.

—Cristina Lee, "Pair Charged with Illegal Exports to Iran," *Los Angeles Times*, 13 September 1991, p. D2, in Lexis-Nexis, www.lexis-nexis.com; Cristina Lee, "Executive Gets Prison Term for Exports to Iran; Courts: Computer Consulting Firm Manager Shipped Restricted Equipment and Misled Customs Officials About It; His Employer Faces Sentencing Next Month," *Los Angeles Times*, 26 August 1992, p. D5, in Lexis-Nexis, www.lexis-nexis.com.

18 April 1989

An Iranian defense industries official announces that a new surface-to-surface missile with a range of 200km had

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been manufactured. In addition to the new missile, the official says that Iran has manufactured the Oghab, Shaheen-1, and Shaheen-2 missiles.

—"Defense Industries Manufacture New Missile," IRNA (Tehran), 17 April 1989; in FBIS Document FBIS-NES-89-073, 18 April 1989, p. 52.

May 1989

A defense and economic agreement with the Soviet Union includes industrial cooperation to make Iran self-sufficient in, among other things, ballistic missile production.

—"Iran Builds Its Strength," *Jane's Defence Weekly*, 1 February 1989, pp. 158-159.

May 1989

Twenty-two nations in the Third World, including Iran, either possess or are developing ballistic missiles or long-range rockets. SIPRI also suggests that 17 of those countries have deployed ballistic missiles and all but four—Iran, Israel, South Korea, and Taiwan—have imported them.

—"Proliferation of Ballistic Missiles Worries Sipri," *Financial Times* (London), 18 May 1989, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

May 1989

At the IDEA '89 defense exhibition in Ankara, Turkey, Iran shows off its Oghab, Nazeat, Shahin-2, and another missile. The Shahin-1 is mentioned at this exhibit. The Iranians at the exhibit stated that they are now able to make "ammonium perchlorate...and thermal nonconductors for missile nozzles," suggesting that Iran has the capability to make "advanced ceramic components and piping by the flow-forming method."

During their visit to North Korea, Iran's Minister of Construction Foruzesh and President Khameni are probably able to secure more shipments of the Scud-Mod. B missiles. Iran will also keep funding North Korea's Scud program.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 62-63, 57.

May 1989

North Korea and Iran reportedly reach an agreement for the continued delivery of Scud-B missiles and an extension of Iranian financing of North Korea's Scud development program.

—Joseph S. Bermudez, Jr., "Iran's Missile Developments," in William C. Potter and Harlan W. Jencks, eds., *International Missile Bazaar: The New Supplier's Network* (Boulder, San Francisco and Oxford: Westview Press, 1994), p. 57.

2 May 1989

Iran's deputy foreign minister announces that Tehran will buy weapons from the Soviet Union and is negotiating with other countries for the purchase of bombers.

—"Elsewhere in the World," *USA Today*, 2 May 1989, p. 4A, in Lexis-Nexis, www.lexis-nexis.com.

2 May 1989

Iranian Deputy Foreign Minister Ali Mohammed Besharati tells the *Tehran Times* that "all related issues" with the purchase of weapons for the Soviet Union have been finalized. Iran also confirms arms deals with Romania and

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Czechoslovakia for tanks, missiles, and a new naval base in the Strait of Hormuz.

—"The World," *Los Angeles Times*, 2 May 1989, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

8 May 1989

Andrew Marks, accused of supplying restricted fighter and missile parts to Iran in 1986 and 1987, is acquitted of all 12 charges held against him at Isleworth Crown Court. He and his electronics firm, Company Logic Resource Ltd. of London, had faced charges of illegally exporting parts for Hawk missiles and F-14 fighters.

—"Iran deal man cleared; Andrew Marks," *The Times* (London), 9 May 1989, in Lexis-Nexis, www.lexis-nexis.com.

9 May 1989

Iranian President Khomeini and Speaker of the Parliament Hojat-al-Islam Ali Akbar Hashemi Rafsanjani begin a 10-day visit to China and North Korea. Analysts suggest that Khomeini hopes to buy Chinese and North Korean artillery, basic aircraft, and machine tools. France is poised to sell advanced missile technology to Iraq, analysts say, making it likely that Iran will try to purchase Chinese missile-possibly through North Korea.

—Hazhir Teimourian, "Khomeini heads shopping trip to communist world; Iranian visit to China and North Korea," *The Times* (London), 10 May 1989, in Lexis-Nexis, www.lexis-nexis.com.

10 May 1989

President Khomeini is wrapping up arms deals during his visit with China. Though the exact nature of the deals is unknown, Iran confirms several large purchases of Chinese missiles and talks relating to communications and satellite technology. Khomeini's next stop on his 10-day tour is North Korea, which Western military analysts cite as an important conduit for Chinese arms to Iran.

—Reuters, "Iranian leader talks arms with China, N. Korea," *Christian Science Monitor*, 10 May 1989, p. 6, in Lexis-Nexis, www.lexis-nexis.com.

22 June 1989

At a press conference in Moscow, Speaker of the Iranian Parliament Hashemi Rafsanjani praises a series of agreements on economic and technical cooperation agreed to by the Soviet Union and Iran. The Soviet Union declares its readiness to help Iran "strengthen its defense capacity," and Rafsanjani indicates Iran's preference for mostly "technological assistance" that would enable the Iranian munitions industry to produce its own missiles, aircraft, and electronic equipment.

—Michael Parks, "Rushdie Sentence Stands, Iranian Says; Rafsanjani Indicates West Won't Get Post-Khomeini Olive Branch," *Los Angeles Times*, 23 June 1989, p. 14, in Lexis-Nexis, www.lexis-nexis.com.

22 June 1989

Rafsanjani says "In some things we have technical needs, and we intend to satisfy these from different sources."

—Reuters, "Iran, Soviet Union Agree on Defense," *St. Louis Post-Dispatch*, 23 June 1989, p. 16A, in Lexis-Nexis, www.lexis-nexis.com.

22 June 1989

Middle Eastern diplomats say that Soviet arms sales to Iran would include anti-tank missiles and surface-to-air missiles.

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—"Soviets sign defence deal with Iran's new leader," *Toronto Star*, 23 June 1989, p. A14, in Lexis-Nexis, www.lexis-nexis.com.

July 1989

U.S. intelligence personnel detect new activity at one of Iran's Silkworm missile sites on the Iranian coastline. "They suspected the possibility of a firing—perhaps an experiment," one official says. In Washington, Pentagon officials conclude that no Silkworm missile was fired, but some unspecified activity was noted at the Silkworm launch site. —Patrick E. Tyler, "Saudis Negotiate for Gulf Barge Base," *Washington Post*, 1 August 1989, p. A22, in Lexis-Nexis, www.lexis-nexis.com.

July 1989

Akbar Torkan is appointed Minister of Defense in President Rafsanjani's new cabinet. Torkan was a close Rafsanjani aide, was head of Iran's Defense Industries Organization during much of the Iran-Iraq War, and was a driving force behind building it up to produce surface-to-surface missiles and other weapons to overcome the arms embargo. —Associated Press, "Iranian President Quits as Chief of Armed Forces," *New York Times*, 3 September 1989, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

12 October 1989

Iranian Revolution Guards Corps (IRGC) Commander Mohsen Rezai travels to Pyongyang to meet with North Korean leader Kim Il Sung regarding final plans for the expansion of the Isfahan missile complex and to address the development project for an extended-range Scud-B (Scud-C). *Iran Times* says Rezai said that he had "signed an agreement covering exchange of training and war experiences, transfer of military technology and weapons, and scientific cooperation."

—*Iran Times*, 12 October 1989; Kenneth Timmerman, "Iran's Ballistic Missile Program," *Mednews*, 21 December 1992, p. 5.

25 October 1989

Iranian Rear Admiral Muhammad Hosayn Malekzadegan announces that Iran has manufactured early-warning and high-precision missile diverting systems.

—"Early Warning-Diversion Missile System Announced," IRNA (Tehran), 25 October 1989; in FBIS Document FBIS-NES-89-206, 26 October 1989, p. 64.

13 November 1989

Iranian Said Asefi Inanlou pleads guilty to one count each of conspiracy to defraud and making false statements to investigators and is scheduled for sentencing on 16 January. He has been indicted on 51 counts of stealing government property, conspiracy, exporting defense articles without a license, and making false statements to customs officials. Inanlou has helped mastermind a scheme to smuggle U.S. military hardware, including inertial navigation units and guiding mechanisms for the Phoenix air-to-air missile, to Iran. The smuggling ring was exposed in July 1985, when U.S. Customs agents arrested Edgardo and Franklin Agustin. Investigators say the ring operated between January 1981 and July 1985. The jet parts were stolen from U.S. Navy ships as well as military warehouses in the Philippines, Norfolk, Virginia, and North Island Naval Air Station.

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—H.G. Reza, "Iranian pleads guilty as 8-year arms smuggling case winds down," *Los Angeles Times*, 14 November 1989, p. B1, in Lexis-Nexis, www.lexis-nexis.com.

December 1989

Iranian armed forces and the Islamic Revolution Guards Corps (IRGC) use Chinese-made Silkworm missiles and F-14 fighters in maneuvers in the Persian Gulf and the Sea of Oman. The Iranian Navy uses up to 80 speedboats mounted with assorted missiles against hypothetical enemy positions.

—Agence France-Presse, "Iran manoeuvres," *The Independent* (London), 14 December 1989, in Lexis-Nexis, www.lexis-nexis.com.

13 December 1989

During Iran's Zolfeqar-5 amphibian and air force operations, five missile units of the Islamic Revolution Guards Corps (IRGC) fire Silkworm missiles into hypothetical enemy positions. Military experts report the operations of the Navy, Air Force, and Missile units as well as the IRGC in the Zolfeqar-5 operations are "very" satisfactory.

—"IRNA Notes Silkworm Missile Test," IRNA (Tehran), 13 December 1989; in FBIS Document FBIS-NES-89-238, 13 December 1989, p. 47; "Silkworm Missiles Tested During Naval Maneuvers," Domestic Service (Tehran), 13 December 1989; in FBIS Document FBIS-NES-89-238, 13 December 1989, p. 46.

15 December 1989

Ken H. Park, owner of Ellin International Co., is sentenced to 33 months in prison and fined \$150,000 for his role in shipping guided missile parts to Iran. Included in the shipments to Iran were wing assemblies and targeting devices for the Hawk, Sidewinder, and Sparrow missile systems. The parts were falsely labeled as truck and tractor equipment destined for South Korea. U.S. Customs Service agents uncovered evidence that Park and other U.S. citizens and foreign nationals participated in a smuggling ring that sent as many as 56 arms shipments totaling \$3.1 million via a Singapore firm in 1988. No other charges are filed against other members of the smuggling ring.

—Jim Doyle, "Arms Dealer Sentenced for Iran Deal," *San Francisco Chronicle*, 16 December 1989, p. A5, in Lexis-Nexis, www.lexis-nexis.com; "California in Brief; San Francisco; Exporter Sentenced in Sales to Iran," *Los Angeles Times*, 18 December 1989, p. A30, in Lexis-Nexis, www.lexis-nexis.com.

29 December 1989

Israeli military sources say that Syria is approaching North Korea for assistance in the development of surface-to-surface missiles (SSMs) after China, under U.S. pressure, withdrew from a similar deal. The sources also indicate that Egypt and North Korea are engaged in a project to develop a missile based on the Soviet Scud missile; part of this project is being developed in Egypt. Retired Israeli Brigadier General Aharon Levran says that published reports indicate that North Korea is assisting Iran in the development of an indigenous SSM.

—Associated Press, "Syrian Bid for N. Korea Arms Aid Reported," *Los Angeles Times*, 30 December 1989, p. A8, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; "Syria Is Reported to Seek Help from N. Korea to Get Missiles," *St. Louis Post-Dispatch*, 31 December 1989, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; *Korea Times*, 30 December 1989, p. 4, in "Missile Cooperation With North Korea Alleged," JPRS-TND-90-002, 17 January 1990, p. 12.

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1988

1988

Iran begins limited-scale assembly of North Korean Scud-B missiles from "knock-down kits" at a facility near Isfahan, Iran's largest ballistic missile plant.

—Kenneth Timmerman, "Iran's Ballistic Missile Programs," *Mednews*, 21 December 1992, pp. 4-5.

1988

Iran provides North Korea with wreckage of Al-Hussein missiles used by Iraq in the "war of the cities." This may have helped with the North Korean program to produce the Scud-C.

—Chang Chun Ik, *Pukhan Haek-Missile Chŏnjaeng* (Seoul: Sömundang, May 1999), pp. 275-276.

1988

The CS-802 is an upgraded C-801 and is exhibited for the first time. It uses a turbojet propulsion system with a rocket booster instead of the solid-fueled booster in the C-801.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), pp. 42, 46, 56.

1988

The Shahid Sattari Air Force University is established.

—"Iran: Radio carries report from Air Force University," *Vision of the Islamic Republic of Iran Network 1* (Tehran), 17 February 2001; in FBIS Document IAP20010217000034, 17 February 2001.

1988

Iran initiates its Shahab-3 ballistic missile program at the same time that North Korea starts its Nodong ballistic missile project.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 26.

1988

Iran is reportedly developing chemical warheads for its missiles. North Korea has possibly supplied Iran with a small number of Hwasong-5 chemical warheads, in addition to chemical weapon technology. China and some European organizations have allegedly provided assistance to Iran's chemical weapons programs.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 13.

1988

Negotiations between China and Iran on the sale of short-range ballistic missiles (SRBMs), which are probably the

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M-9, are still ongoing. [Note: These negotiations began in 1987.]

—"Iran," *Jane's Intelligence Review*, 1 December 1992, in Lexis-Nexis, www.lexis-nexis.com.

1988

Iran launches 243 Oghab missiles on Iraqi Border cities.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 22.

1988

Iran begins its acquisition of Scud-Bs, a difficult task given the fact that few countries have these missiles. While the Soviet Union is giving Iraq Scud-Bs, other countries that have purchased missiles from the Soviets are not allowed to sell them to anyone else. Many countries that have these ballistic missiles were supporting Iraq during the war, and so only Libya and Syria, which were allied with Iran, are willing to sell these missiles to them. Iran began talking with both countries about this issue in early 1983. Syria gave Iran multiple rocket launchers (MRLs) and other military aid, and Libya gave Iran a few surface-to-air missiles (SAMs).

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 51.

1988

Production for the Mushak-120 begins and is first used during the "war of the cities." Supposedly, Iran did not finish the Mushak-160's development stage until after the war with Iraq. Production of the missile is intended to begin in 1989.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 61.

1988

In early January, Reagan administration officials consider and reject a military plan to intercept ships carrying missiles to Iran. Secretary of State George P. Shultz says that setting up a blockade of arms shipping under UN auspices would be complicated. He declines to say whether the United States had considered acting alone to stop arms shipments to Iran.

—John H. Cushman, Jr., "US Studied Halting Iran-Bound Missiles," *New York Times*, 18 January 1988, p. A6, in Lexis-Nexis, www.lexis-nexis.com.

1988

Iran's Scud missile program splits into two sections. North Korea helps Iran build a factory to make the Scud-Mod. B missiles indigenously in one section of the program; in the other, China supplies Iran with missile technology. At some point in 1988, China and Iran seem to make a deal for a missile facility to produce "M-class" surface-to-surface missiles.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 57.

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1988

Iran launches approximately 104 Oghab missiles. The Oghab, with a range of only 40km and a 70kg warhead. However, the Oghab lacks the accuracy to hit anything other than large area targets. Despite its unproven effectiveness, Iran launches the Oghab at Iraqi border cities, including Basra, Abu al-Khasib, Al-Zuybar, Umm-Qasr, Mandali, Khanaqin, and Bammil. Iran's artillery barrages are more effective than the Oghab.

—Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: The Iran-Iraq War* (Boulder, CO: Westview Press, 1990), p. 367.

1988

Iran signs an agreement with China, which calls for China to fit conventional warheads on Iranian unguided sounding rockets. The China Great Wall Industry Corporation is to provide the warheads. The contract is cancelled after the cessation of the Iran-Iraq War.

—"Iran," *Jane's Intelligence Review*, 1 December 1992, in Lexis-Nexis, www.lexis-nexis.com.

1988

Missile Forecast 1988 reports that the Islamic Republic of Iran has been developing short-range mobile missiles. Some of these missiles have ranges from 130 to 160 to 200km. The earlier models of these missiles were called Nazeat. This publication also claims that the development of Iran's 130km missile began in the early 1980s. In addition, Iran benefited from Chinese designs in the development of its 130km-range missile. The related Chinese project originally developed the old HD-2 (Guide Line) surface-to-air missiles into surface-to-surface missiles. These missiles, which in Iran are called Nazeat and Fajr, do not have guidance systems. Iran subsequently extended the range of these missiles to 160 and 200km and named them Zalzal. Western sources have reported that Iran used 10 of these missiles in the Iran-Iraq War against Iraq.

—Staff Colonel Yaqub Aslan, "World Strategic Rockets and Missiles: "Iran's Surface to Surface Missiles," *Saff* (Tehran), No. 229, 22 May-21 June 1999; in "Saff on Iran's Surface-to-Surface Missiles"; in FBIS Document FTS19990904000330, 4 September 1999.

1988

Iran launches 335 missiles at Iraq; 75 of the missiles are Scuds.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

1988

Iran reportedly fires 77 North Korean-produced Scud-B missiles during the War of the Cities.

—"The Iranian Connection," *Jane's Intelligence Review*, 1 April 1989, p. 180, in Lexis-Nexis, www.lexis-nexis.com.

1988

Notwithstanding a lack of supporting evidence, it is suggested that the Iranians are interested in North Korean developments with the Scud-PIP, despite Iran's heavy commitment to its own tactical ballistic missile programs and

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its deployment of a number of such systems.

—"The Iranian Connection," *Jane's Intelligence Review*, 1 April 1989, p. 180, in Lexis-Nexis, www.lexis-nexis.com.

1988

Iran launches 77 Scud-B missiles within a 52-day period against Iraq during the "War of the Cities." Iran launches 61 missiles at Baghdad, 9 at Mosul, 5 at Kirkuk, 1 at Takrit, and 1 at Kuwait. Iran fires as many as 5 missiles per day, and at one point launches 3 missiles within 30 minutes. By the end of the war, Iran has only 10-20 remaining missiles.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington DC: Center for Strategic and International Studies), 7 February 2000, p. 35.

1988

North Korea sells 100 "warheads" to Iran in 1988.

—"North Korea," *Asia-Pacific Defence Reporter*, April 1991, p. 24.

Early 1988

Iran purchases 40 Scud-B missiles from North Korea. The missiles are employed during the War of the Cities from February 1988 to April 1988. [Note: These missiles may be part of the June 1987 purchase rather than an additional purchase. This may also be a reference to one of the missile deliveries taking place from July 1987 to February 1988.]

—Steven Emerson, "The Postwar Scud Boom," *Wall Street Journal*, 10 July 1991, p. A12.

Early 1988

The Chinese and North Koreans collaborate in the construction of a missile production facility believed to be manufacturing Silkworm Missiles under Chinese license along the Tehran-Mashhad railway.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 23.

Early 1988

Another missile site is built 350km south of Tabas along Mashhad-Isfahan road to monitor missile tests from the Sharoud range.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 23.

Early 1988

The first units of the Nazeat come off the production line at the Isfahan missile production site.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 26.

11 January 1988

Iran receives a shipment of Chinese-made Silkworm missiles, apparently routed from a North Korean port to Bandar-e Abbas. Approximately six missiles and a launcher were spotted on the deck of a North Korean port where

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the Iranian merchant ship *Iran Bayan* was loading two weeks ago. North Korea is a transfer point of Chinese shipments to Iran. North Korea also sells arms to Iran directly. U.S. officials are unsure whether the Silkworm missiles were sold by China to North Korea and subsequently resold to Iran, or if the missiles were sold outright from China to Iran.

—Molly Moore, "More Silkworm Missiles Reported in Iran," *Washington Post*, 14 January 1998, p. A32, in Lexis-Nexis, www.lexis-nexis.com.

12 January 1988

A U.S. administration official says that Iran receives a shipment of Chinese-built Silkworm missiles from North Korea. Some intelligence reports suggest that the new shipment includes missiles capable of being launched from ships. The evidence is not conclusive on the types of missiles included. Reports of the delivery are based partly on satellite photographs of a ship that recently arrived in Iran from North Korea. There is no clear indication of the number of missiles included in the shipment, only that there is a small number of Silkworm missiles and some Styx missiles. [Note: This source identifies the Styx missile as a variation of the Silkworm missile. This is inaccurate. The Silkworm (HY-2) is a Chinese variation of the Russian-designed Styx missile. The article reports that the Styx missile is the ship-based variant of the Silkworm. It is possible that the reporter is confused by the missile types and is reporting that the shipment contains Styx missiles when in fact the shipment may be carrying modified ship-launchable Silkworm missiles. It is well-documented that Iran is actively pursuing a ship-based variant of the Silkworm missile.]

—David Shipler, "US Says Iran Received More Chinese Missiles," *New York Times*, 13 January 1988, p. A7, in Lexis-Nexis, www.lexis-nexis.com.

13 January 1988

A U.S. administration official says that the recent delivery of Silkworm missiles is not conclusive proof that China has broken a November 1987 promise to stop sending missiles to Iran, as the missiles could have come from North Korean stocks.

—UPI, "Iran Gets First Ship-Based Silkworm Missiles—US," *Los Angeles Times*, 13 January 1988, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

19 January 1988

U.S. intelligence sources report that U.S. allies were among the nations that exported a total of \$1.5 billion in military equipment to Iran in 1987. The largest supplier of arms to Iran in 1987 was China, which shipped \$600 million worth of artillery, ammunition, and Silkworm missiles. China also sold Iran industrial machinery needed to produce its own weapons. North Korea sold \$400 million in military hardware to Iran in 1987, including artillery, fast patrol boats, and Soviet-designed Scud surface-to-surface missiles. Spain and Portugal sent \$150 million worth of military equipment to Iran; Japanese firms sent \$100 million in spare parts and trucks to Iran; West German and Swiss firms sold chemical warfare defensive gear; and \$340 million worth of military hardware came from Warsaw Pact countries. The sources have no evidence of Soviet arms transfers to Iran. The totals were compiled as part of an updated Pentagon analysis of foreign military transactions with Iran.

—John M. Broder, "US Allies Took Part in '87 Arms Sales to Iran," *Los Angeles Times*, 20 January 1988, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

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19 January 1988

North Korea denies allegations made in the U.S. news media that Chinese-made Silkworm missiles are being supplied to Iran via North Korea.

—Korean Central News Agency, 19 January 1988, in "KCNA Denies Silkworms Shipped to Iran," FBIS-EAS-88-011, 19 January 1988, pp. 14-15.

28 January 1988

China reportedly sells Iran HY-2 Silkworm anti-ship cruise missiles, at least 96 of which are received by Iran. The Great Wall Industry Corporation of China is believed to be handling the Silkworm sale.

—"China and the Gulf," *Jane's Foreign Report*, 28 January 1988, in www.janesonline.com.

February 1988

U.S. customs misses a shipment of ammonium per chlorate (AP) used as an oxidizer for solid fuel destined to Iran. They are able to recover it with the assistance of Dutch customs, which finds the chemical in a vessel in Rotterdam. After investigations, the U.S. customs realize that Iran purchased the chemical through German and Swiss intermediaries.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 26.

February 1988

Dutch police, acting on a tip from U.S. Customs Service officials, seize 1,144 drums of ammonium perchlorate from an Iranian-registered ship, the *Aladat*, bound for the port of Bandar-e Abbas. The West German firm D.A. Dampf placed the shipment aboard the Iranian vessel.

—Paul Houston, "US Freezes Company's Loan Over Chemical Bound for Iran," *Washington Post*, 24 March 1989, p. A11, in Lexis-Nexis, www.lexis-nexis.com.

2 February 1988

U.S. sources say that American-made Stinger missiles are found on an Iranian speedboat sunk by U.S. helicopters on 8 October 1987. The boat is retrieved by U.S. Navy divers and apparently contains several Stinger missiles and one launcher. U.S. officials say that the Stinger missiles were seized by Iran from Afghan rebels.

—Associated Press, "US-made missiles found on sunken Iranian boat," *San Diego Union-Tribune*, 2 February 1988, p. A3, in Lexis-Nexis, www.lexis-nexis.com.

4 February 1988

Iran is manufacturing various types of rockets that can be launched against unguided and guided missiles and can manufacture types that strengthen Iran's offensive capability, such as anti-tank, surface-to-air, and surface-to-surface systems.

—"Revolution Guards Missile Industry Examined," Domestic Service (Tehran), 4 February 1988; in FBIS Document FBIS-NES-89-025, 8 February 1989, pp. 55-56.

25 February 1988

The Islamic Revolution Guards Corps (IRGC) General Staff announces that the IRGC Air Force begins the first

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training course on surface-to-surface missiles during a special ceremony at IRGC Air Force's Fajr base.

—"IRGC Air Force Begins Missile Training," Domestic Service (Tehran), 25 February 1988; in FBIS Document FBIS-NES-88-038, 26 February 1988.

29 February 1988

Iranian government sources say that Iran fires three surface-to-surface missiles at Baghdad, aiming them at a radio and television building and two military centers, in retaliation for Iraqi attacks on what Iran termed "non-military areas of Tehran" during the previous week. The missiles are launched in the early morning, at 2:55, 3:05, and 3:25. Iraq says only two missiles were launched, at 3:15 and 3:35 a.m. Iran time. A statement submitted by the Islamic Revolution Guards Corps (IRGC) says, "The Iraqi regime has renewed its attacks on Iranian civilian areas because it is unable to fight Muslim combatants on the battlefronts.... Its renewed attacks on civilian areas will not go unanswered." Iraq claims that only two missiles struck Baghdad. Iran has fired eight missiles into Baghdad since the UN Security Council called for a cease-fire on 20 July 1987. Altogether, Iran has fired 37 missiles into Baghdad since March 1985, when the two countries began bombing each other's cities.

—Reuters, "Many killed as Iran bombs Iraqi capital," *Toronto Star*, 29 February 1988, p. A1, in Lexis-Nexis, www.lexis-nexis.com; W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

Late February 1988

The Iranian ship *Iran Teyfour* delivers 80 HY-2 Silkworm and 40 Scud-B missiles from North Korea and China to the Iranian port of Bandar Abbas.

—AFP (Paris), 1 April 1988, in "Government Buys Chinese, N. Korean Missiles," FBIS-NES-88-063, 1 April 1988, p. 45; Steven Emerson, "The Postwar Scud Boom," *Wall Street Journal*, 10 July 1991, p. A12.

29 February-21 April 1988

This period is known as the "Second War of the Cities" between Iran and Iraq. During this time, the total number of Oghab rockets launched by Iran goes up to around 365.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 50.

1 March 1988

Iran's Islamic Revolution Guards Corps Air Force launches three Scud missiles at Baghdad at 9:25, 9:26, and 11:05 in the evening. Iraq says Iran only launched two missiles: one at 9:11 p.m. and the other at 11:33 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

2 March 1988

Iran's Islamic Revolution Guards Corps Air Force launches two Scud missiles at Baghdad at approximately 6:00 a.m. In a rare public appearance, Ayatollah Khomeini tells families of war victims in a 10-minute address that Iraqi

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attacks only increase Iranian resolve. "We fear nothing," he says, "for a martyrdom-lover it makes no difference to be martyred by a missile, a bomb, or anything else." Khomeini promises "tooth-smashing" retaliation against Iraq. —W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; David Hirst, "More missiles rain down on Gulf cities," *Guardian* (London), 3 March 1988, in Lexis-Nexis, www.lexis-nexis.com.

3 March 1988

Since 29 February, Iran has fired 10 surface-to-surface missiles at Baghdad, while Iraq has fired 25 missiles at Tehran. Military experts speculate that, with both sides bent on retaliation, the two countries will fire missiles at each other's capitals until they run out of ammunition.

—Reuters-AP, "'War of cities' continues amid missile barrage," *Toronto Star*, 3 March 1988, p. A14, in Lexis-Nexis, www.lexis-nexis.com.

3 March 1988

Iran's Islamic Revolution Guards Corps (IRGC) Air Force launches three Scud missiles at Baghdad. Iraq says the missiles landed at 6:25 a.m., 1:30 p.m., and 6:37 p.m. Both Iran and Iraq are believed to be using Soviet-made Scud-B surface-to-surface missiles, although the Soviet Union denies supplying the missiles. Iran also uses Scud-Bs reportedly supplied by its Arab allies, Syria and Libya.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; "Capitals of Iran and Iraq under missile fire for 4th day," *Los Angeles Times*, 4 March 1988, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

4 March 1988

Iraq says it fires three surface-to-surface missiles at Tehran, and Iran counters with two Scud missiles launched at Baghdad at 5:15 p.m. Iraq says only one missile was fired at Baghdad. Iran claims to have fired 12 surface-to-surface missiles into Baghdad since the beginning of this latest round of the "War of the Cities," but Iraq has confirmed only nine. In a sermon, Ayatollah Abdulkarim Ardabili says Iran will stop the missiles if Iraq does, but otherwise would "retaliate severely by showering missiles and artillery fire" on Iraqi cities. Iran's Islamic Revolution Guards Corps (IRGC) Ground Forces launch an unknown number of medium-range missiles at an Iraqi "mobile surface-to-surface missile pad" near the Tib River. Iran says that it destroyed the launch pad.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; Associated Press, "Iran, Iraq Continuing Deadly Duel of Missiles," *Los Angeles Times*, 5 March 1988, p. 20, in Lexis-Nexis, www.lexis-nexis.com; Reuters, "Iraq launch pad wrecked in missile war, Iran says," *Toronto Star*, 5 March 1988, p. A15, in Lexis-Nexis, www.lexis-nexis.com.

5 March 1988

Iran's Islamic Revolution Guards Corps (IRGC) Air Force fires four Scud missiles at military installations in Baghdad. One missile is launched before 7:00 a.m., the others between 7:44 p.m. and 9:26 p.m, Iran time. Iraq acknowledges

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the missile strike, reporting that it hit a residential area.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; "Iran, Iraq Continue Missile Attacks," *Washington Post*, 6 March 1988, p. A30, in Lexis-Nexis, www.lexis-nexis.com.

5 March 1988

Iran's Foreign Minister Ali Akbar Velayati says that "more than 30" Iraqi missiles have hit Tehran.

—Associated Press, "Iran, Iraq admit many dying in 'cities war'," *Toronto Star*, 7 March 1988, p. A3, in Lexis-Nexis, www.lexis-nexis.com.

6 March 1988

Iran's army launches 10 medium-range missiles against the Iraqi cities of Basra, Mandali, Khanaqin, Banmil, and Naft Khaneh in the early morning. Meanwhile, the Islamic Revolution Guards Corps (IRGC) Air Force launches five missiles at Baghdad at 12:25, 7:20, and 7:21 in the morning, then shortly before midnight.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

7 March 1988

Iran's Islamic Revolution Guards Corps (IRGC) Air Force launches one Scud missile at Mosul, Iraq, at 6:38 p.m. The IRGC Air Force also launches two Scuds at Baghdad, at 3:00 p.m. Iraq says that only one missile was launched at Baghdad. Iran is retaliating for an Iraqi missile attack against Tehran, in which three long-range missiles reportedly kill 30 people.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; UPI, "Iraq, Iran Missile Blitz Continues," *Los Angeles Times*, 7 March 1988, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

8 March 1988

Iran's Islamic Revolution Guards Corps (IRGC) Air Force launches one Scud missile at Baghdad at 12:30 a.m. and one unknown missile at an Iraqi military facility in Al-Amarah at 1:03 a.m. Later that evening, Iran launches two Scuds at Mosul. Iraq says that only one missile was fired at Mosul, at 2:30 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

8 March 1988

The Iranian government announces that Iran has launched four surface-to-surface missiles against Baghdad in retaliation for three missiles launched against Tehran by Baghdad. Iraqi officials acknowledge only that two missiles have struck residential areas of Baghdad.

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—Charles P. Wallace, "Missiles Fly in 2nd Week of 'War of Cities'," *Los Angeles Times*, 8 March 1988, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

8 March 1988

U.S. White House spokesman Marlin Fitzwater says the Reagan administration accepted China's declaration that it no longer sells Silkworm missiles to Iran, though China remains a supplier of conventional arms. The United States protested to China in 1987 about its sale of Silkworms to Iran. "To the best of our information, they have not delivered any missiles since then."

—Associated Press, "China backs US embargo on Iran arms; administration given Beijing assurance on Silkworm missiles," *Los Angeles Times*, 8 March 1988, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

9 March 1988

Iran's Islamic Revolution Guards Corps (IRGC) Air Force fires two Scud missiles at Baghdad at 10:00 a.m. and 10:05 a.m. Iraq says that one missile was launched.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

9 March 1988

Iran has launched a total of 20 missiles at Iraqi targets since 29 February. In addition, Iran is reported to be firing Scud-B missiles at Baghdad; these missiles are believed to have come from Syria and Libya.

—Charles P. Wallace, "Iraq Strikes Ship in Gulf, 3 Iranian Cities; Tehran Retaliates with Missile Attack; Lull in Tanker War Ends," *Los Angeles Times*, 9 March 1988, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

10 March 1988

Iranian Prime Minister Husayn Musavi says that Iran will end the missile attacks against Baghdad provided that Baghdad end its air and missile raids on Iranian centers.

—"Tehran calls for ceasefire in war of the cities: Baghdad sets terms for end to punishing missile duel in separate move," *Guardian* (London), 11 March 1988, in Lexis-Nexis, www.lexis-nexis.com.

10 March 1988

After 11 consecutive days of missile strikes on each other's capitals, it appears as if Iran and Iraq are ending reciprocal bombardment. Iraq signals its willingness to end the missile exchanges with Iran, but on its own terms. The first term is that Iraq should make the last bombardment since, as Iraq claims, Iran initiated the exchanges with two missile attacks on Baghdad on 29 February. Iran is believed to have fired the last missile. Iran has launched nearly 30 missile strikes against Baghdad and Iraq has launched more than 50 against Tehran. The Iraqi overture for a cease-fire appears prompted from concern about the damage to civilian morale.

—Richard Johns, "Iran-Iraq Missile War at End," *Financial Times* (London), 11 March 1988, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

10 March 1988

The Iranian Army fires six unknown missiles at "industrial installations" in Basra and Khanaqin, Iraq. The Islamic

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Revolution Guards Corps (IRGC) fires two Scud missiles at Baghdad at 10:00 and 10:02 p.m. The IRGC Navy fires ten unknown missiles at Iraqi ships and naval facilities around Umm Qasr, including the "Iraqi Navy's 7th Headquarters."

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

11 March 1988

Iran fires four unknown missiles at Basra and Al-Amarah, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

11 March 1988

Iranian Majlis Speaker Hashemi Rafsanjani addresses Friday prayers in Tehran as Iraq fires eight missiles on the capital. Tehran worshippers chant, "War, war, till victory," "Martyrdom is honor," and "Missile for Missile," calling for reprisal attacks. Iran's last missile is launched only 16 minutes before the deadline for the conditional ceasefire agreed to on 10 March. Iraq reports firing 67 missiles on Iran since 29 February, compared to Iran's 31 missiles. Most of the missiles have been aimed at the two countries' capitals.

—David Hirst, "War of the cities grinds to a halt: Missile attacks end just 16 minutes before deadline," *Guardian* (London), 12 March 1988, in Lexis-Nexis, www.lexis-nexis.com.

14 March 1988

Military sources in Washington report that Iran may be planning to install Silkworm missiles on the island of Abu Musa in the Persian Gulf. Surveillance detects evidence that crude missile launch pads are being built by the Islamic Revolutionary Guards Corps (IRGC). The sources, speaking on condition of anonymity, say there is currently no sign of the missiles being installed. The installation of Silkworm missiles on Abu Musa would extend the "Silkworm envelope" along Iran's coast, doubling the arc of the present threat.

—Associated Press, "US naval officers not worried about Iran missile threat," *San Diego Union-Tribune*, 14 March 1988, p. A3, in Lexis-Nexis, www.lexis-nexis.com.

14 March 1988

The short-lived conditional ceasefire between Iran and Iraq is broken. Iraq cites the victims of Iranian artillery in Kurdistan as justification for its decision to resume missile strikes on the Iranian capital. The Iranian government retaliates by firing two missiles at Baghdad, while Iraqi authorities report that only one of the two missiles hits the capital.

—Charles P. Wallace, "Iran, Iraq continue cycle of death; artillery fire leads to more coffins, retaliatory missiles," *Los Angeles Times*, 15 March 1988, p. 10, in Lexis-Nexis, www.lexis-nexis.com.

14 March 1988

Iran's Islamic Revolution Guards Corps (IRGC) fires two Scud missiles at Baghdad at 12:20 p.m. and 12:25 p.m. Iraq

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says Iran launched one missile. IRGC ground forces fire nine unknown missiles at Umm Qasr, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

15 March 1988

Iran's Islamic Revolution Guards Corps (IRGC) fires 11 unknown missiles at "industrial and military targets" around Al-Nashwah and Said Canal in Iraq's Basra province.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

15 March 1988

Iran threatens to turn Baghdad into "an inferno" because of missile attacks on Tehran.

—"Iran Threatens Inferno," *Financial Times* (London), 15 March 1988, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

15 March 1988

Iraq launches six long-range missiles at Tehran, but the failure of Iran to respond in kind prompts speculation that it has run out of missiles.

—Associated Press, "Many civilian deaths as Iran, Iraq blast cities," *Toronto Star*, 16 March 1988, p. A17, in Lexis-Nexis, www.lexis-nexis.com.

16 March 1988

Iran's Islamic Revolution Guards Corps (IRGC) fires 14 missiles at various Iraqi targets. The attacks include five Scud missiles launched at Baghdad at 1:45 a.m., 1:47 a.m., 2:18 a.m., 2:20 a.m., and 12:22 p.m. The Iraqi news agency confirms only three hits on the capital. The IRGC also launched nine unknown missiles at "economic and military targets" around Al-Nashwah and Soeib Canal in Basra Province.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; Associated Press, "UN urges halt as Iran, Iraq trade missile shots," *Los Angeles Times*, 17 March 1988, p. 11, in Lexis-Nexis, www.lexis-nexis.com.

17 March 1988

Iran launches 35 missiles at various targets in Iraq. The attacks include 20 unknown missiles of Iran's Islamic Revolution Guards Corps (IRGC) aimed at "industrial and military centers" in Basra; 12 unknown missiles aimed at Al-Zubayr; and 3 medium-range missiles aimed at "military and economic centers" in Basra and Khanaqin.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

17 March 1988

In a telephone interview, Kamal Kharrazi of Iran's Supreme Defense Council, says that some of the 35 long-range

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missiles fired by Iran at Baghdad during the most recent "War of the Cities" that began on 29 February were domestically manufactured copies of foreign missiles. Western military experts believe Iran is able to manufacture copies of Soviet Scud-B missiles supplied by Syria and Libya. Kharrazi says 50 short-range missiles launched against targets closer to the front were also domestically produced. He declines to specify the foreign weapon on which they had been based, but there is speculation that the compact artillery shell with a range of about 40km may be of Brazilian origin.

—Richard Johns, "Iran Claims It Is Making Missiles," *Financial Times* (London), 18 March 1988, p. 4, in Lexis-Nexis, www.lexis-nexis.com.

17 March 1988

The Islamic Revolutionary Guards Corps (IRGC) fires 20 medium-range surface-to-surface missiles (SSMs) at Basra and 12 medium-range SSMs at Al-Zubayr.

—"I Quarter 1988: March," Gulf/2000 Project (New York: School of International and Public Affairs [SIPA], Columbia University, March 1988).

18 March 1988

Iran fires two missiles at Mosul and one missile at Tikrit. The IRGC fires 24 medium-range surface-to-surface missiles (SSMs) at Zubayr, Harith and Shobair, as well as four medium-range missiles at the Basra region.

—"I Quarter 1988: March," Gulf/2000 Project (New York: School of International and Public Affairs (SIPA), Columbia University, March 1988); Associated Press, "Iran, Iraq wage missile duel; 3 tankers attacked," *San Diego Union-Tribune*, 18 March 1988, p. A6, in Lexis-Nexis, www.lexis-nexis.com.

18 March 1988

Iran launches 36 missiles at various targets in Iraq. Iran's Islamic Revolution Guards Corps (IRGC) Air Force fired 24 of the missiles at "industrial targets" in Al-Zubayr, Al-Harithah, and Shobair. The IRGC Air Force also launched four Scud missiles at Mosul, at 1:30 p.m., 1:32 p.m., and around 8:00 p.m. The other attacks include four unknown missiles aimed at Basra, Khanaqin and Banmil; two Scuds aimed at Kirkuk; one "long-range" missile aimed at Tikrit; and one unknown missile aimed at an "industrial target" in Khanaqin. This is the first reported attack on Tikrit.

[Note: Iraqi President Saddam Hussein is from Tikrit.]

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

19 March 1988

Iran launches 14 missiles at various targets in Iraq, and 12 unknown missiles were launched at Umm Qasr. One Nazeat missile was launched at 8:02 a.m. at "military and industrial targets" in Al-Amarah. Another such missile was launched at Iraq's army command headquarters in Baghdad at 1:00 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), pp. 25, 26.

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19 March 1988

A more accurate version of the Oghab, the Fajr-3, goes on the production line.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), pp. 25, 26.

19 March 1988

Iran reports its firing of a long-range missile into Baghdad today. Iran's IRNA also reports that Iran fires 12 missiles into the port of Umm Qasr in southeastern Iraq and one into Al-Amarah, a city 320km southeast of Baghdad.

—Associated Press, "Iranian missile rocks Baghdad; Iraqi jets strike," *San Diego Union-Tribune*, 19 March 1988, p. A3, in Lexis-Nexis, www.lexis-nexis.com.

19 March 1988

Iran fires the IRAN-130 for the first time against targets in Al-Amarah. The missiles are reportedly of Iranian manufacture, though Iran has failed to produce the IRAN-130 in any significant quantity. The missiles are deployed to the Islamic Revolution Guards Corps (IRGC). It is unclear if any of the IRAN-130 missiles being fired are hitting their targets or whether they have any technical effect.

—Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: The Iran-Iraq War* (Boulder, CO: Westview Press, 1990), p. 367.

Spring 1988

The "Scud Mod. B" assembly plant that North Korea helped Iran build becomes operational.

—Andrew Rathmell with contributions by James Bruce and Harold Hough, "Iran's Weapons of Mass Destruction," *Jane's Intelligence Review - Special Report No 6*, p. 20.

20 March 1988

Iran fires 11 unknown missiles at Basra and two Scud missiles at Baghdad. The Islamic Revolution Guards Corps (IRGC) launched the Scuds at Baghdad just before 1:00 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

23 March 1988

Iran launches one Scud missile at Baghdad at approximately 8:00 a.m. Five other missiles are launched at Basra and Khanaqin, Iraq, between 11:05 a.m. and 2:05 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

24 March 1988

Iran fires four Scud missiles at Baghdad, killing 72 people. The first two missiles were launched at 2:25 p.m. and 2:47 p.m.; the second two were fired at 8:23 p.m. and 8:25 p.m. Iran also launches six unknown missiles in the afternoon at "military and industrial targets" in Basra and Mandali, Iraq.

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—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

25 March 1988

Iran launches four unknown missiles at Basra, Khanaqin and Banmil, Iraq. Iraq reports only two missile strikes against Baghdad.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; Associated Press, "23 Die as Missiles Hit Iraq and Iran Capitals," *New York Times*, 25 March 1988, p. A7, in Lexis-Nexis, www.lexis-nexis.com.

25 March 1988

IRNA reports that six missiles are fired during the night into the strategically important city of Basra and the border town of Mandali.

—Associated Press, "Iran missiles, shells slam Iraqi port," *San Diego Union-Tribune*, 25 March 1988, p. A3, in Lexis-Nexis, www.lexis-nexis.com.

26 March 1988

Iran launches four unknown missiles at Basra, Khanaqin and Banmil, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

27 March 1988

Iran has access to Scud-B missiles from Libya, Syria, and North Korea. It is concluded that the missile exchanges between Iran and Iraq have had more psychological than military utility because the accuracy of the missiles has been poor; however, if the missiles were to become more accurate, it could significantly alter the nature of the conflict between the two gulf countries.

—Geoffrey Kemp, "Mideast Missile Madness: A Bazaar for Doomsday," *Washington Post*, 27 March 1988, p. C1, in Lexis-Nexis, www.lexis-nexis.com.

27 March 1988

Iran's Islamic Revolution Guards Corps (IRGC) launches two Scud missiles at Baghdad at 8:10 a.m. and 8:12 a.m. Iraq says one missile was launched. Iran also launches two unknown missiles at Basra at 9:45 a.m. and 9:48 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

28 March 1988

Iran's Islamic Revolution Guards Corps' (IRGC) Ground Forces fire three unknown missiles at "economic and military targets" in Mandali, Iraq.

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—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

29 March 1988

Iran fires two unknown missiles at Mandali, Iraq, at 5:00 p.m. and 6:00 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).].

29 March 1988

Iran's President Hashemi-Rafsanjani states that his country is ready to begin the full-scale production of missiles, which will enable Iran to launch 20 missiles per day into Baghdad. He says that the missiles to be produced will have a 130km range and are not an imitation of another missile.

—"Most Iraqi Cities Now Within Missile Range," IRNA, 29 March 1988; in Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 60.

30 March 1988

Iran fires 14 unknown missiles at "military, economic, and industrial installations" in Mandal and Al-Zubayr Iraq at 12:00 noon.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

31 March 1988

Iran fires three unknown missiles at Mandali, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

April 1988

Iran reportedly fires 10 pre-production examples of the Mushak-120 short-range ballistic missile (SRBM) at Iraq.

—Raytheon, "Strategic: Mushak 120," *Missile Systems of the World* (Raytheon, 1999), p. 456.

April 1988

Iraqi Foreign Minister Tariq Aziz identifies the *Iran Teyfour* as one of the Iranian ships involved in transporting North Korean missiles to Iran. According to Aziz, the *Iran Teyfour* is in Bandar-e Abbas during late February 1988 with 80 HY-2 Silkworm and 40 Scud-B missiles. According to an article in *Jane's Intelligence Review*, Aziz's assertion appears incorrect. According to Lloyd's of London shipping records, the *Iran Teyfour* was at the following locations: Surabaya, Japan from 25-26 January 1988; Bandar Shahid Rejaie, Iran on 9 February; Singapore from 29 February to 1 March; and Pusan, Republic of Korea from 9 to 11 March. However, the article suggests that the *Iran*

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Teyfour could have delivered North Korean missiles while en route to Bandar Shahid Rejaie from Surabaya, then shipped them to a North Korean port unannounced or while meeting a North Korean ship at sea.

—"The Iranian Connection," *Jane's Intelligence Review*, 1 May 1989, p. 206, in Lexis-Nexis, www.lexis-nexis.com.

April 1988

The Iranian Ambassador to China claims that Iran is able to produce Silkworm missiles by using the design of a missile that was taken from Iraq. This claim is later found to be untrue. This is, however, the first time Iran's intent to have an indigenous missile program is mentioned.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 60.

1 April 1988

Iran has launched 258 missiles at Iraq, 61 of which were the Scud-Mod. B.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 56.

1 April 1988

China and North Korea sell Iran 80 surface-to-surface Silkworm missiles and 40 Soviet-made Scud missiles, according to the United Arab Emirates newspaper *Al-Ittihad*. The missiles are reportedly delivered to the Iranian port of Bandar-e-Abbas.

—"Government Buys Chinese, N. Korean Missiles," *Agence France Presse*, 1 April 1988.

1 April 1988

Iran launches a missile attack on Kirkuk, Iraq's northern oil capital. Iraq says that only one missile was launched. The strike on Kirkuk is announced after Iraq declares it will halt its missile attacks on Iranian cities for three days beginning 1 April, because Turkish Prime Minister Turgut Ozal is visiting Baghdad. Iran also launches five unknown missiles at Basra, Iraq.

—Associated Press, "Iran bombs Iraq oil city, charges gases killed 75," *San Diego Union-Tribune*, 1 April 1988, p. A3, in Lexis-Nexis, www.lexis-nexis.com; W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

4 April 1988

Iraq says an Iranian missile strikes the city of Kirkuk, 225km north of Baghdad around 9:00 a.m. Iran says the missile was aimed at a refinery in Kirkuk.

—Associated Press, "Many civilians killed as missile hits Iraq city," *San Diego Union-Tribune*, 4 April 1988, p. A3, in Lexis-Nexis, www.lexis-nexis.com; W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

5 April 1988

Various Iranian missile units fire 17 missiles at different targets in Iraq. Twelve of the missiles are launched at Umm

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Qasr, killing 53 people. Iraq says that at least one of these landed at 10:30 a.m. Umm Qasr is the site of Iraq's only operating naval base.

Iran's army ground troops launch three unknown missiles at Basra at 11:40 p.m., 11:50 p.m., and midnight. The Islamic Revolution Guards Corps (IRGC) launch two Scud missiles at Baghdad at 8:15 p.m. and 8:20 p.m. Iraq says that one missile was launched at Baghdad, at 8:35 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; "Iraq and Iran report exchange of missiles," *Christian Science Monitor*, 6 April 1988, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

6 April 1988

Various Iranian missile units fire 17 missiles at different targets in Iraq. Nine of the missiles are launched at "military and economic centers" in Basra and Khanaqin. The Iranian army's ground forces launch four unknown missiles military facilities in Kani Kon, and two more at "military centers" in Basra. The missiles were launched at Basra at 12:45 and 1:50 a.m. The Islamic Revolution Guards Corps (IRGC) launches two Scud missiles at Baghdad at 4:19 and 4:20 p.m. Iraq says that one missile was fired at 4:36 p.m. Iranian time. [Note: Iran's time zone is 30 minutes ahead of Iraq's.]

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

7 April 1988

Iran launches 13 missiles at different targets in Iraq. The Islamic Revolution Guards Corps (IRGC) launch eight unknown missiles at Umm Qasr, and two Scuds at Baghdad. Iraq reports that one missile was launched at Baghdad at 2:01 p.m., Iraq time. [Note: Iran's time zone is 30 minutes ahead of Iraq's.] Iran's army ground forces fire three unknown missiles at Basra.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

7 April 1988

Iranian Defense Minister Brig. General Jalali says that a missile produced by the defense industries of Iran is tested. The missile, with a reported range of more than 130km, completes its final testing stages and will be ready for production at the end of April.

—"New Missile Nearly Ready for Production," Domestic Service (Tehran), 7 April 1988; in FBIS Document FBIS-NES-88-068, 8 April 1988, p. 53.

8 April 1988

Iran launches seven missiles at different targets in Iraq. Two unknown missiles are launched at Khanaqin at 5:45 a.m. and 5:50 a.m. The Islamic Republic Air Force fires one "long-range" missile at Al-Amarah at 7:45 a.m. The Islamic Revolution Guards Corps (IRGC) Air Force launches two Scuds at Baghdad at 10:05 a.m. and 10:07 a.m. Two

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Scuds are fired at Mosul at 2:14 p.m. and 2:16 p.m. Iran has launched 67 missiles at Baghdad and other Iraqi cities since the "War of the Cities" resumed in February.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; "Iranian missiles hit Baghdad after Iraq fires at four cities," *Los Angeles Times*, 9 April 1988, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

11 April 1988

Iranian Brigadier General Mohammad Jalali says that Iran's Defense Industries Organization is making two missiles with a range of 130km and more. One of the missiles is known to be the Mushak and the other the North Korean Scud-Mod. B.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds. p. 55.

11 April 1988

Iran's Islamic Revolution Guards Corps (IRGC) Air Force fires two Scud missiles at "two key military targets" in Baghdad, at 6:35 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; "Iran, Iraq Resume Attacks In 'War of the Cities,'" *Washington Post*, 12 April 1988, p. A16, in Lexis-Nexis, www.lexis-nexis.com.

12 April 1988

Iran fires one unknown missile at Al-Amarah, Iraq, at 5:01 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

13 April 1988

Iran launches four missiles at two Iraqi cities. The Islamic Republic Air Force launches two "long-range" missiles at Al-Amarah, Iraq, at 9:07 a.m. and 10:47 a.m. The Islamic Revolution Guards Corps (IRGC) Air Force launches two Scud missiles at Baghdad, at 10:10 p.m. Iraq says that only one missile was fired at Baghdad, at 10:28 p.m., Iran time. [Note: Iran's time zone is 30 minutes ahead of Iraq's.]

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

14 April 1988

Colonel Rahimi, Iran' First Deputy Minister of Defense, says that Iran has reached the capability of producing a missile with a 320km range, which is the Scud-Mod. B made by North Korea. It seems that the Iranians may have made the missile by putting together the parts supplied by North Korea, rather than making the whole missile

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indigenously.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 55.

15 April 1988

Iran's Ground Forces launch six unknown missiles "military and economic targets" in Basra, Khanaqin, and Ali Al-Gharbi, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

16 April 1988

Iran launches two Scud missiles at Baghdad at 2:50, Iraq time. Iran does not confirm the attacks.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

18 April 1988

Iran's Islamic Revolution Guard Corps (IRGC) launch nine unknown missiles at Khanaqin and Basra, Iraq. Iran also launches one Scud missile at Baghdad at 4:20 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

18 April 1988

U.S.-Iranian tensions explode into missile warfare as the United States attacks two Iranian platforms in retaliation for a mine that blew a hole in a U.S. frigate last week in the Persian Gulf. The three-ship U.S. battle group comes under attack five times from Iran's Silkworm anti-ship missile batteries. At one point during the sea battle, the United States and Iran fire U.S.-made Harpoon anti-ship missiles at each other's vessels.

—Associated Press, "'Silkworm incoming' cry sailors in Iran attack," *Toronto Star*, 19 April 1988, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

19 April 1988

U.S. officials react warily to reports that the missiles fired on a U.S. battle group were Iranian Silkworm missiles. Pentagon spokesman Dan Howard says the United States lacks "positive evidence" that Silkworms were used. It is possible that the warning system of the *USS Williams* misidentified the incoming missiles. If it is determined that Iran did fire Silkworm missiles, some U.S. Navy officers believe the U.S. policy of retaliation for provocative acts might necessitate a strike against Iran's missile launch sites.

—Peter Grier, "If Iran fired Silkworms, will US feel need to escalate?" *Christian Science Monitor*, 20 April 1988, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

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20 April 1988

Iran fires one Scud missile at Iraq's Al-Wafrah oil field at 3:15 a.m., Iraq time. The missile lands in the Kuwaiti desert near Al-Wafrah, but causes no damage. The attack is the first in which Iran uses its longer-range Scud missiles against Iraq's Gulf Arab allies.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; Reuters-AP, "Iran missile slams oilfield inside Kuwait," *Toronto Star*, 20 April 1988, p. A18, in Lexis-Nexis, www.lexis-nexis.com.

1 May 1988

Iran has launched a total of 447 missiles at Iraq, including 115 Scuds, since 12 March 1985 (the first missile attack against Iraq).

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

May 1988

A "highly-placed Arab source" tells the *Times* that Qatar has bought Stinger missiles from Iran, and that the Stinger missiles are also on offer to another Gulf state.

—Andrew McEwen, "Tehran offers to sell banned Stinger missiles to Arab states in Gulf," *The Times* (London), 27 May 1988, in Lexis-Nexis, www.lexis-nexis.com.

May 1988

Islamic Revolution Guards Corps (IRGC) Minister Mohsen Rafiqdust says that Iran is 70% self-sufficient in arms production. Don Kerr, an analyst for the International Institute for Strategic Studies in London, says that Rafiqdust's claim seems accurate, but that more "exotic" weapons such as long-range missiles, fighter jets, and armored vehicles must still be imported by Iran. Among the arms Iran is believed to be making are several missiles, rockets, and remotely piloted vehicles (RPVs). Iran is producing the Oghab SSM, which has a range of 40km and has reportedly been used against Basra. Kerr says, however, that there is no indication that the use of the Oghab missile has "swayed anything." Iran is also producing copies of U.S.-designed TOW missiles and Soviet-designed Katyusha rockets. Iranian officials announced their production of RPVs in 1987, and Iraq is reported to have shot down three of them over the southern warfront. Iranian Prime Minister Mir Husayn Musavi says that Iran has begun serious studies of the U.S. Stinger missile for domestic production. Kerr says that, given Iran's current technological capability, Iran should be able to copy Stinger missiles in the not-too-distant future. He regards claims that Iran is producing copies of Soviet Scud-B missiles more dubious because of the complexity of the missile. Kerr says that production of small anti-tank weapons or anti-aircraft missiles, like the U.S. Redeye, are well within Iran's technical capabilities.

—Christian Howlett Spoor, "Iran said to be 70% self-sufficient in arms production," *Christian Science Monitor*, 25 May 1988, p. 11, in Lexis-Nexis, www.lexis-nexis.com.

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2 June 1988

U.S. General George B. Crist, head of the U.S. Central Command, says that Iran is building a new Silkworm missile site complex at Kuhestak. He says that the Aegis-class missile cruiser *Vincennes* is deployed in the Gulf, partially because of the increase in Silkworm missile activity.

—Associated Press, "New Silkworm Missile Base Reported in Persian Gulf," *Journal of Commerce*, 2 June 1988, p. 1B, in Lexis-Nexis, www.lexis-nexis.com.

6 June 1988

The Chinese Foreign Ministry denies a U.S. newspaper report that Chinese-made Silkworm missiles arrived in Iran in May 1988, saying that China has tried to stop the flow of missile to Iran.

—"China Blocks Silkworms," *Financial Times* (London), 7 June 1988, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

31 June 1988

U.S. General George B. Crist, head of the U.S. Central Command, says a permanent Iranian Silkworm missile site is expected to become operational on the Strait of Hormuz in the fall of 1988. The United States is responding to the potential threat by stationing an Aegis class cruiser within range of the facility with orders to fire against any Silkworm launched, regardless of the missile's intended target.

—Molly Moore, "Gulf Missile Threat Seen Increasing; US Acts to Counter Bunkered Silkworms," *Washington Post*, 1 July 1988, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

July 1988

The Mushak-160 is tested.

—Raytheon, "Strategic: Mushak 120," *Missile Systems of the World* (Raytheon, 1999), p. 456.

2 July 1988

The Kuwaiti newspaper *Al-Qabas* reports that Iran is about to conclude a deal with Israel to purchase the Jericho-1 missile through a third party.

—"Israel Reportedly to Sell Jericho-1 Missiles," MENA (Cairo), 2 July 1988; in FBIS Document FBIS-NES-88-131, 8 July 1988, p. 55.

13 July 1988

A senior U.S. State Department official says the United States has received unconfirmed reports that China is trying to sell M-9 ballistic missiles to Libya, Syria, Iran, and Pakistan.

—Susan F. Rasky, "Kuwaiti to Seek Reversal of Missile Ban," *New York Times*, 14 July 1988, in Lexis-Nexis, www.lexis-nexis.com.

31 July 1988

Islamic Revolution Guards Corps' (IRGC) head Rafiqdust says that following a successful test firing of a 120km-range missile, manufactured by the Construction Jihad Ministry, the IRGC Ministry also successfully test-fires a missile with a range of 160km. Rafiqdust says the missile will be mass produced.

—"IRGC Minsiter Rafiqdust on New Missiles," Domestic Service (Tehran), 31 July 1988; in FBIS Document FBIS-NES-88-148, 1 August 1988, p. 52.

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19 August 1988

Hashemi-Rafsanjani states that one of the missiles being produced in Iran is the Mushak missile, which is not only a missile but a missile family with different ranges. The designs for the Mushak family seem to have started between 1985 and 1986. One of the missiles has a proposed range of 130km, though it only reached 120km, and the other missile has a range of 160km. To distinguish them, they are named the Mushak-120 and the Mushak-160.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 61.

26 August 1988

U.S. Customs officials seize a shipment of ammonium per chlorate (AP) used as an oxidizer for solid fuel in Houston, Texas. This shipment was going to Iran.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center 1992), p. 26.

4 September 1988

Islamic Revolution Guards Corps (IRGC) Minister Rafiqdust states that "two large munitions and casting factories" would be ready to produce the Mushak-160 and the TOW anti-tank missiles sometime next year.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 61.

24 September 1988

Iran's Center for War Research of the Reconstruction Jihad testing of the "largest and longest-range" domestically-produced missile is complete. The Center is reportedly preparing for mass production of the missile. The announcement is made during Holy Defense Week.

—"Testing of 'Longest-Range' Missiles Completed," Domestic Service (Tehran), 24 September 1988; in FBIS Document FBIS-NES-88-186, p. 62.

26 October 1988

Majid Modaressi is found guilty by a federal jury for conspiring to smuggle sensitive defense equipment and missile parts to Iran. Majid and his father, Ahmad, were arrested earlier in 1988 when they met with an undercover agent they believed to be a defense company executive to negotiate the sale of Stinger missiles and spare parts for F-4 and F-14 jets. Specifically, however, the pair was interested in buying twystron and klystron tubes. They said they intended to ship the tubes out of the country disguised as well-drilling equipment. Though the tubes have civilian uses, the prosecutor contends that the tubes were integral parts of the Hawk missile anti-aircraft system.

—Elizabeth Neuffer, "Iranian found guilty of plotting to smuggle; Sensitive defense equipment involved," *Boston Globe*, 27 October 1988, p. 70, in Lexis-Nexis, www.lexis-nexis.com.

November 1988

There is a large military exhibition in Tehran. At this exhibit, Iran shows off its short-range surface-to-surface missiles named the Oghab, "Shahin 333," and the Ran.

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—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 62.

4 November 1988

Two Nobel Kemi employees, a Swedish arms subsidiary of Nobel Industries group, and a private businessman are charged with selling 1,600 tons of ammunition and propellants worth SKr 150 million to countries such as Iran, Syria, and Egypt between 1981 and 1985, in defiance of Swedish law, which bans arms sales to the Middle East and countries at war or in areas of conflict. Mats Lundberg and Karl-Erik Schmitz admit selling ammunition to off-limits countries such as Iran via intermediary countries such as Yugoslavia and Italy, but maintain that the Swedish authorities were aware of their actions and gave the deals their tacit approval. When customs officers seized documents in 1986, they claimed they had uncovered an unofficial club of ammunitions companies across Europe, which combined to supply huge orders for Iran. Schmitz says that in one instance, he was contacted by the Yugoslavs to buy ammunition for resale to Iran, which was nicknamed "Nicholas" by club members as opposed to "Charlie" for Iraq. The ammunition was then sold—unprocessed—by Yugoslavia to Iran in contravention to Swedish law.

—Sara Webb, "Swedish Community Closes Ranks Around Arms Companies," *Financial Times*, 4 November 1988, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

7 November 1988

Ahmad Modaressi is sentenced to 14 months in prison and his son, Majid, receives a sentence of six months in prison for attempting to illegally export components of Hawk missile systems to Iran.

—John H. Kennedy, "Iranian man, son receive prison terms in arms plot," *Boston Globe*, 8 November 1988, p. 31, in Lexis-Nexis, www.lexis-nexis.com.

Late 1988

North Korea and Iran establish a secret, joint military commission to facilitate military cooperation.

—Steven Emerson, "The Postwar Scud Boom," *Wall Street Journal*, 10 July 1991, p. A12.

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1987

Early 1987

The Chinese deliver more sophisticated PL7 missiles made after the French Matra Magic R-550. These missiles are long-range, air-to-air missiles and can hit targets at up to 10km. China also assists Iran in manufacturing a short-range, solid-fueled ballistic missile named Nazeat or Iran-130.

—Kenneth R. Timmerman, *Weapons of Mass Destruction: The Cases of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 25.

1987

Iran launches 79 surface-to-surface missiles at Iraq; 18 of the missiles are Scuds.

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—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

1987

In 1987, a special unit of the Islamic Revolution Guards Corps (IRGC) in Bandar Abbas, Iran, under the command of Mohsen Rezai, began working on a project to extend the range of Chinese-supplied Silkworm missiles and to arm them with nuclear warheads.

— "Rafsanjani's Bomb," *Mednews*, 8 June 1992, pp. 1-5.

1987

Iran assembles the Scud-B missile kits, imported from North Korea in 1987 and 1988, in the facility of Isfahan.

—Bates Gill, "Chinese Arms Exports to Iran," *MERIA Journal*, Vol. 2, No. 2, May 1998, www.biu.ac.il.

1987

Iran uses a mobile launcher to conduct the first test since 1987 of its North Korean Scud-Cs. Estimates indicate that Iran possesses about 100 North Korean Scuds.

—"Missile Proliferation Chronology," *Arms Control Reporter*, June 1991, p. 706.B.55-706.E.4.

1987

The extent of an arms procurement scheme is revealed: a small Swedish company, Scandinavian Commodity, organizes a way to ship explosives and equipment to Iran in contravention of sanctions. Karl-Erik Schmitz, managing director of Scandinavian Commodity, has been approached by Iranian officials and asked to supply a complete munitions factory. [Note: For more reported arms schemes this year, refer to the entry for September 1987.]

—"Insight: Exposed-how Tehran beat arms boycott," *The Times* (London), 4 October 1987; via Lexis-Nexis, www.lexis-nexis.com.

1987

Iranian technicians alter the design of anti-tank rockets to meet the lack of imported launchers.

—Ann Tibbitts Schulz, *Buying Security: Iran Under the Monarchy* (San Francisco: Westview Press, 1989), p. 55.

1987

Production of the Oghab reaches a "satisfactory rate." A total of 70 Oghab rockets are launched since it was made operational in 1986. Nine were launched in 1986 and 61 this year. Between 6 December 1986 and 15 February 1987, Iran launches 53 Oghab rockets, mostly aimed at Basra and Khanaqin. The Islamic Revolution Guard Corps starts production of small artillery rockets with a short range. These are called the Katyusha, Nakhudsha, and mini-Katyusha. Supposedly before the Shah's regime fell, Iran was preparing to "reverse-engineer the rockets for the Soviet BM-21 122mm multiple-rocket launcher."

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 50, 63.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



1987

North Korea helps Iran set up a "Scud Mod. B" assembly plant.

—Andrew Rathmell with contributions by James Bruce and Harold Hough, "Iran's Weapons of Mass Destruction," *Jane's Intelligence Review - Special Report No. 6*, 1 June 1995, p. 20.

1987

Sources indicate that a Chinese-built missile assembly plant, which may have begun rocket production, is located 175km east of Tehran, near Semnan. It is supposedly capable of building 600-1,000 Oghab rockets per year if Iran can import key ingredients such as ammonium perchlorate for solid-fueled motors. The plant is also supposed to produce the Iran-130. Another plant that is reportedly being built near Bandar Abbas by the Chinese may be for the assembly of the Silkworm. China supposedly also helps the naval branch of the Guards modify the Silkworm to extend its range to 400km.

—Anthony H. Cordesman, *Threats and Non-Threats from Iran* (Washington, DC: Center for Strategic and International Studies, 26 January 1995), p. 58.

1987

Hashemi-Rafsanjani, Iran's president, says that Iran's efforts to make its own missiles is part of its military power and that becoming an active arms dealer is one of Iran's goals.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 64-65.

1987

Iran begins producing Scud-B (Shahab-1) missiles domestically, with technical assistance from North Korea.

—"A Dangerous Race in a Multi-axial World: The Missiles Clubs in the Middle East: The Century of Mass Destruction," *Al-Wasat* (London), 30 August 1999; in "Mideast Missile Race Detailed," FBIS Document FTS19990903000290, 3 September 1999.

1987

The first flight of the Mushak-120 short-range ballistic missile takes place.

—Raytheon, "Strategic: Mushak 120," *Missile Systems of the World*, Raytheon, 1999, p. 456.

1987

China begins negotiating with Iran to sell short-range ballistic missiles (SRBMs), which are probably the M-9.

—"Iran," *Jane's Intelligence Review*, 1 December 1992, in Lexis-Nexis, www.lexis-nexis.com.

1987

North Korea sells Scud missiles to Iran.

—"North Korea demands the extradition of its two diplomats," Agence France Presse, 27 August 1997, in Lexis-Nexis, www.lexis-nexis.com. [CNS translation]

1987-1988

North Korea exports about 100 Scud missiles to Iran.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—Kim Chun Pöm, "Pukhan'üi Haek-Missile Kisulsujun Öddön'ga," *Joongang Ilbo*, 19 March 1992, p. 6, in KINDS, www.kinds.or.kr.

1987-1992

North Korea exports an estimated 250 missiles and associated technology worth \$580 million to Egypt, Iran, Libya and Syria. The Hwasong-5 (Scud-B) and Hwasong-6 (Scud-C) missiles cost between \$1.5 and \$2 million each.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 20.

1987-1992

Iran purchases 200-300 Scud-B missiles from North Korea.

—Anthony H. Cordesman, *Iran and Nuclear Weapons* (Washington, DC: Center for Strategic and International Studies, 7 February 2000), p. 35.

1987-1992

North Korea exports 250 missiles worth \$580 million to countries in the Middle East, including Iran and the United Arab Emirates.

—Lim Yun-Suk, "US and N Korea to Hold Talks on Pyongyang's Missile Exports," Agence France Presse, 28 March 1999.

8 January 1987

Iran strikes the *World Dawn* with a Sea Killer ship-launched SSM during a night attack. The *World Dawn* flies a Panamanian flag and is hit off the coast of the United Arab Emirates while carrying oil from Kuwait bound for Italy.

—Bernard E. Trainor, "Iranian Warships Now Using Missiles for Night Attacks," *New York Times*, 20 January 1987, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

10 January 1987

The White House releases a memo outlining Israel's role in Iran's weapons procurement activities, which is included in the U.S. Senate Intelligence Committee's report on Iran that was written by Colonel Oliver North on 17 January 1986. [Note: For more information on the memo, see the entry for 17 January 1986.]

—Bernard Gwertzman, "Senate Report on Iran Arms Sales: Role of Israel is Highlighted," *New York Times*, 10 January 1987, p. 6, in Lexis-Nexis, www.lexis-nexis.com.

11 January 1987

Iran's Islamic Revolution Guards Corps (IRGC) launches one Scud missile that lands on the outskirts of Baghdad at approximately 6:00 a.m. local time. Tehran radio claims that the missile struck Iraq's Air Force command headquarters, which Iraq denies. An Iraqi spokesman says the missile explodes in a residential area. This is the first time in more than six weeks that the Iranians fire one of their long-range missiles at the Iraqi capital. The IRGC ground forces also fire three short-range Oqab (Eagle) missiles at Basra in southern Iraq. [Note: The Oqab is the Iranian version of a Frog missile.]

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of*

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



Terror (Darlington, VA: Darlington Press).]; Michael Ross, "Air Strikes, Missiles Hit Iran, Iraq: Baghdad Struck; Troops Battle to Dislodge Invaders," *Los Angeles Times*, 12 January 1987, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

12 January 1987

Iran strikes the *Atlantic Dignity* with a Sea Killer ship-launched SSM during a night attack. The *Atlantic Dignity*, flying a Liberian flag, was sailing off the coast of Oman while carrying oil from Kuwait bound for Italy.

—Bernard E. Trainor, "Iranian Warships Now Using Missiles for Night Attacks," *New York Times*, 20 January 1987, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

12 January 1987

Iraqi jets raid five Iranian cities and towns: Kashan, Qom, Esfahan, Borujerd, and Arak, and knock out a base for U.S.-made Hawk surface-to-air missiles (SAMs) near the Iranian border town of Khorramshahr.

—Michael Dobbs, "Fighting Intensifies in Gulf War; Iran Claims to Hold Recent Gains; Iraq Escalates Air Raids," *Washington Post*, 13 January 1987, p. A14, in Lexis-Nexis, www.lexis-nexis.com.

13 January 1987

Iran's Islamic Revolution Guards Corps launch one Scud missile from Shalamcheh, an Iranian border outpost, at a trade center in Baghdad. Residents of the city report hearing two explosions. This is the second missile strike against Baghdad since Iran launched its new cross-border thrust east of the Iraqi city of Basra on 9 January 1987.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; Reuters, "Iran, Iraq trade blows with missiles, jets as offensive rages on southern battle front," *Toronto Star*, 13 January 1987, p. A3, in Lexis-Nexis, www.lexis-nexis.com.

14 January 1987

Iran's Islamic Revolution Guards Corps fire one Scud missile at the Iraqi prime minister's building in Baghdad around 12:30 p.m. The surface-to-surface missile attack is the third to hit the city in four days.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; Reuters, "Iran launches third missile into Baghdad as battle rages," *Toronto Star*, 14 January 1987, p. A3, in Lexis-Nexis, www.lexis-nexis.com.

14 January 1987

U.S. intelligence officials say that Iran hits the *Saudiah*, a vessel flying a Kuwaiti flag, off the coast of the United Arab Emirates while carrying oil from Kuwait to Pakistan. A Sea Killer ship-launched SSM strikes the *Saudiah* during a night attack.

—Bernard E. Trainor, "Iranian Warships Now Using Missiles for Night Attacks," *The New York Times*, 20 January 1987, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

15-16 January 1987

Iran's ground forces fire seven Oqab (Eagle) missiles within 48 hours at Basra, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988

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[expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

16 January 1987

Iran's Islamic Revolution Guards Corps fires an unknown missile at a military installation in Abu al-Khasib, Iraq at 1:20 p.m. The IRGC also fired one Scud at the Iraqi War Ministry in Baghdad.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

17 January 1987

Iran fires three Oqab (Eagle) missiles at Khanaqin, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

18 January 1987

Iran's Islamic Revolution Guards Corps fires two "mid-range" missiles at Iraqi troops and fortifications in the "Karbala-5 Operational Region." Iran also fires two Oqab (Eagle) missiles at 7:00 and 7:15 a.m. at Basra, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

19 January 1987

Iran fires seven "medium-range" missiles at Basra and Khanaqin, Iraq at 11:15 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

20 January 1987

Iran fires a long-range missile into Baghdad. Iraq's official Baghdad Radio says the missile hit a "residential area of Baghdad." The Iranian news agency IRNA says that the missile was aimed at the headquarters of Iraq's Baath party. The headquarters are adjacent to Saddam Husayn's presidential palace. IRNA also reports that the missile attack, the fifth attack on Baghdad in 10 days, is in retaliation for Iraqi air raids on civilian targets in several Iranian cities.

—AP, Reuters, "Toxic gas engulfs Iraqi city Iran says," *Toronto Star*, 20 January 1987, p. A8, in Lexis-Nexis, www.lexis-nexis.com.

20 January 1987

The surface-to-surface missile that strikes Baghdad is believed to be a Soviet-made Scud-B.

—Reuters, "Iran Fires Missile at Baghdad, Reports Advance Toward Basra," *Los Angeles Times*, 21 January 1987, p. 8, in Lexis-Nexis, www.lexis-nexis.com.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



20 January 1987

U.S. intelligence officials say Iranian warships in the Persian Gulf are using Italian-made Sea Killer missiles against oil tankers in night attacks for the first time. Iranian frigates based at Bandar-e Abbas near the Strait of Hormuz carry the missiles. The Sea Killer is a ship-launched, surface-to-surface missile about one meter long with a high-explosive warhead. U.S. intelligence officials say that since 1984, more than 200 vessels have been hit and either sunk or damaged by Iranian Sea Killer missiles.

—Bernard E. Trainor, "Iranian Warships Now Using Missiles for Night Attacks," *New York Times*, 20 January 1987, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

21 January 1987

In answering a question about TOW anti-tank missiles and Hawk anti-aircraft missiles sold to Iran by the Reagan administration, chief Pentagon spokesman Robert B. Sims says, "We've seen no indication these have been employed [in the current Iranian offensive] and if they have, they have had no effect."

—"Iran Fires Missile at Baghdad, Reports Advance Toward Basra," *Los Angeles Times*, 21 January 1987, p. 8, in Lexis-Nexis, www.lexis-nexis.com.

22 January 1987

Iran fires a "mid-range" missile at Iraqi oil facilities near Banmil at 8:30 a.m. At 10:30 p.m., the Islamic Revolution Guards Corps fires one Scud missile at Baghdad.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

23 January 1987

Iran fires two missiles at Basra, Iraq at 2:00 and 3:00 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

24 January 1987

Iran fires two "mid range" missiles at Basra, Iraq at 2:00 and 3:00 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

25 January 1987

Iran fires four "medium-range" missiles at Basra and Khanaqin, Iraq. The missiles are fired around 4:30 a.m. and 10:30 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

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26 January 1987

Iran fires four missiles at Basra, Iraq. The missiles are launched at 3:00 a.m., 4:00 a.m., 11:00 p.m. and 12:00 p.m. Another missile is launched at Iraqi oil facilities near Banmil at 9:00 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

31 January 1987

Iran's Islamic Revolution Guards Corps report firing a Scud missile at a "strategic military target" in Baghdad at 8:30 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

February 1987

Iran reportedly conducts successful test-fires of the Chinese-supplied HY-2 Silkworm missiles from a site on Qeshm Island.

—Joseph S. Bermudez, "North Korea's HY-2 Silkworm programme," *Jane's Intelligence Review*, 1 May 1989, p. 203, in Lexis-Nexis, www.lexis-nexis.com.

3 February 1987

State-run Baghdad Radio reports that an Iranian surface-to-surface missile strikes Baghdad, the eighth SSM to hit Baghdad since the beginning of the Iranian offensive. The Iranian news agency IRNA reports that the missile strike was in retaliation for the deaths of 68 schoolgirls in an Iraqi air raid on 2 February.

—"Missile hits Baghdad; Iran cities bombed," *San Diego Union-Tribune*, 4 February 1987, p. A11, in Lexis-Nexis, www.lexis-nexis.com.

4 February 1987

Iran fires one "medium-range" missile at Khanaqin, Iraq at 1:15 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

5 February 1987

Iran's Islamic Revolution Guards Corps fires one Scud missile at Baghdad.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

6 February 1987

An Iranian surface-to-surface missile strikes Baghdad, the ninth such attack since the beginning of the year. Iran radio, which can be heard in Baghdad, warns Iraqis to leave the capital to "remain safe" from attacks carried out

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"in reprisal for continuous Iraqi air raids on Iranian residential areas." Iran fires one "mid-range" missile at Khanaqin, Iraq at 8:00 a.m.

—"The World," *Los Angeles Times*, 6 February 1987, p. 2, in Lexis-Nexis, www.lexis-nexis.com; W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

6 February 1987

Belgian newspapers report that U.S. and West European weapons have passed illegally through Belgian seaports and airports on their way to Iran over a period of four years. The weapons, including those in the U.S. arms-for-hostages scandal, carried falsified customs and end-user certificates.

—Richard Owen, "Weapons for Iran said to have passed through Belgium," *The Times* (London), 7 February 1987, in Lexis-Nexis, www.lexis-nexis.com.

7 February 1987

Iranian officials say that they have fired a missile into Khaneqin, 145km northeast of Baghdad.

—"Beirut's starving may start eating human flesh," *Toronto Star*, 7 February 1987, p. A12, in Lexis-Nexis, www.lexis-nexis.com.

9 February 1987

Middle East aviation sources say that U.S. missiles sent to Iran in the arms-for-hostages deal have knocked out a substantial number of Iraqi planes and tanks in the more recent Iran-Iraq War fighting. The sources say that the Hawk anti-aircraft and TOW anti-tank missiles have been a major factor in heavy losses suffered by Iraq since Iran launched its most recent offensive on 9 January. Iran reportedly deploys most of its anti-aircraft missiles near major ground war zones along the border and around strategic areas such as its Kharq Island oil terminal.

—Reuters, "Iran's US weapons 'take toll' on Iraqi forces," *Toronto Star*, 9 February 1987, p. A8, in Lexis-Nexis, www.lexis-nexis.com.

10 February 1987

The chief of the Islamic Revolution Guards Corps (IRGC), Mohsen Rezai, says that the IRGC has a large store of missiles ready for use and that if "[Iraq's] mischief continues, our attacks on strategic centers in Baghdad and other cities will increase."

—"The World," *Los Angeles Times*, 10 February 1987, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

11 February 1987

Iraqi warplanes bomb six Iranian cities: Qom, Nahaavand, Borujerd, Kuhdasht, Urumieh, and Tabriz, while thousands of people are marching in the streets in celebration of the anniversary of the 1979 revolution. An Iranian spokesman for the war information headquarters in Iran says that "Iran's Islamic combatants will target Baghdad in the coming hours." The spokesman advises Baghdad residents to evacuate their city, and adds that Iranian artillery will also target "military and economic sites" in Iraqi border cities.

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—UPI, "Iraq planes bomb during Iran parades," *Los Angeles Times*, 11 February 1987, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

11 February 1987

Iran fires a surface-to-surface missile at Baghdad in retaliation for Iraqi air raids on 18 Iranian cities that killed or wounded scores of civilians on the eighth anniversary of the 1979 revolution. This is the 10th missile Iran has launched against Baghdad in 1987.

—"Iraq Bombs 18 Cities; Iran Missile Hits Baghdad," *Los Angeles Times*, 12 February 1987, p. 16, in Lexis-Nexis, www.lexis-nexis.com; W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

12 February 1987

Iran fires one "mid-range" missile at Basra, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

13 February 1987

Iran's Islamic Revolution Guards Corps Air Force fires one Scud missile at Baghdad at 7:50 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

15 February 1987

Iran fires one unknown missile at Basra, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

29 February 1987

Iran fires 3 Scud-Bs at the Iraqi capital, Baghdad.

—Dilip Hiro, *The Longest War: The Iran-Iraq Military Conflict* (New York: Routledge, 1991), p. 200.

End February-Mid-April 1987

Iran launches 50 Scuds at Iraqi cities.

—Sharam Chubin, "Iran and the War from Stalemate to Ceasefire" in Efraim Karsch, ed., *Iran-Iraq War* (New York: St. Martin's Press, 1989), pp. 21-22.

1 March-20 April 1987

Iran launches 77 Scud-Bs on Iraqi urban centers. Most of them are targeted at the capital Baghdad.

—Dilip Hiro, *The Longest War: The Iran-Iraq Military Conflict* (New York: Routledge, 1991), p. 200.

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10 March 1987

A federal judge says that he could not accept the Reagan administration's Iranian arms sales as a defense for a Pakistani man accused of smuggling Hawk missile parts to Iran. The defendant, Arif Durrani, claims that he was asked by U.S. officials to locate out-of-stock Hawk missile parts as part of the effort to free American hostages in Lebanon. Durrani claimed in a 4 February affidavit that he was approached by a man he now believes was Lt. Col. Oliver North.

—"Westlake Village Man on Trial in Arms Case; US Sales to Iran Rejected as Defense," *Los Angeles Times*, 12 March 1987, p. 11, in Lexis-Nexis, www.lexis-nexis.com.

14 March 1987

U.S. intelligence sources say Iran is installing large land-based anti-ship missiles near the Strait of Hormuz. The missile system, which appears to be the Chinese-made HY-2 (C-802), was spotted by U.S. intelligence within the last month. The HY-2 missile system is based on a Chinese-built version of the Russian-designed missile known as the Styx or SS-N-2. The HY-2 missile system is a Chinese coastal defense version of the ship-launched Styx. According to intelligence sources, there are approximately six missiles at two separate locations near the mouth of the Gulf. One is on the Iranian coastline near the town of Kuhstak, the other on the island of Qeshm, near Bandar-e Abbas. None of the Iranian missiles has been fired, but the presence of the HY-2 is seen as a sign that Iran is prepared to continue and even intensify its shipping war in the Persian Gulf against Iraq. Earlier in the year, the Iranians began to launch night attacks with Sea Killer missiles against ships in the Gulf.

—Bernard E. Trainor, "New Iranian Missiles Reported at Gulf Entrance," *New York Times*, 15 March 1987, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

14 March 1987

It is not known how Iran obtained the HY-2 missiles. China denies selling weapons to Iran, contrary to allegations made by U.S. officials.

—Associated Press, "Iran's 'Styx' Missiles Worry Shipping Officials," *Journal of Commerce*, 20 March 1987, p. 22B, in Lexis-Nexis, www.lexis-nexis.com.

20 March 1987

The United States informs the Iranian government of its "serious concern" over the presence of HY-2 anti-ship missiles in the Strait of Hormuz. U.S. State Department spokesman Charles Redman says that the warning was conveyed through the Swiss Embassy in Tehran. He calls the Silkworm missiles "a potential threat to international shipping."

—UPI, "US Tells Iran of Concern Over Hormuz," *Los Angeles Times*, 21 March 1987, p. 8, in Lexis-Nexis, www.lexis-nexis.com.

25 March 1987

According to the British Navy, Iran tests its new Silkworm anti-shiping missile in the Strait of Hormuz.

—"Iran Tests Missile," *Financial Times* (London), 25 March 1987.

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25 March 1987

Speaker of Iran's Parliament, Hojat-al-Islam Hashemi Rafsanjani says, "Americans around the world would be in danger if the United States launched an attack in the Persian Gulf," where U.S. naval forces have been strengthened. He confirms that the United States has warned Iran through the Swiss Embassy in Tehran against using the mobile Chinese-made HY-2 missiles deployed on the northern shore of the Strait of Hormuz.

—Associated Press, "Iran Warns of Danger if US Attacks in Gulf," *New York Times*, 25 March 1987, p. A5, in Lexis-Nexis, www.lexis-nexis.com.

28 March 1987

An Iranian gunboat fires a missile into the *Sedra*, a Singapore-registered tanker sailing in the Persian Gulf. According to shipping sources, the missile is an Italian-made Sea Killer. Iran has produced a medium-range surface-to-surface missile with technological help from China. The Iranians have targeted shipping in the Persian Gulf during the six-and-a-half-year-old Iran-Iraq War. The Iranians have attacked a dozen vessels owned by Kuwait or plying Kuwaiti ports since September 1986. Iran claims Kuwait supports Iraq in the Gulf War.

—"Iranian-fired missile guts tanker in gulf," *San Diego Union-Tribune*, 29 March 1987, p. A2, in Lexis-Nexis, www.lexis-nexis.com.

30 March 1987

The U.S. General Accounting Office (GAO) report states that the Pentagon undercharged the CIA by \$2.1 million for anti-tank missiles that eventually were sold to Iran.

—"Anti-tank missiles for Iran sold at loss," *San Diego Union-Tribune*, 31 March 1987, p. A9, in Lexis-Nexis, www.lexis-nexis.com.

April 1987

Iran's Ambassador to China, Alauddin Borujerdi, says that any Chinese arms that Iran might be using were either bought on the international arms market or captured from Iraqi forces.

—Reuters, "China Checking on Arms Reaching Iran," *Los Angeles Times*, 10 May 1987, p. 26, in Lexis-Nexis, www.lexis-nexis.com.

2 April 1987

Arif Durrani, a Pakistani businessman accused of illegally selling Hawk missile parts to Iran, is convicted on three counts for exporting the missile parts to Iran without U.S. government permission. Durrani has claimed throughout the trial to have acted on behalf of the U.S. National Security Council as part of the Reagan Administration's secret arms-for-hostages deal with Iran. [Note: Refer to the entry for 10 March 1987 for more information.]

—UPI, "Man Convicted in Missile Parts Sale to Iran Despite Claimed NSC Role," *Los Angeles Times*, 3 April 1987, p. 30, in Lexis-Nexis, www.lexis-nexis.com.

13 April 1987

Iran's ambassador to China, Alauddin Borujerdi, acknowledges that Iran might have obtained weapons from China, including missiles, but denies that they are the result of any military agreement. He says that Chinese weapons are available on the "open market" and do not have to be obtained through a direct military agreement with the

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Chinese. Borujerdi says, "It is just natural that we have bought weapons, but...all these weapons are available to us and we shall take all the opportunities to buy them in the open market." China repeatedly denies that it has sold arms to Iran.

—"Iran May Have Received Chinese Arms, Aide Says," *Washington Post*, 14 April 1987, p. A11, in Lexis-Nexis, www.lexis-nexis.com.

24 April 1987

A Gulf military source states that Iran set up a missile-launching site on captured Iraqi soil within range of Kuwait and its oil tankers.

—"Iranian Missile Site," *Financial Times* (London), 24 April 1987, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

28 April 1987

Commander of the naval unit of the Islamic Revolution Guards Corps (IRGC), Husayn Alai, says that his unit has access to the "most powerful" coast-to-sea missile system in the Persian Gulf, which was installed in strategically significant locations.

—"Armed Forces Install 'Powerful' Antiship Missiles," IRNA (Tehran), 28 April 1987; in FBIS, 29 April 1987, p. 13.

May 1987

The White House and the U.S. State Department hint that U.S. warplanes would attack Chinese-supplied Silkworm missiles if they are deployed to threaten U.S. forces and if Iranian actions provide a justification for such an attack. U.S. Secretary of Defense Caspar W. Weinberger and Secretary of State George P. Schultz reportedly protest the shipment of Silkworm missiles and other weapons to Iran during recent trips to Beijing.

—Don Oberdorfer, "US Policy in Gulf Complicates Relations with Soviets, Chinese; Cooperation Sought at United Nations to Halt Flow of Arms to Iran," *Washington Post*, 31 May 1987, p. A30, in Lexis-Nexis, www.lexis-nexis.com.

9 May 1987

China is seriously investigating whether Chinese arms are being sent to Iran by third parties. Abu Iyad, head of a Palestine Liberation Organization (PLO) delegation to China, quotes Chinese officials as saying that Chinese weapons could have reached Iran by indirect routes.

—Reuters, "China Checking on Arms Reaching Iran," *Los Angeles Times*, 10 May 1987, p. 26, in Lexis-Nexis, www.lexis-nexis.com.

Mid-May 1987

China makes its second delivery of Silkworm (HY-2) anti-ship missiles to Iran. The official says, "The missiles add a dangerous dimension to shipping in the gulf." He says that Iran has prepared sites for the weapons, but has not deployed Silkworm missiles.

—Associated Press, "China said to be sending anti-ship missiles to Iran," *Toronto Star*, 27 May 1987, p. A16, in Lexis-Nexis, www.lexis-nexis.com.

19 May 1987

Assistant Secretary of State Richard W. Murphy, the Reagan administration's senior Middle East specialist, testifies before the Senate Foreign Relations Committee that Iran agreed in 1986 to spend \$700 million to purchase the

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Silkworm missile system for possible use in blocking the Strait of Hormuz. Chinese officials, in public and private, are said to have denied that China is supplying arms to Iran.

—Don Oberdorfer, "US Policy in Gulf Complicates Relations with Soviets, Chinese; Cooperation Sought at United Nations to Halt Flow of Arms to Iran," *Washington Post*, 31 May 1987, p. A30, in Lexis-Nexis, www.lexis-nexis.com.

23 May 1987

The Kuwaiti newspaper *Al Qabas* reports that China has signed an agreement with Iran to build four factories in Iran for ammunition, rockets, and tank spare parts. In return, China will receive 28 million barrels of oil annually. The paper also reports that China has agreed to deliver an unspecified number of Chinese-made MiG19 warplanes, 200 tanks similar to the T59, field guns, and SA-2 and SA-7 anti-aircraft missiles to Iran.

—Lena Sun, "China Strongly Denies Selling Arms to Iran," *Washington Post*, 11 June 1987, p. A29, in Lexis-Nexis, www.lexis-nexis.com.

Late May 1987

A deputy Iranian foreign minister, Sheikh al-Islam, slips into Beijing unannounced by the Chinese on what diplomatic sources say is an arms-buying mission. According to diplomatic sources in Beijing, Iran is suspected of asking China to supply more Silkworm missiles.

—Jasper Becker, "Iran 'asks China for more missiles'," *Guardian* (London), 1 June 1987, in Lexis-Nexis, www.lexis-nexis.com.

Early June 1987

Tank owners operating out of Dubai and Abu Dhabi report that captains of several vessels hear a missile being test-fired. Foreign tankers sailing in the Gulf also pick up triangularity transmissions coming from the coastline near Bandar-e Abbas, where the Silkworm missiles have been taken. The transmissions, which will eventually be used for targeting, are essential preliminary to the deployment of mobile batteries.

—Robert Fisk, "Iran 'begins tests' on Silkworm firing," *The Times* (London), 15 June 1987, in Lexis-Nexis, www.lexis-nexis.com.

June 1987

Iran and North Korea conclude a \$500 million arms agreement which includes the purchase of 90-100 North Korean-produced Scud-Bs and an unknown number of HY-2 Silkworm missiles. The Scud-B is known as the Hwasong-5 in North Korea, and the Shahab-1 in Iran. North Korea has also agreed to help set up a missile production plant in Iran. This deal may include Iranian purchase of SA-2, HQ-1 and HQ-2 surface-to-air missiles.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, pp. 12-13.

June 1987

Iran and North Korea sign a \$500 million follow-up agreement whereby Iran will receive 90-100 Scuds. Deliveries start in 1987 and are completed in March 1988. Part of the follow up was the construction of missile facilities in Iran for the production of Scud-B and a longer-version Scud-C. There are approximately 100 facilities employing several thousand people. The largest facility was built near the industrial city of Isfahan.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 22.

June 1987

As a continuation of their 1985 bilateral accord, Iran and North Korea complete a \$500 million military assistance agreement, which includes the purchase of 90-100 North Korean Scud missiles, 12 transporter-erector launchers (TELs), and an unknown number of North Korean-built HY-2 Silkworm missiles.

—Joseph S. Bermudez, Jr., "North Korea's HY-2 'Silkworm' Programme," *Jane's Soviet Intelligence Review*, May 1989, pp. 203-207; Joseph S. Bermudez, Jr., "Ballistic Missiles in the Third World—Iran's Medium-Range Missiles," *Jane's Intelligence Review*, April 1992, pp. 147-152; Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 12.

June 1987

Iran and North Korea conclude a \$500 million arms agreement which includes the purchase of 90-100 North Korean-produced Scud-Bs and an unknown number of HY-2 Silkworm missiles. Deliveries are believed to begin during July 1987 and continue irregularly through 1988.

—"The Iranian Connection," *Jane's Intelligence Review*, 1 May 1989, p. 206, in Lexis-Nexis, www.lexis-nexis.com.

June 1987

Iran spends about \$500 million on an arms deal with North Korea that includes the purchase of Scud-Mod. B missiles, transporter-erector launchers (TELs), and HY-2 Silkworm missiles. Once the missiles arrive in Iran, they are put under the auspices of the "Missile Unit of the IRGC [Islamic Revolution Guards Corps] Air Force" which is overseeing the Scud attacks against Iraq.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: the New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 54-55.

June 1987

In response to a Reagan administration protest over the sale of HY-2 Silkworm missiles to Iran, China denies that it made the sale. U.S. officials do not believe the denial, but one anonymous White House source says China contends the missiles are coming from North Korea.

—Gerald B. Boyd, "U.S. Says China Is Arming Iran, Despite Denial," *New York Times*, 7 June 1987, pp. A1, A15.

June 1987

White House Chief of Staff Howard H. Baker, Jr. warns that the United States will consider Iranian deployment of Silkworm missiles a hostile act that might result in U.S. retaliation.

—"US Detects Iran Work on Missiles," *Los Angeles Times*, 6 July 1987, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

June 1987

An unnamed Western diplomat in Beijing expresses frustration with what he describes as the growing gap between China's overall foreign policy image and its goal of earning income to modernize its armed forces. "China has held itself up as a leader in world disarmament. How can you say you're a leader and at the same time be a

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major arms supplier?"

—Lena Sun, "China Strongly Denies Selling Arms to Iran," *Washington Post*, 11 June 1987, p. A29, in Lexis-Nexis, www.lexis-nexis.com.

6 June 1987

Frank C. Carlucci, Reagan's national security adviser, says that Chinese officials deny selling missiles to Iran, and indicates that the United States does not believe the Chinese denials. Carlucci says China's denial comes in a response through diplomatic channels to a protest by the administration over the sale of Silkworm missiles. Carlucci says there are at least 20 Silkworm missiles in Iran, and Tehran will soon receive twice that number. A White House official, who asks not to be identified, says China contends in its denials that the missiles are being supplied by North Korea.

—Gerald M. Boyd, "US Says China Is Arming Iran, Despite Denial," *New York Times*, 7 June 1987, p. 1, in Lexis-Nexis, www.lexis-nexis.com; David Hoffman, "US Rejects Denial by Chinese; Carlucci: Beijing Has Sent Antiship Missiles to Iran," *Washington Post*, 7 June 1987, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

9 June 1987

Iranian authorities believe that Americans, "contrary to what they claim, are unable to accept the risk of attacking Iranian missile bases in the Persian Gulf or other forms of confrontation. U.S. centers and nuclear reactors can be more vulnerable than the missile bases of the Islamic Republic of Iran."

—AP, Reuters, "US reactors a target if missiles hit, Iran says," *Toronto Star*, 10 June 1987, p. A29, in Lexis-Nexis, www.lexis-nexis.com.

10 June 1987

North Korea denies Western press reports that it is acting as a conduit for Chinese Silkworm missile deliveries to Iran.

—Korean Central News Agency, 10 June 1987, in "Rumor of Arms to Iran Called 'Malicious Lie'," FBIS-EAS-87-111, 10 June 1987, p. C1.

10 June 1987

A spokesman for the Chinese foreign ministry denies as "sheer fabrication" reports of a massive arms-for-oil deal between China and Iran. The spokesman says that China is neutral in the Persian Gulf War. "The Chinese government hopes that all parties concerned will exercise constraint and cease attacks and threats of attack on oil tankers and merchant ships navigating in the Gulf," the spokesman says. The reported arms-for-oil deal between China and Iran is said to be valued at approximately \$560 million. Details of the reported agreement originally appear in a Kuwaiti newspaper.

—Julian Baum, "China stresses neutrality in Gulf, denies aiding Iran," *Christian Science Monitor*, 11 June 1987, p. 12, in Lexis-Nexis, www.lexis-nexis.com.

10 June 1987

Chinese and Iranian officials deny U.S. charges that China supplies Silkworm anti-ship missiles to Iran. In Tehran, Iranian parliamentary speaker Hashemi Rafsanjani denies that Iran has obtained Silkworm missiles from China.

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Rafsanjani tells a meeting of Iranian physicians that the missiles in Iran's possession were captured from Iraq in the February 1986 invasion of Iraq's Faw Peninsula. Rafsanjani also suggests that it will be unnecessary to deploy anti-ship missiles to the Strait of Hormuz, because "these missiles are mobile, and hitting a ship moving at a steady velocity in the straits would not be a difficult task."

—Reuters, "China denies giving Iran anti-ship missiles for gulf," *Toronto Star*, 11 June 1987, p. A17, in Lexis-Nexis, www.lexis-nexis.com.

13 June 1987

Iranian Foreign Minister Ali Akbar Velayati denies that Iran has received any weapons from China, including anti-ship missiles. He says that Iran has manufactured its own missiles and adds that China did not help to build the missile production site. Velayati's denial emerges amid reports that China has sold surface-to-ship Silkworm cruise missiles to Iran. China also denies the sale of the Silkworm missile. Velayati says that Iran is ready to purchase weapons from any country in the world except Israel and South Africa. Velayati met with Chinese head of state Li Xiannian after visiting North Korea. Many European and Asian diplomats say that Iran has obtained "great quantities" of Chinese arms via North Korea.

—"Iran denies receiving Chinese missiles," *San Diego-Tribune*, 14 June 1987, p. A10, in Lexis-Nexis, www.lexis-nexis.com.

13 June 1987

Velayati says that Iran manufactures its own missiles and that China is not helping to build the missile production installation.

—Edward A. Gargan, "Iranian denies China is a source of weapons," *New York Times*, 14 June 1987, p. 6, in Lexis-Nexis, www.lexis-nexis.com.

30 June 1987

Iranian President Ali Khamenei says that Iran has the missile strength to make the Persian Gulf dangerous for U.S. ships. After watching war games by the Islamic Revolution Guards Corps' missile brigade in central Iran, Khamenei says the United States would receive "such a blow that neither the American public nor the Congress would ever forgive their [administration's] folly." Khamenei does not reveal how Iran obtains its missiles, but says that "through sincere efforts all hurdles have been passed."

—Reuters, "Iran boasts its missiles now imperil US Navy," *Toronto Star*, 2 July 1987, p. A2, in Lexis-Nexis, www.lexis-nexis.com.

July 1987

Deliveries of Scud-B (Hwasŏng-5) missiles from the Iranian order begin. The deliveries are believed to have been made by sea and continue through February 1988. The missile is called "Shahab-1" in Iran. The first batch of shipments total 100 for use in the Iran-Iraq War, and the number eventually reaches 400 missiles.

—Joseph S. Bermudez, Jr., "New Developments in North Korean Missile Programme," *Jane's Soviet Intelligence Review*, August 1990, pp. 343-345; Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 12; Chang Chun Ik, *Pukhan Haek-Missile Chŏnjaeng* (Seoul: Sŏmundang, May 1999), p. 270; "Ballistic Missile Threat Evolves,"

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International Defense Review, Vol. 33, No. 10, 1 October 2000, in Lexis-Nexis Academic Universe, www.lexis-nexis.com.

5 July 1987

Pentagon officials say that the United States has detected Iranian preparations to make its Silkworm missiles operational.

—"US Detects Iran Work on Missiles," *Los Angeles Times*, 6 July 1987, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

6 July 1987

Iran reportedly begins to place its Silkworm missiles on launchers in the Strait of Hormuz. The missiles have been test-fired in February, but gulf-based salvage executives report that some of the missiles were installed on 3 July. A U.S. government official in Washington, however, cautions against reporting the missiles as deployed. He says that according to evidence available to him the missiles were not "operationally deployed."

—"Iran Reportedly Deploys New Missiles," *Los Angeles Times*, 6 July 1987, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

July 1987

A military report edited by Seoul's Yonhap News Agency says that North Korea exports at least 100 Scud-B missiles to Iran between July 1987 and early February 1988. The North Korean Scud-B has a range of 320km, an improvement over the original Soviet-built Scud-B with a range of 280km. North Korea has reached "100% independent production" of the Scud-B in 1986.

—"DPRK Military Terms Defined," *Pukhan Yongjo 400 Sonjip* (Seoul), 25 February 2000; in FBIS Document KPP20000308000103, 8 March 2000.

8 July 1987

U.S. Navy planes fly over the Persian Gulf in an operation intended to "knock out" Iranian anti-ship missiles. The operation is reportedly launched after the United States "detected preparations to make the Iranian Silkworm missiles operational." White House spokesman Marlin Fitzwater says that the planes are launched from the *USS Constellation* to escort the *USS Stark* from the Persian Gulf.

—"US Planes Sent To Check Silkworm Missile Sites," IRNA (Tehran), 8 July 1987; in FBIS Document FBIS-NES-87-131, 9 July 1987, p. S1.

8 July 1987

Islamic Revolution Guards Corps (IRGC) commander Mohsen Rezai says that Iran built copies of Soviet-made SS-N-2 Styx missiles that were captured when Iranian forces overran Iraq's southern Faw Peninsula in February 1986. Rezai says that if one of these missiles had been fired at the *USS Stark* last week while it was being escorted out of Bahrain, the American ship would have been cut in half.

—Associated Press, "Iran Says It Copied Missiles," *Journal of Commerce*, 10 July 1987, p. 3B, in Lexis-Nexis, www.lexis-nexis.com.

13 July 1987

U.S. Defense Secretary Caspar Weinberger says U.S. forces are ready to attack Iranian Silkworm missiles if Iran

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prepares to fire them at Kuwaiti oil tankers escorted by American warships.

—Mark Tran, "US warns it is ready to attack Iran missiles," *Guardian*, 14 July 1987, in Lexis-Nexis, www.lexis-nexis.com.

August 1987

In regards to the military maneuver beginning this month, Commander Mohsen Rezai says that "ground-to-air, ground-to-ground, and ground-to-sea missiles were aimed at mocked targets but would not be fired during the maneuvers; however, if the enemy takes action in the gulf, the Guards missile maneuvers will become a real military operation."

—Paula A. DeSutter, *Denial and Jeopardy Deterring Iranian Use of NBC Weapons* (Washington, D.C.: National Defense University Press, 1997), p. 59.

4 August 1987

Iranian Navy Commodore Mohammed Hosayn Makekzadegan says that all Iranian missile systems are ready to be put into operation in the event of any plot by Iran's enemies.

—"Makekzadegan Says Missiles Ready," IRNA (Tehran), 4 August 1987; in FBIS Document FBIS-NES-87-150, 5 August 1987, p. S3.

17 August 1987

The Iranian ambassador to Beijing, Alaeddin Borujerdi, says that Iranian Silkworm missiles deployed around the Strait of Hormuz are not Chinese missiles, but copies of missiles seized from Iraq. The United States believes that the Silkworm missiles are Chinese-made.

—"Envoy in Beijing Says Missiles Not From China," Agence France Presse, 14 August 1987; in FBIS Document FBIS-NES-87-158, 17 August 1987, p. S9.

19 August 1987

Victor Fonseca, a Portuguese citizen, is arrested in Midland, Texas while inspecting crates he believed to contain \$2 million in missile guidance parts destined for Iran. Fonseca is charged with organized criminal activity and jailed in lieu of \$500,000 bond.

—Associated Press, "Sting Foils Alleged Missile Deal for Iran," *Los Angeles Times*, 20 August 1987, p. 24, in Lexis-Nexis, www.lexis-nexis.com.

31 August 1987

Iranian Defense Minister Brig. General Jalali says the Defense Ministry's "self-sufficient industries" are making a new missile. He stresses that if Saddam Hussein begins a war of cities, the missile will be used.

—"Defense Minister Announces New Mine, Missile," Domestic Service (Tehran), 28 August 1987; in FBIS Document FBIS-NES-87-168, 31 August 1987, p. S6.

September 1987

The United States cuts off supplies of Stinger anti-aircraft missiles to an Afghan guerrilla group after discovering that the Afghan resistance sold at least 16 of the missiles to Iran. The commanders who are said to have sold the missiles, Mullah Mahiullah of Nimrooz and Mullah Faqir-Ahmad of Anar Dara, were supplied with 36 Stinger

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missiles. They deny having sold the missiles to Iran and claim that the Iranians captured the weapons inside Afghanistan.

—Sara Shah, "Afghans sell US Stingers to Khomeini," *The Times* (London), 20 September 1987, in Lexis-Nexis, www.lexis-nexis.com.

4 September 1987

A Chinese-made Silkworm missile is fired from Iran and hits Kuwaiti territory.

—Patrick E. Tyler, "Iran Warns Kuwait on Ties to Iraq, US; Report Blames Tehran for Missile Attack," *Washington Post*, 7 September 1987, p. A23, in Lexis-Nexis, www.lexis-nexis.com.

10 September 1987

The United States sends a message through the Soviet Union to Libya stressing its concern over Libyan attempts to procure chemical weapons from Iran in exchange for Soviet-made mines. It is further reported that Libya and Syria have been supporting Iran and providing Iran with Soviet-made weapons, including long-range surface-to-surface missiles.

—David B. Ottaway, "In a Rare Joint Effort, Superpowers Press Libya; Gadhafi Cautioned on Arms Deal with Iran," *Washington Post*, 11 September 1987, p. A33, in Lexis-Nexis, www.lexis-nexis.com.

11 September 1987

During talks with Chinese leaders in Beijing, Iranian Deputy Foreign Minister Ali Mohammed Besharati reports that Iran has Chinese-designed missiles, but claims they were captured from Iraq rather than purchased from China. Besharati's statement is the most explicit made to date asserting Iran's possession of Silkworm (HY-2) missiles.

—Daniel Southerland, "Iraq Called Silkworms' Source," *Washington Post*, 12 September 1987, p. A17, in Lexis-Nexis, www.lexis-nexis.com.

11 September 1987

Iranian Deputy Foreign Minister Ali Mohammed Besharati says, "It is not our concern at this time as to where the Iraqis received these missiles. We have Chinese-made missiles available at our disposal, but we have not received them from China. We captured them from the Iraqis."

—Associated Press, "Iran Seized Missiles, Aide Says," *Los Angeles Times*, 12 September 1987, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

8 September 1987

Italian authorities arrest Walther Demuth, a Swiss man who could be connected to the Iran-Contra arms affair, on a U.S. arms-trafficking warrant. An international warrant was issued on 20 August 1986 by authorities in New York that charged him with illegal trade in military materials and defrauding the U.S. government. Demuth is head of the Swiss company Helitrade, which deals in arms and aircraft. According to police, Demuth is involved in selling five second-hand French aircraft to Iran at the time of his arrest.

—Associated Press, "Italians hold Swiss man suggest links to Irangate," *Toronto Star*, 13 September 1987, p. A16, in Lexis-Nexis, www.lexis-nexis.com.

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13 September 1987

Iraq reports that Iran fired 17 missiles at Basra.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

17 September 1987

Iran fires 17 Oghab rockets at the Iraqi city of Basra.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 50.

22 September 1987

Iranians display Stinger missiles with other weapons on the first day of Iran's War Week parades. Other weapons on display include Russian Scud-B missiles, SAM-2 missiles, Tiger Cat missiles, and what are said to be copies of Chinese Silkworm missiles.

—"Stingers said part of McFarlane deal," *San Diego Union-Tribune*, 14 October 1987, p. A9, in Lexis-Nexis, www.lexis-nexis.com.

5 October 1987

Iran's Islamic Revolution Guards Corps fire one Scud missile at Baghdad's Higher Military Training Center for Republican Guards. The missile struck at 10:07 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

6 October 1987

Iran's Islamic Revolution Guards Corps fire one Scud missile at Baghdad's Higher Military Training Center for Republican Guards. The missile struck at 12:38 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

8 October 1987

Iranians claim to have fired Stinger SAMs from patrol boats in the Persian Gulf against U.S. helicopter gunships. A Pentagon official reports that no Stinger launchers or missiles are found on the destroyed Iranian patrol boats, but cables, batteries and other equipment used with the missiles are among the debris. U.S. Secretary of Defense Caspar W. Weinberger confirms for the first time that Iran possesses advanced Stinger missiles.

—"Iran Claims to be Building Its Own Stinger Missiles," *Los Angeles Times*, 11 October 1987, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

9 October 1987

The U.S. Defense Department says two Iranian boats, captured by the U.S. Navy in the Persian Gulf, contain

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equipment "believed associated with the U.S. Stinger program."

—"AFP: Stinger Missiles Part of US Arms Deal," Agence France-Presse, 27 October 1987; in FBIS Document FBIS-NES-87-207, 27 October 1987, p. 47.

10 October 1987

Head of the Islamic Revolution Guards Corps, Mohsen Rafiqdust, tells a news conference that Iran is making its own version of the U.S.-designed Stinger missile. He says that Iran has obtained Stinger missiles and is successfully copying them. Rafiqdust gives no further details on how Iran obtained the missiles.

—"Iran Claims to Be Building Its Own Stinger Missiles," *Los Angeles Times*, 11 October 1987, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

10 October 1987

Mohsen Rezai, commander of the Islamic Revolution Guards Corps, announces that Iran has obtained and successfully copied the anti-aircraft Stinger missile for quite some time.

—"IRGC Commander on Producing Stinger Missiles," IRNA (Tehran), 10 October 1987; in FBIS Document FBIS-NES-87-197, 13 October 1987, p. 44.

11 October 1987

Two Afghan rebels are arrested in Pakistan for attempting to sell Stinger missiles to Iran. A second source reports that the "kidnapping" of an Afghan Mujahideen convoy was arranged near the Iranian border so its Stinger missiles could be confiscated and taken to Iran.

—Edward Gorman, "Afghans held for secret weapons deal," *The Times* (London), 12 October 1987, in Lexis-Nexis, www.lexis-nexis.com.

11 October 1987

An Iranian surface-to-surface missile hits Baghdad around midnight. Iran claims that the missile has hit a major military garrison; Iraq claims the missile has struck a civilian area.

—Associated Press, "Iraq Hits 3 Tankers; An Iranian Missile Goes Off in Baghdad," *New York Times*, 12 October 1987, p. A6, in Lexis-Nexis, www.lexis-nexis.com; W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

11 October 1987

Iranian Ambassador to the United Nations Said Rajaie Khorassani says that Iran has acquired U.S.-made Stinger missiles and is prepared to use them against American forces in the Persian Gulf. Iran is thought to have purchased 20 Stinger missiles from Afghan rebels for \$1 million.

—Lionel Barber, "Iran Threatens to Use Stingers," *Financial Times* (London), 12 October 1987, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

13 October 1987

Iran fires a Scud missile at Baghdad, killing 250 people. Iraq says the missile struck next to an elementary school. After the missile attack, the Iraqi news agency says, "It is Iraq's right and its duty to reply to this heinous crime.

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They want a war of the cities and they will get it. Missiles will make them understand." [Note: Statements such as these are representative of the attitude of reciprocity that marked the War of the Cities missile exchanges between Iraq and Iran.]

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; Andrew Gowers and Lionel Barber, "Iranian Missile Hits School Killing 32," *Financial Times* (London), 14 October 1987, p. 3, in Lexis-Nexis, www.lexis-nexis.com.

13 October 1987

The magazine *Al-Masirah* reports that Iran obtains Stinger surface-to-air missiles and launchers through an Islamic party in Afghanistan led by Yunis Khalis (Hizb-i-Islami-i).

—"Stinger Missiles Obtained From DRA Rebels," Radio Free Lebanon, 10 October 1987; in FBIS Document FBIS-NES-87-197, 13 October 1987, p. 43-44.

13 October 1987

Afghan resistance leader Yunis Khalis denies that the Mujahideen guerillas have sold U.S.-made Stinger missiles to Iran.

—"Afghan resistance leader denies that Mujahideen guerillas have sold Stinger missiles to Iran," *The Times* (London), 14 October 1987, in Lexis-Nexis, www.lexis-nexis.com.

14 October 1987

An unidentified source "close to the 'radical' revolutionary group in Iran" says that U.S. Stinger missiles were part of the Robert C. McFarlane secret arms deal. He says he could not remember how many Stingers he helped to unload from McFarlane's plane. Speaker of the Iranian Parliament Hashemi Rafsanjani has said many times that in addition to the cake, the Colt pistol, and the Bible signed by Reagan, there were also weapons on the McFarlane plane.

—"Stingers said part of McFarlane deal," *San Diego Union-Tribune*, 14 October 1987, p. A9, in Lexis-Nexis, www.lexis-nexis.com.

15 October 1987

In an interview with the *Tehran Times*, Mohsen Rezai says that the Islamic Revolution Guards Corps has started to copy missiles made by the West and East in both design and manufacture. Rezai reports progress in making the missiles for battlefield use. Work is also started on the Scud-B missile. Rezai says that Iran has almost achieved self-sufficiency in Scud missile production and that similar missiles have been purchased from various countries in the past. He says that Iran has more than 16 Stinger missiles, which Iran has been copying for the past year. He denies that the missiles have been obtained from Yunis Khalis.

—"Rezai'e on Output, Sources of Weapons," *Keyhan* (Tehran), 15 October 1987, p. 2; in FBIS Document FBIS-NES-87-204, 22 October 1987, pp. 35-36.

15 October 1987

In an interview with the *Wall Street Journal*, U.S. Secretary of Defense Caspar Weinberger reports that the Islamic

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Revolution Guards Corps (IRGC) snatched six U.S.-manufactured Stinger missiles from Afghan guerrillas after a convoy delivering the weapons broke down. According to U.S. intelligence sources, the Iranians grabbed the missiles from a convoy on its way to Afghan rebel leader Ismail Khan. Weinberger's disclosure of the intelligence report is seen as an attempt to discredit rumors that the Stinger missiles were delivered by the United States during Robert McFarlane's trip to Iran on 28 May 1986. The Iranian Ambassador to the UN Rajaie Khorassani suggests that "middlemen" arranged the acquisition of Stinger missiles.

—Alex Brummer, "Stinger missiles 'snatched from Afghan rebels'," *Guardian* (London), 15 October 1987, in Lexis-Nexis, www.lexis-nexis.com.

22 October 1987

The Reagan administration decides to delay future transfers of high-technology items to China and asks the Senate to review a current \$528 million arms agreement as part of a protest of China's sale of Silkworm missiles to Iran. Both actions follow Iran's Silkworm missile attack on 22 October on a Kuwaiti oil terminal in the Persian Gulf, the third time in a week that Iranian Silkworms have hit targets in Kuwaiti waters. Although China has repeatedly denied selling Silkworm missiles to Iran, U.S. intelligence sources report that Beijing has sold 30 to 35 Silkworm missiles to Iran.

—Molly Moore and David B. Ottaway, "US Reacts to China's Silkworm Sale; Technology Transfer Delayed; Senate Seeks Review of Arms Deal," *Washington Post*, 23 October 1987, p. A32, in Lexis-Nexis, www.lexis-nexis.com.

22 October 1987

U.S. military analysts suggest that the accuracy displayed by Iran's Silkworm missile attack on a Kuwaiti offshore oil terminal indicates that Iran has an advanced version of the missile, which has long been thought powerful but inaccurate.

—Peter Grier, "Surprising Accurate Hits; Iran may be using upgraded Silkworms, defense experts say," *Christian Science Monitor*, 23 October 1987, p. 6, in Lexis-Nexis, www.lexis-nexis.com.

23 October 1987

Iran's ambassador to China, Alaeddin Borujerdi, says that Iran has dozens of U.S.-made Stinger missiles, but he refuses to say how Iran has obtained them. He adds that foreign estimates of Iran's Stinger missile arsenal are "far too low." He also reiterates that Iran has obtained Chinese-made Silkworm missiles from Iraq during battle and its use of the Silkworm missiles has nothing to do with China.

—Associated Press, "Iran Boasts of Many US Missiles," *Los Angeles Times*, 23 October 1987, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

23 October 1987

In reference to the recent Reagan administration's decision to place curbs on China in response to alleged sales of Silkworm missiles to Iran, a U.S. State Department spokesman says, "We will continue to use every opportunity to discourage all parties from supplying arms to Iran."

—Mohsin Ali, "US urges China to end supply of missiles," *The Times* (London), 24 October 1987, in Lexis-Nexis, www.lexis-nexis.com.

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27 October 1987

The United States has reportedly supplied Iran with more than 30 Stinger anti-aircraft missiles as part of a secret arms deal known as the "Iran-gate" scandal. The report adds that Robert McFarlane, former national security advisor to U.S. President Ronald Reagan, traveled to Iran with a shipment of HAWK anti-aircraft missile spare parts on 28 May 1986 in a bid to free Western hostages held by pro-Iranian groups in Lebanon. Sources close to the U.S. Defense Department say that Iran's Revolution Guards Corps could have obtained the Stinger missiles destined for Afghan rebels by confiscating them. On 9 October, the U.S. Defense Department said that two Iranian boats, captured by the U.S. Navy in the Persian Gulf, contained equipment "believed associated with the U.S. Stinger program."

—"AFP: Stinger Missiles Part of US Arms Deal," Agence France-Presse, 27 October 1987; in FBIS Document FBIS-NES-87-207, 27 October 1987, p. 47.

27 October 1987

U.S. administration officials say that a shipload of Chinese-built artillery shells have been delivered to Iran within the past week. The sources also point to "indications" that China is preparing to sell additional Silkworm missiles to Iran, possibly through a Hong Kong trading front.

—"US reports new deliveries of Chinese arms to Iran," *Christian Science Monitor*, 28 October 1987, p. 2, in Lexis-Nexis, www.lexis-nexis.com.

30 October 1987

Iran's Islamic Revolution Guards Corps Air Force fires one Scud missile at Iraq's air force headquarters in Baghdad at 1:07 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

31 October 1987

The Chinese have, over time, sold approximately 75 Silkworm missiles to Iran in addition to about 12 launchers.

—"Picking up Styx," *Economist*, 31 October 1987, p. 39, in Lexis-Nexis, www.lexis-nexis.com.

2 November 1987

Chinese Communist Party Chief Zhao Ziyang blasts the United States for accusing China of selling weapons to Iran. He reiterates denials by Chinese leaders that Beijing does not sell weapons to Iran nor to Iraq.

—AP-Reuters, "Zhao blasts American criticism of missiles, crackdown in Tibet," *Toronto Star*, 2 November 1987, p. A12, in Lexis-Nexis, www.lexis-nexis.com.

3 November 1987

U.S. Under-Secretary of State Michael H. Armacost meets with Chinese Vice Foreign Minister Qian Qichen and other Chinese officials, and reports their pledge to prevent Silkworm missiles from being delivered to Iran. China has repeatedly denied selling Silkworm missiles to Iran and denies that it sells any weapons to Iran or to Iraq. Armacost cites a September interview between NBC anchor Tom Brokaw and Chinese Communist Party Chief Zhao

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Ziyang. In the interview, Zhao said that he did not believe Iran has Chinese-made missiles, but that "the international arms market is very complicated" and "if a country has the money and is ready to pay a high price, it will have no trouble finding ways to acquire weapons." Zhao said, "We have taken note of international reaction...and are making efforts to prevent weapons China will export from being transferred to Iran or Iraq through other channels."

—David Holley, "China Pledges to Prevent Silkworm Delivery to Iran," *Los Angeles Times*, 4 November 1987, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

3 November 1987

Iran's main opposition group based in Iraq, the MKO, announces that the Iranian government signed a contract with China in early 1986 to buy Silkworm missiles from China. They allege that Iran later sent more than 100 men to China for training in the use of the missiles. A communiqué from the Baghdad-based group states, "A \$400 million contract was signed between the two sides of the missile deal, the first shipment of which arrived at the southern Iranian port of Bandar Abbas in March, 1986." They add that Iran has sent a team headed by an Iranian official named Rezai to Beijing. [Note: It is likely that the "Rezai" mentioned here is Mohsen Rezai, an influential member of the Islamic Revolution Guards Corps, and later its commander.]

—David Holley, "China Pledges to Prevent Silkworm Delivery to Iran," *Los Angeles Times*, 4 November 1987, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

4 November 1987

In a prepared statement, Chinese Foreign Ministry spokesman Li Zhaoxing accuses U.S. officials and American media of spreading "groundless rumors" alleging that China is selling Silkworm missiles to Iran. He says the ministry has been asked to comment on reports "by US newspapers that China had sold 96 missiles to Iran and there were Chinese military specialists in Iran helping operate Silkworm missiles.... Here is our reply. All these are groundless rumors. Recently the US press has been trying to give the international community the impression [that] China has become the biggest arms supplier for Iran and has been spreading such rumors. This is really ridiculous. We express our strong dissatisfaction with the practice of shifting to China the responsibility for the escalation of tension in the [Persian] Gulf. Such attempts will get nowhere."

—David Holley, "China Accuses US of Rumors on Iran Silkworms," *Los Angeles Times*, 5 November 1987, p. 7, in Lexis-Nexis, www.lexis-nexis.com.

6 November 1987

Senior U.S. officials report that the Reagan administration, prompted by intelligence reports, has asked top Israeli officials if their government or private Israeli arms dealers have again sold arms to Iran. The Israelis deny any new sales, according to the officials. The unconfirmed reports received by U.S. intelligence include allegations that some Israelis may have negotiated to sell up to \$750 million in arms to Iran in late summer 1986. The package reportedly includes U.S.-made TOW anti-tank missiles, Israeli Gabriel air-to-surface missiles; F-4 and F-5 aircraft engine parts, tanks and jeeps. The report alleges that the deal was made through a third party based in Geneva.

—David B. Ottaway and Molly Moore, "Israel Denies New Reports of Arms Shipments to Iran," *Washington Post*, 6 November 1987, p. A32, in Lexis-Nexis, www.lexis-nexis.com.

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8 November 1987

Head of the Islamic Revolution Guards Corps, Mohsen Rezai, says that Iran is heading toward military self-sufficiency and is capable of manufacturing surface-to-surface missiles. He notes that the mass production of anti-tank TOW missiles is underway and that Iran is completing the manufacture of Scud missiles. Rafiqdust also notes that Iran is copying surface-to-air missiles (SAMs) of all kinds and will soon be able to mass-produce them.

—"Minister on Missile Manufacture, New Submarine," IRNA (Tehran), 8 November 1987; in FBIS Document FBIS-NES-87-216, 9 November 1987, p. 61.

9 November 1987

Iran says it launched two Scud missiles at Baghdad, but Iraq reports only one strike. The missile impacted at 6:15 p.m. and killed 116 people.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

13 November 1987

A Customs and Excise probe by UK officials discovers stolen F-14 Tomcat parts in a Middlesex, England mansion. They include spare parts for the F-14 that the Shah had bought for Iran before he was expelled.

—Richard Johns, "Arms Embargo Which Cannot Withstand The Profit Motive," *Financial Times* (London), 13 November 1987, in Lexis-Nexis, www.lexis-nexis.com.

13 November 1987

Iran has been able to acquire the Stinger missiles. The Stinger is regarded by the United States as a sophisticated missile that is only sold by the United States to "trusted allies." Supposedly these missiles have been brought to Iran from Afghanistan. Chinese and North Korean imports have not compensated for the inaccessibility of parts for the Mirage F-1 fighter-bombers and the Exocet missiles. It is suspected that the Chinese have sent Silkworm missiles to Iran, though they continue to deny it, and say the missiles have probably been taken from the Iraqis. It is also possible that they may have come from North Korea. The shipments supposedly made from China to Iran include Soviet artillery and delivery systems as well as anti-aircraft missiles.

Valsella Meccanotecnica, a company that is half-owned by Fiat, has been found to supply Iran with mines by using companies in other countries such as Nigeria. Bofors, a subsidiary of Sweden's Nobel Industrier AB, has sold RBS anti-aircraft missiles to Iran by the way of Singapore, going against Stockholm's export laws to a country at war.

The 17 men that have been arrested in conjunction with selling arms to Iran are still waiting for their trial.

Iran has centers that acquire weapons and materials for Iran. One of them is the Pacific Import-Export office in Hamburg, and another is located in Zurich. Others are in Singapore, Greece, Turkey, and Spain, which specialize in shipments from South Africa, Brazil, and Portugal. Yugoslavia seems to have helped ship parts, including East European and East German variants of the ZSU series anti-aircraft guns. South Africa could pose a significant threat to any arms embargo declared against Iran.

—Richard Johns, "Arms Embargo Which Cannot Withstand The Profit Motive," *Financial Times* (London), 13 November 1987, in Lexis-Nexis, www.lexis-nexis.com.

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17 November 1987

New allegations of a French weapons sale to Iran emerge when the Lyons edition of the right-wing *Figaro* newspaper reports that three French Air Force Transall planes transported three consignments of missile systems to Tehran between 1982 and 1986. The daily reports on what it says were freight manifests for the airlift of "weapons and munitions" made by the Manurhin Company from French airbases to Tehran. Manurhin, which was taken over by Matra in 1984, denies any commercial links with Iran over the past 10 years. "We sell materiel to Iraq, but we have no relations with Iran," says Manurhin director Jan-Pol Philouze.

—Reuters, "New arms allegations emerge in France's 'Irangate' scandal," *Toronto Star*, 18 November 1987, p. A15, in Lexis-Nexis, www.lexis-nexis.com.

24 November 1987

Chinese Ambassador to the United States Han Xu reports that China has stopped selling Silkworm missiles on the international arms market in an effort to prevent their diversion to Iran. "Because we cannot control the international market...now we are trying to confine any sales of Silkworms." Han does not specify whether the cutoff of Silkworm missile sales applies to foreign governments, such as North Korea, as well as to private arms dealers. In the past, North Korea has served as a conduit for Chinese arms sales to other countries. Han says that U.S. officials have no proof to support their allegations that China is supplying Silkworm missiles to Iran. U.S. officials, however, insist that their proof is in the form of pictures of crates containing Silkworm missiles being loaded onto ships in Chinese ports, and pictures of those same crates being unloaded at Iranian ports. The pictures have been shown to Chinese officials, but they remain steadfast in their denials.

—Jim Mann, "Silkworm Missile Off World Market, China's Envoy Says," *Los Angeles Times*, 25 November 1987, p. 7, in Lexis-Nexis, www.lexis-nexis.com.

29 November 1987

Islamic Revolution Guards Corps Brig. General Mohammad Husayn Jalali announces on 29 November that Iran is manufacturing two types of advanced missiles.

—"Defense Minister on Advanced Missile Production," IRNA (Tehran), 29 November 1987; in FBIS Document FBIS-NES-87-230, 1 December 1987, p. 66.

1 December 1987

A report detailing the successful testing of a new SSM is submitted during a session of Iran's State Scientific Research Council. The report stresses that the first series of this new missile, manufactured by the Defense Industries Organization (DIO), will be placed at the disposal of the battlefronts.

—"New Missile Available in 'Next Few Days'," Domestic Service (Tehran), 1 December 1987; in FBIS Document FBIS-NES-87-230, 1 December 1987, p. 66.

1 December 1987

Iranian Prime Minister Husayn Musavi receives a report on the missile test of a new surface-to-surface missile. According to IRNA, the first shipments will be sent to forces fighting at the Iraqi front soon.

—Associated Press, "Iran claims successful missile test," *San Diego Union-Tribune*, 2 December 1987, p. A19, in Lexis-Nexis, www.lexis-nexis.com.

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2 December 1987

Iran claims that a new surface-to-surface missile is successfully tested and will be deployed in the next few days. The report gives no further details on the missiles.

—Associated Press, "Iran claims successful missile test," *San Diego Union-Tribune*, 2 December 1987, p. A19, in Lexis-Nexis, www.lexis-nexis.com.

2 December 1987

Western analysts suggest that the development of a new surface-to-surface missile is within Iran's technological capabilities. They add, however, that large-scale production of miniaturized gyroscopes, needed to provide accurate targeting, is a more complex operation. The gyroscopes could be purchased on the international arms market, and there were rumors in 1986 that a supply of gyroscopes had been secured from a West German manufacturer.

—Joan Wucher King, "Iran Claims New Gulf Missile," *Financial Times* (London), 3 December 1987, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

5 December 1987

The United Arab Emirates newspaper *Al-Ittihad* reports that Iran receives 100 C-801 anti-ship missiles from China. The missile is reported to be the most modern Chinese anti-ship missile and resembles the French Exocet in terms of shape and size.

—"Paper on USSR Planes, PRC Missiles," *WAM* (Abu Dhabi), 5 December 1987; in FBIS Document FBIS-NES-87-234, 7 December 1987, p. 69.

12 December 1987

Tokyo news agency Kyodo reports on an article in the Beirut magazine *Al-Shira*. According to the article, China plans to sell Iran 300 additional Silkworm missiles. Iran is reportedly using the missiles against Kuwait. China denies that it directly provided the Silkworm to Iran.

—"PRC Reportedly To Sell Silkworm Missiles," *Kyodo* (Tokyo), 12 December 1987; in FBIS Document FBIS-NES-87-240, 15 December 1987, p. 63.

13 December 1987

A spokesman for the Chinese Embassy in Washington, D.C. says, "We have never sold Silkworms to Iran, and we have already taken measures to stop sales of Silkworm missiles on the international market."

—Robert S. Greenberger, "Chinese Missiles Are Apparently On Way to Iran," *Wall Street Journal*, 21 December 1987, p. 15.

14 December 1987

The Wall Street Journal reports that U.S. intelligence satellite photographs last week have revealed that the Silkworm missiles spotted at a North Korean port in November 1987 are now gone, as is an Iranian vessel that is known to have made previous Silkworm deliveries to Iran.

—Robert S. Greenberger, "Chinese Missiles Are Apparently On Way to Iran," *Wall Street Journal*, 21 December 1987, p. 15.

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18 December 1987

Iran reportedly receives an anti-ship missile from China similar to the French Exocet. The missile is of the SS-801 type and can carry incendiary warheads. Sources report that Iran has been using the missiles during the past month.

—"Sources' Say PRC Silkworm Missiles Arrive," *WAKH* (Manama), 18 December 1987; in FBIS Document FBIS-NES-87-243, 18 December 1987, p. 53.

25 December 1987

U.S. officials point to "strong indications" that China will send Iran either more Silkworm cruise missiles or a newer cruise missile, which is speculated to be as sophisticated as the Exocet cruise missile. The new missiles have been spotted in crates aboard an Iranian ship that U.S. intelligence sources have seen leaving a North Korean port. They have since lost track of the vessel. The missiles are believed to be Chinese-made because North Korea has served as a trans-shipment point for Chinese arms bound for Iran in the past, and the North Koreans are not known to manufacture cruise missiles. U.S. officials speculate that the new weapon China may be providing to Iran is the C-801, which has a solid-fueled engine and booster and can be launched from ships or aircraft.

—David B. Ottaway, "US Notes 'Strong Indications' China is Sending More Missiles to Tehran; Arms Sighted Aboard Iranian Ship Leaving North Korean Port," *Washington Post*, 25 December 1987, p. A37, in Lexis-Nexis, www.lexis-nexis.com.

27 December 1987

Iranian Prime Minister Husayn Mousavi says that Iran begins deployment of long-range missiles on the battlefield. He also states that Iran is producing copies of the U.S.-made TOW anti-tank missiles, as well as remote-controlled pilotless aircraft, and will soon start producing fighter planes.

—David Hirst, "Iran admits making chemical weapons," *Guardian* (London), 28 December 1987, in Lexis-Nexis, www.lexis-nexis.com.

31 December 1987

Three merchant ships believed to be loaded with Chinese-made arms, including Silkworm missiles, are en route to Iran. U.S. intelligence shows that two ships left North Korea more than a week earlier and the third shipped out of Shanghai, China, and headed south toward the Indian Ocean only a few days ago.

—"Chinese army may be headed to Iran," *St. Petersburg Times*, 31 December 1987, p. 12A, in Lexis-Nexis, www.lexis-nexis.com.

Late 1987

The United States convinces China not to sell silkworm missiles to Iran.

—Dilip Hiro, *The Longest War The Iran-Iraq Military Conflict* (New York: Routledge, 1991), p. 240.

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1986-1985

1986

Chinese missile deals with Iran include a 1986 sale of Silkworm anti-ship missiles.

—"Bombs From Beijing: A Report on China's Nuclear and Missile Exports," Wisconsin Project on Nuclear Arms Control, May 1991.

1986

Assistant Secretary of State Richard W. Murphy, the Reagan administration's senior Middle East specialist, said that Iran agrees to spend \$700 million to purchase the Silkworm missile system for possible use in blocking the Strait of Hormuz. Chinese officials, in public and private, are said to have denied that China is supplying arms to Iran.

—Don Oberdorfer, "US Policy in Gulf Complicates Relations with Soviets, Chinese; Cooperation Sought at United Nations to Halt Flow of Arms to Iran," *Washington Post*, 31 May 1987, p. A30, in Lexis-Nexis, www.lexis-nexis.com.

1986

The UK company Plessey receives its government's permission to sell six static air defense systems to Iran, which will supposedly be used to "help defend Iran's Soviet and Afghan borders."

—Richard Johns, "Arms Embargo Which Cannot Withstand The Profit Motive," *Financial Times* (London), 13 November 1987, in Lexis-Nexis, www.lexis-nexis.com.

1986

The U.S. supply of weapons includes 2,000 TOW missiles and 235 Hawk air-defense missiles. The Iranians deny having received Hawk missiles.

—Shahram Chubin and Charles Tripp, *Iran and Iraq at War* (Boulder: Westview Press, 1991), p. 211.

1986

Iran launches 19 surface-to-surface missiles at Iraq; 8 of the missiles are Scuds.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

1986

The Soviet Union delivers a shipment of \$18 million worth of advanced weapons to Iran. Jean-Louis Gantzer, a French arms dealer involved in the transaction, claims to act as broker for a German arms merchant. Gantzer, who has been involved in arms sales to Iran since 1982, says that the agreement of prices and terms of delivery begins with a 17 March 1986 dated telex message to the Iranian Deputy Minister of Defense. The telex includes a catalog of 35 items with suggested prices, including SAM-7 missiles priced at \$48,780 each and launchers at \$12,000.

According to Gantzer's telex, the arms are to be delivered by a company called Praetor Trading Ltd., a Channel Islands dummy firm controlled by Peter Mulack, a West German arms dealer living in Florida.

—John Tagliabue, "How \$18 million got Soviet weapons to Iran," *New York Times*, 27 May 1987, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

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1986

Gantzer boards Iran Air flight 716 from Frankfurt to Tehran. On 1 August 1986, the contract for the Soviet-supplied arms is signed. According to the terms of the contract, Iran agrees to buy 400 missiles and 100 launchers, as well as Soviet anti-tank grenades and artillery ammunition. To facilitate the arms transfer, the North Korean Embassy in Vienna issues an "end user certificate." The document states that the weapons are destined for Pyongyang, North Korea. In addition, special instructions accompanying the contract stipulate that "all documents' should describe the weapons as "industrial equipment and spare parts per contract No. CH 86902 and Ref. 1265." DC-9s are then chartered in Israel and flown to Poland, where the planes are loaded with 331 cases-205 with surface-to-air missiles (SAMs) and launchers, and 126 with other weapons. The aircraft then fly, in December 1986, to Nicosia, Cyprus, with waybills declaring that the cargoes are destined for North Korea. From Cyprus, the planes fly to the Iranian border, where they are met by Iranian planes and escorted to the border.

—John Tagliabue, "How \$18 million got Soviet weapons to Iran," *New York Times*, 27 May 1987, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

1986

In the summer Iran receives the first of several HY-2 Silkworm anti-ship missile batteries from China. [Note: According to German and English sources the deal, known as the October Contract, was set in 1985. See abstracts from 1985.]

—Joseph S. Bermudez, "North Korea's HY-2 Silkworm programme," *Jane's Intelligence Review*, 1 May 1989, p. 203, in Lexis-Nexis, www.lexis-nexis.com; Alan George, "Iran Uses Styx Technology in Cruise Missile Development," *Flight International*, 16 November 1994, in Lexis-Nexis, www.lexis-nexis.com.

1986

There are rumors that Stinger missiles are delivered to Iran by the United States during Robert McFarlane's trip to Iran on 28 May 1986.

—Alex Brummer, "Stinger missiles 'snatched from Afghan rebels'," *Guardian* (London), 15 October 1987, in Lexis-Nexis, www.lexis-nexis.com.

1986

Former Israeli intelligence agent Ari Ben Menashe says that missiles and other weapons are shipped through Australia's Fremantle Port as part of the Iran-Contra deal.

—Layla Tucak and Natalie O'Brien, "Iran-Contra secrets all 'old news'," *Weekend Australian*, 3 November 2001, in Lexis-Nexis, www.lexis-nexis.com.

1986

With the help of imported material and technology from China, Iran is able to begin producing the Oghab rocket and succeeds in making it operational by the end of 1986. The Oghab is a 230mm unguided artillery rocket that has a 45km range and carries a 70kg payload. Though the Oghab is useful to the Iranians against Iraqi cities close to its borders, some believe that the Oghab is a failure because it does not meet Iran's hopes of making a missile close to the FROG-7A that has a 70km range and a 450kg payload.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network*. (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 49-50.

1986

Syria reportedly sells a small number of Scud-B missiles to Iran for \$15 million.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 53.

1986-1987

An agreement to assemble the Chinese made F-7M fighters shows that China supplies Iran with a Chinese version of French air-to-air missiles. The Chinese also sell 2,500 PL2 and PL2A missiles, which are believed to be similar to the U.S.-made Sidewinder.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 25.

Early 1986

Iran purchases \$1.2 billion worth of weapons through Syria, including Scud-Bs.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 20.

January 1986

U.S. President Reagan gives his approval for the sale of weapons to Iran in exchange for releasing the hostages.

—U.S. Central Intelligence Agency, "Background and Chronology of Special Project," Secret Chronology, 18 November 1986, in Digital National Security Archive, nsarchive.chadwyck.com.

February 1986

Iran seizes the HY-2 Silkworm [Sea Eagle] missiles from Iraq when Iran captures the Faw Peninsula.

—John M. Broder, "Silkworm Missile is Chinese Copy of 28-Year-Old Soviet Styx," *Los Angeles Times*, 17 October 1987, p. 10, in Lexis-Nexis, www.lexis-nexis.com.

February 1986

Under an arrangement led by the United States, Iran returns the 18 basic Hawk missiles to Israel it had received in late November 1985. [Note: See entry for 25 November 1985.]

—United States National Security Council, "U.S./Iranian Contacts and the American Hostages," Top Secret Chronology, 18 November 1986, in Digital National Security Archive nsarchive.chadwyck.com.

11 February 1986

Iranian money is deposited in a Central Intelligence Agency bank account in Geneva, to be used for the purchase of TOW missiles. [Note: See entry for 17 February 1986.]

—United States National Security Council, "U.S./Iranian Contacts and the American Hostages," Top Secret Chronology, 18 November 1986, in Digital National Security Archive, nsarchive.chadwyck.com.

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17 February 1986

First shipment of 500 TOW anti-tank missiles from U.S. stocks goes to Iran via Israel as part of the Iran-Contra arms-for-hostages deal.

—James Schwartz, "An Iran-Contra Chronology," *Washington Post*, 23 February 1990, p. A10, in Lexis-Nexis, www.lexis-nexis.com.

19-21 February 1986

Members of the U.S. National Security Council and Central Intelligence Agency inform Israeli and Iranian officials that the United States will sell 1,000 TOW missiles to Iran. Delivery of the missiles was completed on 21 February.

—United States National Security Council, "U.S./Iranian Contacts and the American Hostages," Top Secret Chronology, 18 November 1986, in Digital National Security Archive, nsarchive.chadwyck.com.

March 1986

Iran obtains arms from three Soviet allies: North Korea, Syria, and Libya. A European ambassador interviewed recently in Tripoli confirms reports that Libya is supplying Iran with surface-to-surface and surface-to-air missiles with the knowledge of Soviet officials.

—Claude Van England, "Iran scores gains in war with Iraq: But observers puzzled why Iran hasn't pressed its advantage," *Christian Science Monitor*, 13 March 1986, p. 9, in Lexis-Nexis, www.lexis-nexis.com.

26 March 1986

Charles St. Claire, a Granada Hills arms dealer who is convicted of promoting a scheme to ship stolen U.S. Army anti-tank missiles to Iran, is sentenced to 18 months in prison and a \$15,000 fine by a federal court judge in Orlando, Florida. St. Claire was convicted in December 1985 with Paul Cutter, who is described as the mastermind. Cutter receives a 5-year prison term in January. Four other defendants are acquitted.

—"Dealer Gets 18 Months in Iran Arms Scheme," *Los Angeles Times*, 26 March 1986, in Lexis-Nexis, www.lexis-nexis.com.

29 March 1986

General Moyed, acting through a deputy, responds on 29 March and complains that the prices are "very expensive." Nevertheless, he requests specifications for five items on the list, including the SAM-7 missiles. Gantzer then directs General Moyed to officials from Perenosny Zenitny Raketny Kompleks, a Soviet-controlled installation outside of Warsaw, for more information. Meanwhile, officials of a Swiss insurance company, C. Wuppesahl A. G. of Basel, meet with Iranian representatives and Soviet officials to inspect the weapons in Warsaw. The insurance inspectors then issue a certificate of inspection, confirming the quantity and quality of the goods. Gantzer, acting for Praetor Tradigin, posts a \$100,000 performance bond through the London branch of Commerzbank A. G. Concurrently, the Union Bank of Switzerland issues a letter of credit on behalf of the Iranians for the sum of \$18,640,000, the amount Tehran agreed to pay for the arms.

—John Tagliabue, "How \$18 million got Soviet weapons to Iran," *New York Times*, 27 May 1987, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

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April 1986

The Islamic Revolution Guard Corps announces that it has made considerable progress in missile, aircraft, chemical, and nuclear fields.

—Paula A. DeSutter, *Denial and Jeopardy Deterring Iranian Use of NBC Weapons* (Washington, DC: National Defense University Press, 1997), p. 23.

22 April 1986

Retired Israeli General Avraham Bar-Am and three others are arrested in Bermuda on charges of illegally selling \$2 billion worth of U.S.-made weapons to Iran in contravention of sanctions. The official Islamic Republic News Agency says the charges are a "hasty scenario by ruling groups in America" intended to cover up the United States' failure to remove Al Qaddhafi from power. Charges are filed today in New York against 17 people in connection with five reported conspiracies to smuggle weapons to Iran, including missiles. An Israeli defense official says that Bar-Am is licensed to deal in weapons, but in a legal manner.

—"Iran Denies Accusation of Arms Smuggling," *New York Times*, 24 April 1986, p. A5, in Lexis-Nexis, www.lexis-nexis.com.

30 April 1986

Israeli retired General Ahraham Bar-Am and his fellow smugglers offer Iran 15,750 TOW missiles, 13 F-5 jet fighters, 33 F-4 jet fighters, 46 Skyhawk fighter-bombers, 5 C-130 transport planes, 430 Sparrow missiles, 200 Aim missiles, 200 Maverick missiles, 600 Chaparral missiles, and 200 Python air-to-air missiles. Professional arms dealers comment that even this partial list is "preposterous" and indicate that the Bar-Am weapons sale to Iran is likely intended to fraud the Iranian government out of \$2 billion. [Note: See 22 April 1986 entry.]

—Warren Richey, "Hungry for US-made arms, Iran sometimes burned by swindlers," *Christian Science Monitor*, 30 April 1986, p. 5, in Lexis-Nexis, www.lexis-nexis.com.

15 May 1986

Two Israelis are indicted in New York on charges of conspiring to sell U.S.-made missiles to Iran or to Iraq. The Israeli government asserts that it has no connection with Zeev Reiss, a reserve Army lieutenant colonel, and Gil Silva. Reiss is accused of attempting to ship 3,819 U.S.-made, wire-guided TOW anti-tank missiles. Reiss and Silva approached two prospective arms buyers, who turned out to be undercover U.S. customs agents, asking for a \$200,000 advance for the weapon sale.

—William Claiborne, "US Holds 2 Israelis on Arms Charge; American-Made Missiles Allegedly Destined for Persian Gulf," *Washington Post*, 16 May 1986, p. A26, in Lexis-Nexis, www.lexis-nexis.com.

23-24 May 1986

A shipment of 508 TOW anti-tank missiles and 240 types of Hawk missile spare parts is made to Israel as part of the arms-for-hostages deal for Iran.

—James Schwartz, "An Iran-Contra Chronology," *Washington Post*, 23 February 1990, p. A10, in Lexis-Nexis, www.lexis-nexis.com.

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29 May 1986

A retired Israeli general and four other men appear before a special magistrate on charges that they participated in an illegal scheme to smuggle \$2.5 billion [Referred to as 2.0 billion] in U.S.-made warplanes, missiles, and other weapons to Iran. The scheme, which involved 17 defendants and five weapons-smuggling conspiracies, included smugglers and shipping agents from Israel, West Germany, France, Britain, Greece, and the United States. Cyrus Hashemi, a wealthy Iranian banker who appears on the U.S. Customs Services' "10 Most Wanted" list of international arms smugglers, posed as the buyer for Iran in what is called the U.S. Customs Service' largest sting operation to date. The sting operation begins in 1985, when Hashemi, under indictment in New York on a 1984 charge of smuggling weapons to Iran during the U.S. hostage crisis, approaches U.S. Attorney Rudolph Giuliani to make a deal. Hashemi says that he is involved in the case after being "approached by a representative of persons interested in selling arms to Iran," who was later identified as Samuel Evans, an American lawyer based in London. Israeli citizen Eisenberg and his son Guri Eisenberg produce a list for Hashemi of \$800 million in weapons, including jet fighters and a large collection of missiles, which they claim can be produced from the Israeli Defense Ministry. The five defendants are arrested on 22 April when they arrive in New York to complete their arms transaction. A second deal worth \$343 million in weapons was set up by retired Israeli Brig. General Avraham Bar-Am and his partner William Northrop, an American based in Tel Aviv. U.S. federal law enforcement sources say the Israelis involved in the case had refused to come to New York because of warnings from "superiors" that they would be arrested; instead, the U.S. Customs agents persuaded the arms dealers to meet in Bermuda, where an agreement was arranged for the men to be declared "undesirables" by Bermudan authorities and either arrested as illegal aliens or sent back to the United States. Bar-Am insists that he was operating with the knowledge of the Israeli government and threatens to cooperate with U.S. authorities unless the Israeli government intercedes on his behalf. The Israeli government denies knowledge of Bar-Am or the Eisenbergs and insists that it is a scheme to con Iran out of money.

—Mary Thornton, "5 Appear in NY Court On Arms-Ring Charges," *Washington Post*, 30 May 1986, p. A32, in Lexis-Nexis, www.lexis-nexis.com.

30 May 1986

A visit of a high-level Iranian delegation to France sparks speculation that Iran and France may be moving toward a normalization of relations. France has agreed to repay a \$1 billion loan made during the Shah of Iran's government in exchange for the release of French hostages. French officials deny, however, having issued licenses to export arms to Iran. But a French newspaper reports that several shipments of French-made shells are sold to the Iranian army and reports in Arab papers in the region state that Iran has enhanced its firing power by equipping them with French-made AS-12 missiles.

—Claude van England, "Iran works to repair ties with Soviets and French," *Christian Science Monitor*, 30 May 1986, p. 9, in Lexis-Nexis, www.lexis-nexis.com.

7 June 1986

China, despite repeated denials, is selling weapons in large quantities to Iran as well as to Iraq. The International Institute of Strategic Studies in London lists China as a primary supplier to Iran, providing the Iranians with jets, tanks, artillery, and surface-to-air missiles under an agreement that it says was concluded in March 1985. The

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report also lists Israel, North Korea, Eastern Europe, Argentina, and Switzerland as countries that have supplied Iran with weapons.

—Daniel Southerland, "China Selling More Arms to Iran, Study Shows: Institute Cites \$1.6 Billion in Recent Purchases, Says Iraq also a Client," *Washington Post*, 7 June 1986, p. A16, in Lexis-Nexis, www.lexis-nexis.com.

26 June 1986

Iran launches two Scud missiles at oil facilities 35km to the northwest of Kirkuk, Iraq at 11:00 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

Summer 1986

A court document is filed that may help in determining what role, if any, the Israeli spy Johnathan Jay Pollard played in the 1985 efforts to ship U.S. or other Western arms to Iran via Israel. A single sentence contained in this document written by federal prosecutors reads, "Also found in the suitcase was a letter from Mr. Pollard to 'Yossi' [Joseph 'Yossi' Yagur] concerning the missile systems designed or manufactured by various non-communist countries, which might be available for sale to Iran, including the system known as CACTUS." Joseph Yagur was the science counselor at the Israeli consulate in New York. According to court documents, he made regular cash payments to Pollard in 1985 in exchange for classified U.S. government documents.

—Warren Richey, "Prosecutors ask: Did Pollard help Israel ship arms to Iran?" *Christian Science Monitor*, 6 March 1987, p. 12, in Lexis-Nexis, www.lexis-nexis.com.

3 August 1986

Remaining U.S.-supplied Hawk missile spare parts are shipped to Iran.

—James Schwartz, "An Iran-Contra Chronology," *Washington Post*, 23 February 1990, p. A10, in Lexis-Nexis, www.lexis-nexis.com.

12 August 1986

Iran launches one Scud missile at Baghdad shortly before 2:00 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

29 August 1986

Lieutenant Colonel Oliver North, an official with the National Security Council, is informed that "Iran had \$76 million in a Belgian bank to be used in the purchase of 4,000 TOW missiles." The missiles ordinarily cost \$7,000 each, are normally sold for \$12,000, but would be sold to Iran for \$19,000 each. The \$28 million profit on the deal would go to middlemen. North is also informed that "the Belgian bank was amenable to a deal involving a 'sting,' i.e., the sale of the missiles would go through but empty crates rather than the missiles would actually be delivered...if the U.S. government wanted this."

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—David Laux, "My Contacts with David Duncan," Memorandum for Oliver L. North, U.S. National Security Council, 29 August 1986, in Digital National Security Archive, nsarchive.chadwyck.com.

12 September 1986

Iran's Islamic Revolution Guard Corps' Air Force fires one Scud missile at Baghdad at 12:45 a.m. The attack kills 102 people.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

3 October 1986

Pakistani businessman Arif Durrani is arrested on charges of selling Hawk missile parts to Iran. Durrani operates an aircraft parts business in California.

— "Man Convicted in Missile Parts Sale to Iran Despite Claimed NSC Role," *Los Angeles Times*, 3 April 1987, p. 30, in Lexis-Nexis, www.lexis-nexis.com.

26-29 October 1986

Members of the U.S. National Security Council meet with Iranian officials in Frankfurt, Germany. The United States agrees to provide an additional 500 TOW missiles for the release of two hostages. The missiles are delivered on 29 October.

—U.S. Central Intelligence Agency, "Background and Chronology of Special Project," Secret Chronology, 18 November 1986, in Digital National Security Archive nsarchive.chadwyck.com.

16 October 1986

Iran fires one Scud missile at Baghdad around 10:50 p.m. The attack kills 70 people.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

14 November 1986

Iran's Islamic Revolution Guards Corps Air Force launches one Scud missile at Baghdad at 2:30 a.m. The attack kills 70 people.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

18 November 1986

A top secret National Security Council chronology of the Iran-Contra affair indicates that the U.S. government "acted within the limits of established policy and in compliance with all U.S. law" in providing Iran with 2,008 TOW missiles and 235 Hawk missile spare parts.

—United States National Security Council, "U.S./Iranian Contacts and the American Hostages," Top Secret Chronology, 18 November 1986, in Digital National Security Archive, nsarchive.chadwyck.com.

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21 November 1986

The U.S. Department of Defense informs the House Permanent Select Committee on Intelligence that Iran had requested 4,509 TOW missiles, but only 2,008 had been delivered. The remaining 2,501 Hawks are being stored at an army installation. Iran had also requested 234 Hawk missile spare parts, but only 218 items were delivered. [Note: This conflicts earlier reports that 240 Hawk spare parts were delivered. See entry for 23-24 May 1986.]
—Robert T. Howard, "Handwritten Note Forwarding Packet of Materials relating to Arms Shipments to Iran," Non-Classified Memorandum for the Assistant Secretary of Defense, 21 November 1986, in Digital National Security Archive nsarchive.chadwyck.com.

22 November 1986

Iran launches one Scud missile at Baghdad around 6:30 p.m., killing 28 people.
—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

26 November 1986

Iran's Islamic Revolution Guards Corps Air Force launches one Scud missile at Baghdad shortly after 3:00 a.m. The attack kills 103 people.
—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

7 December 1986

Iran's ground forces fire three short range Oqab missiles at Basra, Iraq, killing 37 people.
—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Suppliers Network*. (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 50; W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

7 December 1986

The Iranian parliament restructures all of North Korea's \$170 million oil purchase debt to Iran. The debt will be paid back over the next five years, beginning retroactively from January 1985. During this period, Iran will deduct 70% of the cost of North Korean merchandise purchased from the debt, paying only the remaining 30% in cash.
—IRNA (Tehran), 7 December 1986, in "Majlis Reschedules 'Entirety' of DPRK Debt," FBIS-NES, 10 December 1986, p. 15.

8 December 1986

Iran's Ground Forces fire three Oqab (Eagle) missiles at Basra, Iraq, killing 51 people.
—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988

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[expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

23 December 1986

Iran fires three Oqab (Eagle) missiles at Basra, Iraq.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

25 December 1986

Iran fires two shore-to-sea missiles at a naval base near Umm Qasr and the Bakr oil terminal.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez, Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

1985

Iran agrees to finance the North Korean missile program in exchange for missiles and missile technology. Iran also offers to assist in clandestine technology acquisition in the United States and Western Europe.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 20.

1985

The Semnan complex is built by the Chinese 175km east of Teheran to manufacture the Oghab, a 40km rocket believed to be based on the Chinese Type-83 design. The Oghab is launched from a Mercedes-Benz LA911B truck with three rockets per launcher.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 22.

1985

The Soviet Union indirectly provides surface-to-surface missiles (Scud-B) to Iran through Libya and Syria.

—Chubin Sharam "Iran and the War from Stalemate to Ceasefire," in Efraim Karsch, ed., *Iran-Iraq War* (New York: St. Martin's Press, 1989), pp. 207-208.

1985

Iran first uses Scud-B missiles in March 1985, during the Iran-Iraq War. Iran launches as many as 14 of the missiles. A small number of missiles originally came from Libya, later more came from North Korea. The Scud-B, originally designed by the Soviets, has a range of 290-300km, is about 11 meters long, 85-90 centimeters in diameter, and weighs 6,300 kilograms. It is a single-stage, liquid-fueled missile capable of carrying a 1000kg warhead.

—Anthony H. Cordesman, "Iran and Nuclear Weapons," Center for Strategic and International Studies, 7 February 2000, p. 35.

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1985

The British secret intelligence service, MI6, helps a prominent London arms dealer and Tory party donor to supply more than 350 million pounds worth of Chinese Silkworm anti-ship missiles to Iran. Details of the secret missile deal, codenamed "the October Contract," are disclosed in legal documents to be filed in a German court. The documents, seen by the *Sunday Times*, form the basis of a claim by Mohammed Hashemi, Iranian-born managing director of the British arms firm, Tagell, for compensation over an unpaid commission of 10 million pounds for acting as middleman in the deal. MI6 first learns about the Silkworm deal in 1985. It dispatched an undercover female agent on a "business trip" to China. She posed as a secretary to Hashemi, who visited China at least 10 times during the negotiations. Michael Palmer, Hashemi's lawyer, says that his client is taking legal action in the regional court in Munich against Ibcot Technical Services, a German firm that represented the Chinese government in the sale of the missiles to Iran. The Silkworm DF-5, the type sold by Tagell to Iran, is a subsonic radar-guided missile capable of hitting ships at a range of 55 miles. The Iranians installed the Silkworms at the port of Bandar Abbas and along the Gulf coast in June 1987 in an attempt to block Western shipping transporting Iraqi oil.

—David Leppard, "MI6 In On Deal for Iranian Missiles," *Sunday Times*, 4 September 1994, in Lexis-Nexis, www.lexis-nexis.com; Diane Francis, "Ottawa Must Ensure Walker Gets His Day In Court," *The Financial Post* (Toronto), 22 October 1994, p. S3, in Lexis-Nexis, www.lexis-nexis.com.

1985

Work on the Mushak-120 missile reportedly begins with assistance from China, North Korea, and others at a Chinese-built factory near Semnan.

—Raytheon, "Strategic: Mushak 120," *Missile Systems of The World* Raytheon, 1999, p. 456.

1985

In the summer, Iran approaches both North Korea and China looking for ballistic missiles and missile technology. It appears from the meetings in Beijing that China has agreed to help Iran manufacture the Oghab tactical artillery rocket. Iran has reportedly fired 253 Oghab rockets at military and civilian targets inside Iraq during the war.

—"Iran," *Jane's Intelligence Review*, 1 December 1992, in Lexis-Nexis, www.lexis-nexis.com.

1985

Iranian President Hashemi Rafsanjani signs a \$500 million deal with North Korea to receive North Korean missiles based on Soviet Scud designs.

—Michael Dobbs, "A Story of Iran's Quest for Power: A Scientist Details The Role of Russia," *Washington Post*, 13 January 2002, in Lexis-Nexis, www.lexis-nexis.com.

1985

Chinese missile deals with Iran include a 1985 sale of production capability for the Oghab.

—"Bombs From Beijing: A Report on China's Nuclear and Missile Exports," Wisconsin Project on Nuclear Arms Control, May 1991.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



1985

Iran agrees to finance the North Korean missile program in exchange for technology transfer and missiles.

—"The Iranian Connection," *Jane's Intelligence Review*, 1 May 1989, p. 206, in Lexis-Nexis, www.lexis-nexis.com.

1985

Hashemi-Rafsanjani, the speaker of the Iranian Parliament, leads a delegation to Libya and Syria to ask for more Scud-B missiles and a week later to China and North Korea to establish military cooperation. China agrees to deliver HY-2 Silkworm coastal defense missiles in 1986 and to help build a missile assembly site. China also agrees to keep delivering HN-5A and HQ-2 surface-to-air missiles (SAMs), to engage in technology transfers, and to help Iran in its efforts to make surface-to-surface missiles and artillery rockets. The North Koreans agree to give Iran HN-5A SAMs, and to help in building an assembly site for them. They also offer aid to build production factories for the HN-5A and the HQ-2, to engage in technology transfers for Iran's missile program, and to assist in the building of an assembly site for the missile that is the same as the North Korean Scud-Mod. B. North Korea will also have military advisors working with Iran's military and its defense industries. After visiting North Korea, Iran begins its own Scud missile program. The intention is to make an assembly site that is under the auspices of the Defense Industries Organization (DIO) for the North Korean Scud-Mod. B after the full development of the missile. It seems that the long-term plan is for Iran to be able to make the missile itself.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 53-55.

1985

Hashemi-Rafsanjani, the speaker of the Iranian Parliament, says that it is Iran's goal to continue acquiring ballistic missiles and to possess the ability of making own missiles.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 64.

1985-1986

The Reagan administration covertly sells more than \$30 million worth of missiles to Iran.

—Harold Hongju Koh, *The National Security Constitution Sharing Power after The Iran-Contra Affair* (New Haven: Yale University Press, 1990), p. 50.

1985-88

North Korea receives delivery of approximately 240 Scud-B missiles that were ordered from the USSR in 1984. About 100 are re-sold to Iran.

—SIPRI, *SIPRI Yearbook 1989: World Armaments and Disarmament* (Oxford: Oxford University Press, 1989), p. 256.

January 1985

Libya and Syria provide additional Scud-Bs to Iran. Syria also sends its missile technicians to Sardasht to train the Islamic Revolution Guards Corps elements in fueling and operating Scud-Bs.

—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 20.

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January-February 1985

Two Scud-B transporter-erector launchers (TELs) and about 20 missiles are brought to Iran as part of its previous 1984 agreement with Libya.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 52.

18 February 1985

Five men—Moises Broder, Eduardo Ojeda, Carlos Ribeiro, Alfonso Bonacho, and Jackie Singer, all Portuguese citizens—are indicted in Los Angeles on federal charges of conspiring to smuggle Army/Raytheon Hawk anti-aircraft missile system spare parts to Iran.

—"Missile Smuggling Charge," *Aviation Week & Space Technology*, 18 February 1985, in Lexis-Nexis, www.lexis-nexis.com.

12 March 1985

Iran launches its first missile against Iraq. The Scud missile is fired at the city of Kirkuk at 2:40 a.m. Iraq claims that "time bombs planted by enemy agents" caused the explosion.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 52; W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

14 March 1985

Iran's Khatam al-Anbya missile unit launches one Scud missile at Baghdad at 3:30 a.m. Iraq says that Iranian infiltrators set off a bomb, causing the explosions. The Scud has a 1000-pound payload and a range of more than 185km.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]; Dilip Hiro, *The Longest War: The Iran-Iraq Military Conflict* (New York: Routledge, 1991), p. 135.

16 March 1985

Iran fires one Scud missile at Baghdad at 6:42 a.m. local time. Iraq says a car bomb caused the explosion.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolaga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

18 March 1985

Iran fires one Scud missile at Baghdad at 12:00 noon.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



[expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

19 March 1985

Iran fires one Scud missile at Baghdad at 5:27 a.m. The attack kills 11 people.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

25 March 1985

Iran fires one Scud missile at Baghdad around 4:30 a.m. The attack kills 76 people.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

25 March 1985

The British newspaper, the *Sunday Times*, reports that Iran is producing long-range surface-to-surface missiles. According to the report, Iran is able to produce one missile every five days.

—"UK Sunday Times Cited on Missile Production," *Tehran International Service*, 26 March 1985; in FBIS, 26 March 1985, p. 14.

27 March 1985

Iran fires one Scud missile at Baghdad at 1:21 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

31 March 1985

Iran fires two Scud missiles at Baghdad at 1:59 a.m. Iraq acknowledges only one explosion.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zologa, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

1 April 1985

Libyan leader Mu'ammar al-Qaddhafi supplies Scud missiles to Iran for use in the Iran-Iraq War. A correspondent of opposition news radio Nejat-e Iran, which is broadcast from Iraq, reports that spare parts for the Scud missiles are supplied by a British arms smuggler. The British Foreign Office denies any involvement of British experts in the assembly and use of the Scud missiles.

—"Clandestine: Libya Supplying Missiles to Iran," Radio Nejat-e Iran, 1 April 1985; in FBIS, 1 April 1985, p. 11.

5 April 1985

Iran fires one Scud missile at Baghdad at 2:23 p.m.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

12 April 1985

Iran's Majlis Speaker Hojjat al-Islam Akbar Hashemi-Rafsanjani says that Iran's missile industry has developed a new missile that can be used "in the next few days." He says that the new missiles are different from missiles previously used against Iraq. The new missile is reported to be very precise and can be launched at the touch of a button. Prior to the announcement, Iran launched nine missiles against Baghdad causing damage and casualties.

—"Hashemi-Rafsanjani on New Missile Development," IRNA, 12 April 1985; in FBIS, 12 April 1985, p. 12.

25 April 1985

U.S. Department of Defense sources say that Iran has fired at least seven Soviet-made SS-1 [Scud-B] missiles at Iraq. Officials say that the acquisition of Scud missiles by Iran is a recent development and that Libya is the most likely supplier. An official also commented on Iran's announcement of a missile production capability, saying, "They may have assembled parts, but they're not making the parts."

—Norman Black, "Iran Missile Attacks Surprised Pentagon; But Missile Supply Short," Associated Press, 25 April 1985, in Lexis-Nexis, www.lexis-nexis.com.

28 May 1985

Iran fires one Scud missile at Baghdad at 4:00 a.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

1 June 1985

Iran fires one Scud missile at Baghdad around 11:00 p.m.

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

4 June 1985

Colonel Seddiq, commander of Iran's Air Force, says that the Air Force has made considerable technical advances in the air defense missile system. Iranian air defense weapons consist of fighter-bombers equipped with air-to-air missiles, a ground-to-air missile system, and anti-aircraft guns.

—"Air Force Commander on Air Defense Missile System," *Tehran Domestic Service*, 4 June 1985; in FBIS, 5 June 1985, p. 11.

6 June 1985

French officials report that they have received an Iranian request to sell a set of Crotale anti-aircraft missiles.

—"Kuwait Paper: Iran Seeks to Buy French Missiles," *Al-Qabas*, 6 June 1985, p. 1; in FBIS, 11 June 1985, p. 15.

Related content is available on the website for the Nuclear Threat Initiative, www.nti.org.



10 June 1985

Iran fires one Scud missile at Baghdad at 6:00 p.m. Iraq reports a missile impacted at 6:45. [Note: Iran's time zone is 30 minutes ahead of Iraq's.]

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

15 June 1985

Iran fires one Scud missile at Baghdad at 5:00 a.m. Iraq says a missile hit at 5:45 a.m. [Note: Iran's time zone is 30 minutes ahead of Iraq's.]

—W. Seth Carus, "Ballistic Missiles Fired in the Iran-Iraq War, 1980-1988," unpublished document, 9 May 1988 [expected to be published in 2002 in Joseph S. Bermudez Jr., Steven Zolga, and Stephen Sewell, *Scud: Weapon of Terror* (Darlington, VA: Darlington Press).]

1 July 1985

Iran and China sign a \$1.5 billion arms-for-oil agreement. The first consignment, which includes surface-to-air missiles (SAMs), reaches Shahbaher port in June on the vessel *Iran Keyfuri*.

—"Nejat-e Iran Reports Iran-PRC Arms Deal," Radio Nejat-e Iran, 1 July 1985; in FBIS, 2 July 1985, p. 12.

7 August 1985

Lali Abd al-Salam al-Triki, Libya's foreign minister, denies that the Libyan government is selling arms to Iran.

—"Libyan Foreign Minister Denies Arms Sales to Iran," IRNA, 7 August 1985.

August 1985

Israel sends Iran 508 TOW missiles.

—United States National Security Council, "U.S./Iranian Contacts and the American Hostages," Top Secret Chronology, 18 November 1986, in Digital National Security Archive nsarchive.chadwyck.com.

25 September 1985

The Japanese news agency Kyodo reports that, "Iran has purchased 130 ground-to-ground and ground-to-air missiles." According to the news agency, the types of missiles are not known, but are Soviet-built and purchased through a third party. Seventy of the missiles are surface-to-surface and 60 are surface-to-air missiles.

—"KYODO Reports Purchase of Soviet-Built Missiles," IRNA, 25 September 1985; in FBIS, 25 September 1985, p. 11.

29 September 1985

Iran purchases 40 upgraded versions of the Soviet Scud surface-to-surface missiles from China and receives the first 15 at the time of the report.

—"UK Newspaper on Purchase of PRC Missiles Cited," IRNA, 29 September 1985; in FBIS 30 September 1985, p. 11.

29 September 1985

Commander of the Islamic Revolution Guards Corps (IRGC) Mohsen Rezai says that the first surface-to-air missile (SAM) site of the IRGC will become operational soon. Rezai says that the surface-to-surface missile unit of the IRGC

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was already used in retaliatory operations against Iraq. He adds that the IRGC makes sophisticated anti-tank missiles in 1984.

—"IRGC Chief: SAM Site to Become Operational 'Soon'," IRNA, 29 September 1985; in FBIS, 30 September 1985, p. 11.

October 1985

North Korea denies reports from Tehran that the USSR has begun shipping about 60 SAMs to Iran via North Korea and Syria.

—"N. Korea Denies Tehran Reports," *Jane's Defence Weekly*, 19 October 1985, p. 857.

23 October 1985

Highly reliable sources report that talks on the sale of Chinese surface-to-surface missiles to Iran are "progressing rapidly." Negotiations are also held in June and July between China and Iran to discuss the sale of older-generation Scud 1-A and 1-B missiles.

—Pierre-Antoine Donnet, "AFP: Iran, PRC Negotiating Missile Sales in Beijing," Agence France Presse, 23 October 1985; in FBIS, 23 October 1985, p. 15.

25 November 1985

Eighteen Hawk anti-aircraft missiles are sent from Israel to Iran aboard a plane owned by a CIA front company. [Note: The missiles are later returned to Israel. See entry for February 1986.]

—James Schwartz, "An Iran-Contra Chronology," *Washington Post*, 23 February 1990, p. A10, in Lexis-Nexis, www.lexis-nexis.com.

Mid-1980s

Iran begins acquiring ballistic missiles in the mid-1980s, when Libya supplies approximately 30 Soviet-made Scud-C missiles with a range of 300km.

—W. Seth Carus, "Iran and Weapons of Mass Destruction," 3 July 2000, www.ajc.org.

1980s

Iran receives 130 HQ-2 surface-to-air missiles from China during the 1980s.

—Bates Gill, "Chinese Arms Exports to Iran," *MERIA Journal*, Vol. 2, No. 2, May 1998, www.biu.ac.il

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1984-1960

1984

North Korea orders approximately 240 Scud-B missiles from the USSR; the missiles are delivered from 1985 to 1988. About 100 are re-sold to Iran. (Note: The accuracy of this report is questionable, but it would establish a "lower bound" for North Korea's program to reverse engineer the Scud-B).

—SIPRI, *SIPRI Yearbook 1989: World Armaments and Disarmament* (Oxford: Oxford University Press, 1989), p. 256.

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1984

It is speculated that South Africa has been supplying Iran with arms until 1984. It then sold Iraq its "G-5 long-range artillery pieces" to prevent weapons from South Africa's Armaments Corporation from going to Iran.

—Richard Johns, "Arms Embargo Which Cannot Withstand The Profit Motive," *Financial Times* (London), 13 November 1987, in Lexis-Nexis, www.lexis-nexis.com.

1984

In a secret agreement, Iran and Libya agrees to sell Scud-B transporter erector-launchers (TEs) to Iran.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 51.

1984-1986

Aero Systems Inc. of Miami sells missile and fighter jet parts to Iran.

—"Aero Systems is Fined \$160,000 for Selling Fighter Parts to Iran," *The Miami Herald*, 1 July 1993, p. C1, in Lexis-Nexis, www.lexis-nexis.com.

April and September 1984

North Korea tests its first three Scud-Mod. B missiles. These missiles are based on Egyptian Scud-Bs, which North Korea wants to reverse engineer and extend the range of. They will be called Scud-Mod. B and the Scud-Mod. C. Iran helps fund this program, accelerating the development process of these missiles. It is believed that Iranians were present during these flight-tests.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 51; Joseph S. Berumdez, Jr., *A History of Ballistic Missile Development in the DPRK*, James Martin Center for Nonproliferation Studies, Monterey Institute of International Studies, Occasional Paper No. 2, February 2000.

24 August 1984

Bijan Zanganeh, minister of the Construction Jihad (CJ), says that the CJ has built a device that deflects Exocet missiles aimed at oil tankers in the Persian Gulf. Iran is reportedly attempting to devise a method to fool the Exocet missiles from hitting their targets. Zanganeh says that only a fraction of the missiles have been able to cripple ships and oil tankers loading at Iran's ports and terminals in the northern tip of the Persian Gulf.

—"Exocet Missile Deflector Built by Construction Jihad," IRNA, 24 August 1984, in FBIS.

October 1984

Yuri Geifman and Iranian businessman Babeck Seroush are indicted in New York for conspiracy to smuggle components used in missile guidance to North Korea.

—Joseph S. Bermudez, Jr. and W. Seth Carus, "The North Korean 'Scud B' Programme," *Jane's Soviet Intelligence Review*, April 1989, pp. 177-181; Lee Jöng Hun, "FROGesö Taepodong Kkaji: Pukhan Missile Game," *Shindonga*, August 1999, p. 202.

Late 1984

Iran purchases a small quantity of Scud-B ballistic missiles from Libya.

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—Kenneth R. Timmerman, *Weapons of Mass Destruction The Case of Iran, Syria and Libya* (Los Angeles: Simon Wiesenthal Center, 1992), p. 20.

Late 1984-Early 1985

North Korea helps establish a Hwasŏng-5 assembly plant in Iran, including providing all necessary technical documentation and regular exchange of technicians and military officials.

—Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 13.

1983

Iran has agreed to contribute funding to the North Korean "Scud-B" reverse-engineering program.

—Duncan Lennox, "Iran's Ballistic Missile Projects: Uncovering The Evidence," *Jane's Intelligence Review*, June 1998, p. 24.

1983

Mehdi Kashani, an Iranian arms dealer who lives in Madrid, is involved in arms smuggling to Iran. This is evident in the form of a shipment of arms bound for Iran leaving Portugal.

—Chris Hedges, "Iran flings its arms net over a small airport in Germany; Lax regulations at local flying fields have opened a door to Tehran's nuclear ambitions," *The Guardian* (London), 16 March 1995, p. 12, in Lexis-Nexis, www.lexis-nexis.com.

1983

The U.S. Operation Staunch is implemented in order to keep other countries from selling military equipment and parts to Iran. Supposedly, it has deterred Argentina, Italy, Portugal, Spain, and South Korea from selling weapons to Iran.

—Richard Johns, "Arms Embargo Which Cannot Withstand The Profit Motive," *The Financial Times* (London), 13 November 1987, in Lexis-Nexis, www.lexis-nexis.com.

1983

A Deputy Minister for Industries position is established within the Ministry of Islamic Republic Guards Corps (IRGC). This new entity is responsible for the work of 13 industrial groups charged with research on weapon production. The research includes work on retrofitting, reconditioning, and repairing existing material and the production of shells, anti-tank missiles, air-defense (SAM) and surface-to-surface missiles (SSMs) such as the adapted Scud version. Mohsen Rezai, head of the IRGC, claims that the IRGC will be able to reach self-sufficiency in RPG-7 and other anti-tank missiles and will soon start manufacturing SAMs and SSMs.

—Shahram Chubin and Charles tripp, *Iran and Iraq at War* (Boulder: Westview Press, 1991), pp. 129-130.

1983

Iran possesses a total of 12 HAWK and MIM-23B improved HAWK missile batteries.

—Mark Heller, ed., Dov Tamari, and Zeev Eytan, "Iran," *The Middle East Military Balance 1983* (Tel Aviv: Jerusalem Post Press, 1983), p. 97.

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1983

Iran acquires Scud-Bs. The Soviet Union sells Iraq and other countries Scud-B missiles but does not allow these countries to sell Scud-B missiles to third parties. Many countries that have these ballistic missiles are supporting Iraq during the war. Only Libya and Syria are allied with Iran and are willing to sell these missiles to Iran. Iran discussed this issue with both countries earlier in the year. Syria sells Iran multiple-rocket launchers (MRLs) and other military ware, and Libya sells Iran a few surface-to-air missiles (SAMs).

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 51.

2 April 1984

According to foreign military sources in China, China covertly supplies Iran with combat aircraft and other military equipment in sales funneled through North Korea since the Iran-Iraq War began. China is believed to have sent its first large arms shipment through North Korea in summer of 1983 after the conclusion of a \$1.3 billion deal negotiated during a visit of a high-level Iranian military delegation to Beijing in April 1983. According to Arab sources, Chinese aircraft and other military equipment are placed in crates in Pyongyang and put on ships heading for Iran. There are reports of China directly shipping weapons to Iran using Greek or Japanese vessels. China denies that it is involved with shipping any weapons to Iran and contends that any shipment of Chinese weapons to Iran was arranged by Pyongyang itself.

—Michael Weisskopf, "China Sells Arms to Iran via N. Korea," *The Washington Post*, 3 April 1984, p. A1, in Lexis-Nexis, www.lexis-nexis.com.

October 1983

Iranian Prime Minister Husayn Musavi and Defense Minister Colonel Mohammad Salimi visit North Korea. North Korea's Scud-Mod. B program is most likely on the agenda, and thus, Iran decides to reach an agreement on missile technology exchange between the two countries and to help finance the missile program with the option of buying them once they are ready for the market.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 51.

25-26 October 1983

Iranian Prime Minister Ruhollah Musavi and Defense Minister Colonel Mohammed Salimi hold talks with North Korean Prime Minister Lee Chong Ok and Minister of the People's Armed Forces O Jin U. The parties reach an arrangement for the long-term Iranian financing of North Korea's Scud-B development program in exchange for Iran's option to purchase production models. Musavi and Salimi leave North Korea on the 26th after a three-day visit.

—Korean Central News Agency, 25 October and 26 October 1983, in "Iranian Prime Minister's Visit to North Korea," BBC Summary of World Broadcasts, 29 October 1983, in Lexis-Nexis Academic Universe, www.lexis-nexis.com; Joseph S. Bermudez, Jr., "Ballistic Missile Development in Egypt," *Jane's Intelligence Review*, 1 October 1992, pp. 452-458; Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, James Martin Center for Nonproliferation Studies, November 1999, p. 10; Lee Jöng Hun, "FROGesö Taepodong Kkaji: Pukhan Missile Game," *Shindonga*, August 1999, p. 202.

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1982

The necessity of having the capability of responding in kind to the Iraqi missiles that are hitting Iran is driving the Iranian missile program. Iran's missile program seems to have been evolving around three goals: acquiring Scud-Bs, designing and making an artillery rocket that resembled the FROG-7A, and having the capability to manufacture tactical ballistic missiles. The major obstacles for Iran's in making its own missiles is the infrastructure of the Defense Industries Organization and the Islamic Revolution Guard Corps, and the fact that most foreign experts left the country during 1979. As part of its indigenous missile-making efforts, Iran begins the construction of the Oghab (Eagle) artillery rocket. Iran also develops battlefield support rockets.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., pp. 49, 51.

1981

Israel reportedly sends Hawk missiles and other arms and artillery for the first time to post-revolution Iran.

—Richard Johns, "Arms Embargo Which Cannot Withstand The Profit Motive," *Financial Times* (London), 13 November 1987, in Lexis-Nexis, www.lexis-nexis.com.

February 1981

Because of Italy's dependence on Iraqi oil, it can be reluctant to deliver helicopters and sea-to-air missiles that Italian companies have built for Iran.

—"For deals in Iran, it's cash and carry," *Business Week*, 2 February 1981, p. 15, in Lexis-Nexis, www.lexis-nexis.com.

1980

Iran deploys and uses the Hughes TOW and Raytheon Dragon anti-tank missiles in its war with Iraq. Maverick air-to-surface missiles are fired from Iranian F-4s against bridges in and around Basra, Iraq.

—David R. Griffiths, "Iran Begins to Use Cobras, Mavericks," *Aviation Week & Space Technology*, 13 October 1980, p. 24, in Lexis-Nexis, www.lexis-nexis.com.

1980

Iran has a stockpile of American made weapons such as air-to-air, air-to-surface, surface-to-air and anti-tank missiles.

—Shahram Chubin and Charles tripp, *Iran and Iraq at War* (Boulder: Westview Press, 1991), p. 207.

1980-1989

Iran purchases 100 HY-2 Silkworm anti-ship missiles from China for installation at two fixed sites near the Strait of Hormuz and for equipment of three or four further mobile missile battalions. Iran has contracted to buy 200 C-801 cruise missiles from China.

—"Iran," *Jane's Intelligence Review*, 1 December 1992, in Lexis-Nexis, www.lexis-nexis.com.

29 January 1980

A secret U.S. State Department report lists some of the heavy weapons that the United States sold to Iran while the Shah was in power. The list includes 424 Phoenix missiles sold for \$202.3 million; 2,500 Maverick missiles sold

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for \$57.4 million; 2,205 Hawk missiles sold for \$315.3 million; and 26,266 TOW missiles sold for \$90.5 million.

—"Military/Security Issues: B. The U.S.-Iranian Military Relationship, 1941-1979," Secret Report of the U.S. Department of State, 29 January 1980, in Digital National Security Archive, nsarchive.chadwyck.com.

13 October 1980

Media reports detail that three Iranian Boeing 747s have flown to North Korea and returned with what military sources believe are medical supplies and artillery shells. This appears to be one of the first instances of Iranian-North Korean cooperation with the transfer of supplies and other military material.

—David R. Griffiths, "Iran Begins to Use Cobras, Mavericks," *Aviation Week & Space Technology*, 13 October 1980, p. 24, in Lexis-Nexis, www.lexis-nexis.com.

30 October 1980

A working paper prepared by the U.S. Department of Defense in September contains a list of \$220 million worth of advanced military equipment and spare parts purchased by Iran in previous years. According to Pentagon officials, the equipment can be shipped to Iran as soon as President Carter lifts economic sanctions against Iran after the freeing of U.S. hostages. Some of the items included on the list are cluster bomb units, laser-guided bombs, and other air-to-ground munitions worth \$26.6 million; 8,656 Dragon anti-tank missiles worth \$33 million; a battery of improved HAWK SAMs and three air defense radar units worth a total of \$20.8 million. An unidentified Carter administration aide says the Pentagon ordered the Sperry-Vickers Company in Jackson, Mississippi, to ship Iranian-owned spare parts for the Phoenix air-to-air missile to the Philadelphia Navy Yard last week. A Sperry-Vickers spokesman declines to comment on the report. Pentagon aides, however, say that when American military technicians left Iran in early 1979, a special effort was made to remove essential components from the Phoenix missile, the most advanced air-to-air systems in the world.

—Richard Burt, "Iran's Weapons in US Include Cluster Bombs," *New York Times*, 30 October 1980, p. A14, in Lexis-Nexis, www.lexis-nexis.com.

5 November 1980

U.S. Department of Defense officials say that France supplies both Iran and Iraq with military equipment: aircraft engines, tank parts, and anti-tank missiles to the Iranians and jet fighters, helicopters, and anti-tank and other missiles to the Iraqis.

—Daniel Southerland, "Iraq-Iran war: neither seems able to win, but have both lost enough to negotiate?" *The Christian Science Monitor*, 5 November 1980, p. 1, in Lexis-Nexis, www.lexis-nexis.com.

Before 1979

Under the Shah, Iran's arsenal includes the following missiles: Hughes Aircraft BGM-71 A, TOW, AGM-65a Maverick, AIM-54A Phoenix, Rapier, MIM-23B Hawk, AIM-7F Sparrow, AIM-9 G/H Sidewinder. Iran also reverse-engineers the Soviet RPG-7, BM 21, and SAM-7 missiles. Iran at least once requests American participation in the development of an American designed missile; the Americans refuse.

—Ann Tibbitts Schulz, *Buying Security: Iran Under the Monarchy* (San Francisco: Westview Press, 1989), pp. 57-58.

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February 1979

Several members of the U.S. House Armed Services Committee express concerns about security of high-technology items and weapons supplied to Iran. Rep. Patricia Schroeder (Democrat, Colorado) says that the security of Iran's Hughes Phoenix air-to-air missile is likely compromised. Iran has 270 of the 100-mile range missiles, considered to be the most advanced in the world. Pentagon officials say that the Phoenix missiles, as well as the F-14s, are still under the control of the Iranian Army.

—"Iran Arms Concern," *Aviation Week & Space Technology*, 19 February 1979, in Lexis-Nexis, www.lexis-nexis.com.

February 1979

Defense contractor, Soltam, and Israel Military Industries sign a contract with Iran to build an arms producing factory. The factory is to be built close to Isfahan. Soltam uses a cover company registered in Germany and Iran pays \$300 million for the project to start. Iran makes another payment of tens of millions of dollars.

—Ronen Bergman, "5 billion Reasons to Talk to Iran," *Haaretz* (Tel Aviv), 19 March 1999; in "Israel's Outstanding Debt to Iran Viewed," FBIS Document FTS19990319001273, 19 March 1999.

February 1979

With the collapse of the Shah's regime, the joint Iranian-Israeli missile program "Project Flower" ends.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: The New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 48.

February 1979

Iran cancels an order for 160 F-16 fighters from General Dynamics. The Iranian contract calls for deliveries to begin in January 1980, and runs through 1983. There is \$660 million in the Iranian trust fund established by the Pentagon for Foreign Military Sales purchases, and \$500 million of that is available if needed for termination costs. Among other items canceled: seven Boeing E-3A airborne warning and control systems valued at \$1.2 billion; two of four Litton Industries Spruance class destroyers, the total program cost for the four ships is \$1.4 billion; 16 McDonnell Douglas RF-4E reconnaissance fighters, valued at \$219 million; armored and other vehicles; 400 Hughes Phoenix air-to-air missiles, valued at \$250-300 million; 200 McDonnell Douglas Harpoon anti-ship missiles (ASMs), valued at \$100 million; 360 Raytheon Improved Hawk surface-to-air missiles (SAMs), valued at nearly \$30 million; and 400 Gould Mk. 46 torpedoes, valued at \$47 million. [Note: The number of F-4 fighters varies through the February entries.]

—"Iranian Arms Cuts Spur Buyer Search," *Aviation Week & Space Technology*, 12 February 1979, p. 19, in Lexis-Nexis, www.lexis-nexis.com.

3 February 1979

The United States and Iran sign a Memorandum of Understanding (MOU) to substantially reduce planned military sales, including the cancellation of major procurements. [Note: See entries under February 1979 and 4 February 1979.] The United States will reduce missile sales to Iran by the following amounts: more than 200 Harpoons, 258 standard SM-1s, 360 I-Hawks, 362 Sidewinders, more than 380 Sparrows, and 444 Phoenix missiles. [Note: Some of the numbers in the MOU are illegible, and the revised quantities of missiles to be sold are not listed. For more

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information on missile procurement schedules, see entries under 22 January 1975; 1976; May 1979; July 1979; and 11 December 1979. For a list of missiles actually delivered to Iran see 29 January 1980.]

—"Revisions of Foreign Military Sales (FMS) Letters of Offer and Acceptance," Memorandum of Understanding between the United States of American and Iran, 3 February 1979, in Digital National Security Archive nsarchive.chadwyck.com.

4 February 1979

The Iranian government, financially hurt by the loss of oil money, decides to cancel U.S. weapons orders worth as much as \$10 billion. Major orders being canceled include 160 general dynamic P-16 fighter planes worth \$3.5 billion, seven sophisticated airborne warning planes produced by Boeing and worth \$1.3 billion, two destroyers worth \$1.4 billion, about 20 McDonnell Douglas F-4 reconnaissance planes worth approximately \$500 million, and 400 Phoenix missiles worth about \$1 billion. [Note: The number of F-4 fighters varies through the February entries.]

—Associated Press, 4 February 1979, in Lexis-Nexis, www.lexis-nexis.com.

14 February 1979

Defense department officials say that a reported proposal to let Saudi Arabia buy 14 of Iran's U.S. supplied (1978) fighter planes as a way of keeping them secure has never been seriously considered. These officials, who have asked not to be identified, stress that the 78 F14s, about 500 advanced Phoenix missiles, and highly sensitive electronic aiming devices are the property of the Iranian government because they were bought and paid for with Iranian funds.

—Associated Press, 4 February 1979, in Lexis-Nexis, www.lexis-nexis.com.

16 February 1979

Some U.S. officials say they strongly believe the secrecy of key American weapons has been breached in Iran's upheaval. These officials advance that they are particularly concerned with the whereabouts of technical manuals, which show knowledgeable engineers about the structure and workings of the highly sophisticated U.S.-built F-14 fighter and the Phoenix missile system, and how to counter them. These same officials say that such vital manuals are available to dissident Iranian Air Force cadets and technicians. Another weapon system, which some U.S. officials believe has been compromised in the Iranian turmoil, is the improved version of the Hawk anti-aircraft missile.

—Fred Hoffman, Associated Press, 16 February 1979, in Lexis-Nexis, www.lexis-nexis.com.

17 February 1979

The upheaval in Iran raises American military concern regarding the sensitive military equipment in the country and the problems of deciding if, when, and how to get it out. The equipment falls into three groups: American devices used to monitor tests of Russian ballistic missiles; American receivers to intercept electronic signals from Russia, and possibly elsewhere; and Iranian-owned modern weapons sold by the West to the Shah. Arms sold to Iran present a different problem; they are Iranian property and all that the United States can do is insist that Iran keeps the agreement not to let another country have them. The most advanced weapons systems in Iran are the 77 F-14 Tomcat fighters [See 11 December 1978—reported number of F-14s is 80.], the six P-3F Orion anti-

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submarine patrol aircraft, and the Phoenix missiles for the Tomcats, which give the Tomcat its 100-mile punch against other aircraft.

—"Secrets at Risk," *The Economist*, 17 February 1979, p. 66, in Lexis-Nexis, www.lexis-nexis.com.

19 February 1979

Although Iran has canceled \$7 billion worth of orders for U.S. weapons, it has kept \$5 billion worth of orders on the books, including two Litton destroyers, two U.S. Navy diesel attack submarines, and a variety of missiles, torpedoes, and ammunition.

—"Iran's Arms Cancellation," *Business Week*, 19 February 1979, p. 36, in Lexis-Nexis, www.lexis-nexis.com.

19 February 1979

Rep. Richard Ichord, member of the House Armed Services Committee, says that, "In all probability, Iran's Hughes Phoenix air-to-air missile system has been compromised." Rep. Patricia Schroeder, also a member of the House Armed Services Committee, says that compromise of the 100-mile range missile will offer security problems to the United States. The heart of the Phoenix system, the aircraft-mounted Hughes AN/AWG-9 fire control radar, has been removed from Iran's 77 Grumman F-14 fighters. A Pentagon spokesman says the Phoenix missiles and the F-14s are still under the Imperial Army's guard. Iran has 270 of the missiles.

—"Iran Arms Concern," *Aviation Week & Space Technology*, 19 February 1979, p. 13, in Lexis-Nexis, www.lexis-nexis.com.

12 March 1979

The Army Aviation Command warns that missiles stolen from the air base located near Tehran during the culmination of the revolution last month could easily explode because they are highly sensitive to atmospheric and temperature changes. The announcement says the explosion of one of the missiles can cause death and serious property damage over an area of two square miles.

—Brian Jeffries, Associated Press, 12 March 1979, in Lexis-Nexis, www.lexis-nexis.com.

29 March 1979

Officials of the new Iranian government are interested in having the U.S. buy back the F-14 fighter planes sold to the Shah. The sources, asking not to be identified, say that the Iranian government has approached the United States recently about selling back 78 F-14 fighter planes and their 200 Phoenix air-to-air missiles that were originally sold to Iran in 1974.

—Associated Press, 29 March 1979, in Lexis-Nexis, www.lexis-nexis.com.

May 1979

The United States makes its final delivery of 274 Phoenix missiles to Iran as part of a \$687 million deal originally approved in 1972. [Note: See 1972 entry.]

—Foreign Military Sales Commitments to Iran, Confidential Memorandum from the U.S. Department of Defense, 3 March 1977, in Digital National Security Archive, nsarchive.chadwyck.com.

July 1979

The United States makes its final delivery of 37 Improved Hawk surface-to-air missile (SAM) battalions to Iran,

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which includes a total of 1811 Hawk missiles. [Note: Later documents indicate that as many as 2,205 Hawks were delivered. See entries for 11 December 1979 and 20 January 1980.] The \$687 million deal was originally approved in 1971. [Note: See 1971 entry.]

—Foreign Military Sales Commitments to Iran, Confidential Memorandum from the U.S. Department of Defense, 3 March 1977, in Digital National Security Archive, nsarchive.chadwyck.com.

13 July 1979

The Governor of Khorramshar Port contacts UPI about a clash between the Revolution Guards and arms smugglers in Minu Island. The smugglers were carrying Soviet-made RPG-7 missiles from Iraq to Iran.

—"Arrest of Arms Smugglers Near Khorramshahr," The BBC, 13 July 1979, in Lexis-Nexis, www.lexis-nexis.com.

10 August 1979

British Secretary of Defense, Fred Mulley, visits Iran. Radio London announces that England assists Iran by building tanks and missiles.

—"BBC Criticized In Iranian Commentary," The BBC, 10 August 1979, in Lexis-Nexis, www.lexis-nexis.com.

19 September 1979

The Soviet newspaper, Pravda, reports that Iranian governmental forces are forced to use missiles and air force in order to clear the rural areas in the Piranshahr, Mariva, and Salmas rebellion in Iran's Kurdistan.

—"Pravda's Report on Events in Kordestan," The BBC, 19 September 1979, in Lexis-Nexis, www.lexis-nexis.com.

24 September 1979

Iran holds its first naval maneuvers since the revolution. The Commander of the Navy, Admiral Ahmad Madani, orders the five-day sea exercises to test the ability of Iran's naval task force to defend the country's shores and vital oil installations. Taking part in the naval exercises are destroyers, missile carrying patrol boats, frigates, hovercraft, and landing craft. Commodore Deyhimi, the Commander of the Persian Gulf and the Gulf of Oman naval base, says that the exercises, involving the four light missile craft, will finish on 3 October. He also states that a series of exercises will be held throughout the year. The Air Force is involved by providing air cover for today's exercises.

—"Iran Holds Naval Maneuvers," Xinhua News Agency, 25 September 1979, in Lexis-Nexis, www.lexis-nexis.com; "Iran," The BBC, 26 September 1979, in Lexis-Nexis, www.lexis-nexis.com.

11 December 1979

The following missiles have been delivered to Iran from the United States, under the Arms Export Control Act of 1976: 9,717 Dragons; 14 Harpoons; 1,442 Hawks; 2,500 Mavericks; 424 Phoenix; 288 Sidewinders; 516 Sparrows; 128 Standards; and 19,064 TOWs. [Note: A later State Department document indicates that 2,205 Hawks and 26,266 TOWs were sold to Iran. See entry under 20 January 1980.]

—"Major End Items Delivered to Iran under FMS," Confidential List from the U.S. Defense Security Assistance Agency, 11 December 1979, in Digital National Security Archive, nsarchive.chadwyck.com.

24 December 1979

Italians have been delaying shipments of spare parts to Iran, including 400 Agusta Bell helicopters as well as

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missiles for Italian-built naval patrol boats. Officials in Rome suggest that it may be increasingly hard to resist Iranian pressures for delivery of the weapons if the hostage crisis drags on.

—"Card the U.S. Can Still Play," *Business Week*, 24 December 1979, p. 40, in Lexis-Nexis, www.lexis-nexis.com.

1978

Iran expects to receive a shipment of AGM-84 Harpoon radar-guided anti-ship missiles (ASMs) from the McDonnell Douglas Corporation.

—"Harpoon Warranty Proposed to Navy," *Aviation Week & Space Technology*, 27 March 1978, in Lexis-Nexis, www.lexis-nexis.com.

1978

The project initiated between Iran Electronics Industries (IEI) and the British Aircraft Corporation (BAC) is cancelled. It was meant to develop and assemble 2,500 Rapier half-tracked, low-level anti-aircraft missiles and expected to produce 75 missiles per month at the site of Parchin.

—Ann Tibbitts Schulz, *Buying Security: Iran Under the Monarchy* (San Francisco: Westview Press, 1989), p. 57.

1978

Iran makes its first payment to Israel in the form of \$280 million worth of oil for the joint "Project Flower" missile program. The aim of the program is to make a longer-range missile of 150-200km and to make a missile that is a "more heavily armed version of the Israeli Gabriel anti-ship missile." As part of the project, the Iranians start building a missile assembly site close to Sirjan, in south central Iran, and a missile test range close to Rafsanjan.

—Joseph S. Bermudez, Jr., "Iran's Missile Development," *The International Missile Bazaar: the New Supplier's Network* (San Francisco: Westview Press, 1994), William C. Potter and Harlan W. Jencks, eds., p. 48.

29 March 1978

Iran formally notifies the United States that it wants to purchase weapons for 12 new frigates. The weapons package includes MK 13 Guided Missile Launching Systems and Harpoon Canister Launching System. The frigates are to complement four Spruance Class missile ships Iran recently purchased. The frigates and the missile ships will be built in the Federal Republic of Germany and the Netherlands.

—D. M. Altwegg, "Armament Suite for Iranian Frigates to Be Built in the Netherlands and Federal Republic of Germany," Letter from the U.S. Defense Security Assistance Agency, 27 July 1978; Erich F. von Marbod, "Notification to Congress of Impeding Navy Arms Sales to Iran," Letter from the U.S. Defense Security Assistance Agency, 27 July 1978, both in Digital National Security Archive, nsarchive.chadwyck.com.

July 1978

All the Israeli engineers and those involved with the defense cooperation with Iran have been flown back to Israel when it became clear that the Iranian regime is about to collapse. All the blueprints and diagrams of the weapons systems involved were returned to Israel via a well-protected diplomatic courier.

—Ronen Bergman, "5 billion Reasons to Talk to Iran," *Haaretz* (Tel Aviv), 19 March 1999; in "Israel's Outstanding Debt to Iran Viewed," FBIS Document FTS19990319001273, 19 March 1999.

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27 July 1978

The United States Defense Security Assistance Agency informs the Senate that the State Department may agree to allow the sale of advanced weapons for Iranian frigates. The weapons include MK 13 Guided Missile Launching Systems and Harpoon Canister Launching Systems. [Note: See 29 March 1978.]

—Erich F. von Marbod, "Notification to Congress of Impeding Navy Arms Sales to Iran," Letter from the U.S. Defense Security Assistance Agency, 27 July 1978, in Digital National Security Archive, nsarchive.chadwyck.com.

August 1978

The U.S. State Department agrees to sell Iran 1,000 naval AGM-45 Shrike radar homing missiles, and Iran accepts the deal. The State Department, however, turns down Iran's request to buy 31 McDonnell Douglas F-4G Wild Weasel aircraft, but offers Iran 31 F-4Es instead.

—"Iranian Bid Denied," *Aviation Week & Space Technology*, 21 August 1978, in Lexis-Nexis, www.lexis-nexis.com.

September 1978

A team of key U.S. Defense, State Department and National Security Council officials is scheduled to visit Iran to establish delivery priority for \$10 billion worth of arms the Shah wants to order. The Shah also wants to buy technical information enabling Iran to build its own airborne missiles.

—"Iranian Priorities," *Aviation Week & Space Technology*, 14 August 1978, in Lexis-Nexis, www.lexis-nexis.com.

December 1978

Unrest in Iran leads to the cancellation of plans to build the Rapier anti-aircraft missile there. The Iranian military will purchase the missile directly from the British Aircraft Corporation. Irano-British Dynamics, the joint company formed between the two countries to manufacture the missile, will be involved primarily in marketing the missile. Iran will not receive advanced technology as planned under the original manufacturing agreement. [Note: See entries under December 1975, November 1976, and 1978 for more information on this agreement.]

—"Iran Rapier," *Aviation Week & Space Technology*, 18 December 1978, in Lexis-Nexis, www.lexis-nexis.com.

11 December 1978

Russian MiG-25 fighters cross into Iranian airspace. The worried Iranian military command asks the Shah for permission to take action against the MiGs, but the Shah refuses. The Shah doesn't want to risk the consequences of arming the vast fleet of fighters and the network of missiles that are deployed (largely by the United States) in Iran. The Pentagon has devised emergency plans to keep U.S. military hardware from falling into unfriendly hands in the event of a leftist take-over of Iran. The Iranians own 80 F-14 Tomcat jet fighters with Phoenix missiles that can target on six enemy planes simultaneously, and arrangements have been made to fly the Tomcats out of the country if the Shah's government falls.

—Bill Roeder, "A Soviet Ploy...And A U.S. Game Plan In Iran," *Newsweek*, 1 January 1979, in Lexis-Nexis, www.lexis-nexis.com.

31 January 1977

Iran may try to insulate its defense development projects from the ups and downs of the oil market by using oil as payment. Germany's Krupp will take oil as a payment for \$135 million worth of copper refining and smelting

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equipment. British Aircraft Corporation will receive between 15,000 and 20,000 bbl. per day of oil for five years in return for \$700 million worth of Rapier missiles.

—"Iran Rebuilds Its Confidence," *Business Week*, 31 January 1977, p. 54, in Lexis-Nexis, www.lexis-nexis.com.

18 July 1977

Israeli Defense Minister General Ezer Weizmann and Iranian Vice Minister of War General Hasan Toufanian discuss the co-production of Israel's Jericho-2 missile, code named Project Flower. [Note: See 1975 entry.] Weizmann says that he has "doubts about this missile" and the project may be re-evaluated. Toufanian says "the most important feature of the missiles is... target acquisition, target identification." He also says that Iran is using the Harpoon missile on its ships and planes, but there have been "technical difficulties" with the Harpoon. Weizmann suggests that the range of the missiles to be co-produced with Iran could be shortened to 150 kilometers. He tells Toufanian that Iran "must have a ground to ground missile." Both sides agree to further discuss the issue. Toufanian also meets with Israeli Foreign Minister Moshe Dayan, who says that the United States may object to Project Flower as the Jericho missile is capable of carrying a nuclear warhead. Dayan suggests that temporarily halting the project will allow time for a "thorough reassessment."

—"Minutes from Meeting Held in Tel Aviv between H. E. General M. Dayan, Foreign Minister of Israel, and H.E. General H. Toufanian, Vice Minister of War, Imperial Government of Iran," Top Secret Minutes from Israel's Ministry of Foreign Affairs, 18 July 1977, in Digital National Security Archive, nsarchive.chadwyck.com.

18 July 1977

The Iranian Deputy Defense Minister General Hasan Tufanian, a former commander of the Iranian air force and responsible for military procurement in Iran's defense establishment, holds a meeting to discuss the joint Israel-Iran missile project, code-named "Tzur." Project "Tzur" will increase the range for surface-to-surface Jericho missiles. Iran will provide the funding and the test ranges and Israel the know-how. Iran will later purchase ready-made missiles from Israel. Israelis present at the meeting are Defense Minister Ezer Weizman, defense officials, and Uri Lubrani. Weizman has invited Tufanian to view a launch of the Jericho-2 missile. After the meeting, the deal is signed and Iran provides large advances of capital to proceed with the project. Large numbers of Israeli experts will go to Iran to begin preparations for the project. [Note: This report contradicts the transcribed notes from the meeting referred to in the previous entry.]

—Ronen Bergman, "5 billion Reasons to Talk to Iran," *Haaretz* (Tel Aviv), 19 March 1999; in "Israel's Outstanding Debt to Iran Viewed," FBIS Document FTS19990319001273, 19 March 1999.

5 September 1977

After the latest incident of Iranian F-14 fighters detecting incursions in Iranian air space by Soviet Mig-25B reconnaissance aircraft, the Shah orders his aircrews to conduct live firing-tests of the F-14's Hughes Phoenix missile system. These represent the first of such tests in Iran. During these tests, weapon systems operators fire the Phoenix missiles at Beech Aircraft BQM-34E target drones. The first test is initiated when the F-14's radar acquires the drone target at a distance of 101 nautical miles. The BQM-34E flies at an altitude of 50,000 feet at Mach 1.6. The F-14 is at a 40,000-foot altitude at Mach 0.8 when it launches its Phoenix missile at the target at a distance of 35 nautical miles. The Phoenix warhead destroys the target. In the second, more difficult test, the F-14 flight crew engages the BQM-34E while the F-14 is at 25,000 feet traveling at Mach 0.8. The target flies at 500ft. at

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a distance of 25 nautical miles. Again the Phoenix missile hits the drone.

—"MiG-25s Detected by Iran," *Aviation Week & Space Technology*, 5 September 1977, p. 14, in Lexis-Nexis, www.lexis-nexis.com.

1976

Missile arsenals of the Imperial Iranian Ground Forces, Navy and Air Force:

| Category and Item | Orders as of March 1976 | Deliveries |
|-------------------------------------|-------------------------|------------|
| Ground Forces | 358 | |
| • M 113AI | 390 | 140 |
| • M 109 (155mm-Sp) | 8 | |
| • M 107 (175mm-SP) | 37 | |
| • M 110 | 15,000+ | |
| • TOW | 10,000+ | |
| • Dragon | 12 | |
| Navy | | |
| • Harpoon | | |
| • Missile Patrol boats Le Combatant | | |
| Air Force | | |
| • Phoenix | 400+ | 0 |
| • Maverick | 2,500 | 2,500 |

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| | | |
|----------------------|--------|------|
| • SAM Hawk Batteries | 37 | 16 |
| • Missiles | 1,800+ | 650+ |

—Senate Foreign Affairs Committee's Subcommittee's on foreign military Assistance, *Aerospace Daily*, 4 August 1976, p. 188.

1976

Iran cuts back an order of six of the Spruance class destroyer missile-carrying ships from the U.S. Navy when the cost rose from \$116 million in 1972 to \$333 million.

—"Iranian Arms Cuts Spur Buyer Search," *Aviation Week & Space Technology*, 12 February 1979, p. 19, in Lexis-Nexis, www.lexis-nexis.com.

November 1976

The British Aircraft Corporation agrees to accept Iranian crude oil in payment for a \$640 million deal to supply the Imperial Iranian Army with the tracked Rapier short-range anti-aircraft missile system. Furthermore, The British Aircraft Corporation and Iranian Electronics Industries agree to create a new company under the name of Irano-British Dynamics to manufacture the Rapier missile in Iran. This new company will develop and assemble 2,500 Rapier half-tracked, low-level anti-aircraft missiles. The project is expected to produce 75 missiles per month at the site of Parchin. Under the agreement, Iran will be allowed to sell the missiles to third countries.

—"Oil for Arms," *Aviation Week & Space Technology*, 29 November 1976, in Lexis-Nexis, www.lexis-nexis.com; Ann Tibbitts Schulz, *Buying Security: Iran Under the Monarchy* (San Francisco: Westview Press, 1989), p. 57.

1975

A maintenance contract of the AGM 65A Maverick and BGM-71 A TOW systems is signed and placed under the supervision of the Iran Electronics Industries (IEI) missile division. According to the contract, IEI can produce subcomponents and assemble 2000 TOWs and Maverick missiles.

—Ann Tibbitts Schulz, *Buying Security: Iran Under the Monarchy* (San Francisco: Westview Press, 1989), p. 57.

1975

Project "Flower" Tzur, a joint collaboration between Iran and Israel, aims to develop a "state-of-the-art sea-to-sea missile, an advanced version of the U.S. Harpoon missile, with a range of 200 kilometers."

—Ronen Bergman, "5 billion Reasons to Talk to Iran," *Haaretz* (Tel Aviv), 19 March 1999; in "Israel's Outstanding Debt to Iran Viewed," FBIS Document FTS19990319001273, 19 March 1999.

22 January 1975

The United States has delivered 3400 TOW missiles to Iran since 1973. A total of 4760 TOWs and 250 launchers will be supplied. Between 1974 and 1975, 2500 Maverick air-to-surface missiles are scheduled for delivery to Iran. The U.S. also plans delivery of 32 Hawk surface-to-air missile (SAM) batteries to Iran between 1974 and 1978. [Note: According to the Federation of American Scientists, there are 48 missiles per Hawk battery.]

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—"The Growing U.S. Involvement in Iran," Secret Report by the United States Department of Defense, 22 January 1975, in Digital National Security Archive, nsarchive.chadwyck.com.

May 1975

Negotiations between Iran and Hughes Missile Systems on co-production of the TOW and Maverick missiles are stalled over disagreements in the pricing structure. Hughes has set the royalty and initial investment costs for Iran at \$20 million for the TOW and \$25 million for the Maverick.

—Sidney Sober, "Your Meeting with the Shah at Blair House," Confidential Briefing Memorandum to Secretary of State Henry Kissinger, 9 May 1975, in Digital National Security Archive, nsarchive.chadwyck.com.

9 May 1975

U.S. Secretary of State Henry Kissinger is advised to discourage Iran from pursuing the Lance surface-to-surface missile. According to a briefing note for Kissinger, "DOD [Department of Defense] does not consider the Lance a cost-effective weapon when used with a conventional warhead. Congressional critics of our arms sales to Iran would tend to link Iran's purchase of the Lance with its nuclear development plans." Iran had previously indicated that it may want six Lance battalions, partly in response to the possibility of Iraq obtaining Scud missiles.

—Sidney Sober, "Your Meeting with the Shah at Blair House," Confidential Briefing Memorandum to Secretary of State Henry Kissinger, 9 May 1975, in Digital National Security Archive, nsarchive.chadwyck.com.

December 1975

The Imperial Iranian Army has made a \$352.8 million order for an upgraded tracked version of the Rapier missile launcher system. The British Aircraft Corporation Guided Weapons Division makes the Rapier and the upgraded version consists of eight missiles. The Imperial Iranian Army has also ordered the American-made M-548 tracked-cargo carrier made by the FMC Corporation in California. The tracked-vehicle Rapier is different from the all-weather Blindfire launcher, which Iran already has. The M-548 vehicles are part of the M-113 family, designed to carry Lance missiles. The system has been tested in a variety of weather conditions in Iran on a modified FMC vehicle. Iran is discussing with the British Ministry of Defense and the British Aircraft Corporation about producing the Rapier missile in Iran.

—"Iran Orders tracked Version of Rapier," *Aviation Week & Space Technology*, 8 December 1975, in Lexis-Nexis, www.lexis-nexis.com.

1974

United States sells 78 F-14 fighter planes and its 200 Phoenix air-to-air missiles to Iran.

—Associated Press, 29 March 1979, in Lexis-Nexis, www.lexis-nexis.com.

1974

The United States authorizes a plan to discuss co-production of the Maverick air-to-ground missile and the TOW anti-tank missile with Iran.

—Alfred L. Atherton, Jr., "Strategy for Your Visit to Iran," Confidential Briefing Memorandum to Henry Kissinger, 20 October 1974, in Digital National Security Archive nsarchive.chadwyck.com; "U.S.-Iran Joint Commission

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Meeting", Confidential Briefing Notes to Henry Kissinger, 2 November 1974, in Digital National Security Archive nsarchive.chadwyck.com.

3 October 1974

The United States Department of Defense (DOD) is growing concerned about Iran's ambitious weapons procurement goals. An internal DOD memorandum states, "There are sufficient negative indicators in relation to the Shah's prospects to prompt the USG (United States Government) toward a somewhat more cautious and guarded relationship with the Shah."

—"Military/Security Issues: B. The U.S.-Iranian Military Relationship, 1941-1979," Secret Report of the U.S. Department of State, 29 January 1980, in Digital National Security Archive, nsarchive.chadwyck.com.

1972

The United States approves the sale of 274 Phoenix missiles to Iran for \$150 million. [Note: Final delivery of this deal is in May 1979.]

—Foreign Military Sales Commitments to Iran, Confidential Memorandum from the U.S. Department of Defense, 3 March 1977, in Digital National Security Archive, nsarchive.chadwyck.com.

May 1972

President Richard Nixon agrees to allow the Shah of Iran to purchase virtually any type of conventional weaponry in the U.S. arsenal, including advanced F-14, AWACS aircraft, and Phoenix and Maverick missiles.

—Mark J. Gasiorowski, *US Foreign Policy and the Shah: Building a Client State in Iran* (Ithaca: Cornell University Press, 1991), pp. 113-114.

16 November 1972

As part of Operation Enhance Plus, the United States agrees to sell Iran air-to-surface missiles. The United States will also allow Iran to own fighter planes that they had previously leased.

—Thomas R. Pickering, "[Operation] Enhance Plus," Top Secret Cable, 16 November 1972, in Digital National Security Archive nsarchive.chadwyck.com.

1972-1977

Between 1972 and 1977, there is a 600% increase in U.S. military sales to Iran.

—Mark J. Gasiorowski, *US Foreign Policy and the Shah: Building a Client State in Iran* (Ithaca: Cornell University Press, 1991), pp. 113-114.

1971

The Iran Electronics Industries (IEI) contracts the Texas-based Emerson Energy Systems to repair TOW and FGM-77A dragon systems for Pakistan and Yemen.

—Ann Tibbitts Schulz, *Buying Security: Iran Under the Monarchy* (San Francisco: Westview Press, 1989), p. 57.

1971

The United States approves the sale to Iran of 37 Improved Hawk surface-to-air missile (SAM) battalions, which includes a total of 1811 Hawk missiles. The total cost is \$687 million. [Note: Final delivery of this deal is in July

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1979.]

—Foreign Military Sales Commitments to Iran, Confidential Memorandum from the U.S. Department of Defense, 3 March 1977, in Digital National Security Archive, nsarchive.chadwyck.com.

Late 1960s

The Shah of Iran opens the Iran Electronics Industries (IEI) missile repair facility in Shiraz to the Pakistanis.

—Ann Tibbitts Schulz, *Buying Security: Iran Under the Monarchy* (San Francisco: Westview Press, 1989), p. 54.

12 April 1962

The Shah of Iran asks U.S. Defense Secretary Robert McNamara why Iran does not have operational Sidewinder missiles for its F-86 fighter planes. McNamara says that the Iranian Air Force needs to increase its ability to maintain its military hardware. The Shah also tells McNamara that Iran needs surface-to-air missiles (SAMs) to defend its airfields. McNamara says that early warning systems and fighter planes are a better solution.

—William Bundy, "United States-Iran Relations," Secret Memorandum of Conversation, 12 April 1962, in Digital National Security Archive, nsarchive.chadwyck.com.

February 1960

The United States decides it will sell Iran Sidewinder air-to-air missiles.

—"Military Basis for a Proposed Reply to the Shah of Iran concerning His Request for Additional Military Assistance," Top Secret Position Paper, 20 February 1960, in Digital National Security Archive, nsarchive.chadwyck.com.

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