

Egypt Missile Chronology

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Last update: March 2009

**As of 5 June 2009, this chronology is no longer being updated.
For current developments, please see the Egypt Missile Overview.**

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.

2008-2005

8 September 2008

The United States Defense Security Cooperation Agency (DSCA) announces the possible sale to Egypt of 6,900 TOW 2A anti-armor guided missiles, with an estimated value of \$319 million. In addition, Egypt has requested 218 fly-to-buy missiles. According to the DSCA, Raytheon will be the primary contractor.

— Keri Wagstaff-Smith. "U.S. DSCA Notifies Congress of Military Equipment Sale to Egypt," *Jane's Intelligence Review*, 10 September 2008; "Egypt-TOW 2A Anti-Armor Guided Missiles," *Defense Security Cooperation Agency Press Release*, 9 September 2008.

9 July 2008

Egypt announces that it is in final talks with U.S. company Raytheon for the acquisition of a number of SeaRAM systems for its new Ambassador 3 class fast missile vessels. The SeaRAM system is a surface-to-air missile used by naval forces to defend against anti-ship cruise missiles.

— Huw Williams, "Egypt Prepares for SeaRAM Acquisition," *Jane's International Defense Review*, 9 July 2008; "RAM Missile Systems: Contracts & Events," *Defense Industry Daily*, 12 June 2008.

8 December 2007

An Israeli government report confirms that, in the early 1990s, Israel had secret talks with North Korea to attempt to halt the proliferation of North Korean ballistic missile technology throughout the Middle East. Specifically, Israel

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was concerned about North Korea's sale of ballistic missiles to Egypt.

— "North Korea, Israel said had 'Top-Secret' Missile Talks in Early 1990s," *BBC Monitoring Asia Pacific*, 8 December 2007; "North Korea's Nuclear Threat: DPRK Aid to Syria Could Spark Fire in Middle East," *The Daily Yomiuri*, 13 November 2007.

5 October 2007

Egypt is attempting to buy 164 Stinger Block 1 missiles, 25 Avengers, and 12 fly-to-buy missiles from the United States. The Stinger Block 1 missiles would be configured for vehicle launch only. The deal is worth around \$83 million. [Note: The Stinger Block 1 Missile "provides forward, short-range air defense against low-altitude airborne targets.]

— Donald McFarlane, "Egypt looks to purchase Stinger Block 1 missiles," *Jane's Defense Industry*, 5 October 2007; "Egypt Buying \$125 Million Worth of RAM Block IA, Support and Service," *Defense Daily International*, 19 October 2007; "FIM-92A Stinger Weapons System: RMP & Basic," *Federation of American Scientists*, www.fas.org.

2 October 2007

As part of Egypt's arms package from the United States, the country is slated to receive 139 RIM-116B Block 1A Rolling Airframe Missiles. The missiles will be provided by Raytheon and be used to arm the country's Ambassador-class fast attack craft. The boats will also be equipped with the "Mk 31 guided-missile system RAM guided system and the Mk 15B Phalanx close-in weapon system." The missiles along with support and related services are worth \$125 million. [Note: The RIM-116 Block 1A Rolling Airframe Missile is a "self-defense system that will provide an improved capability to engage and defeat incoming anti-ship cruise missiles. It ... utilizes SIDEWINDER technology for the warhead and rocket motor, and the STINGER missile's seeker."]

— Tim Fish, "Egypt awaits US FMS FAMs," *Jane's Navy International*, 2 October 2007; "Egypt Buying \$125 Million Worth of RAM Block 1A, Support and Service," *Defense Daily International*, 19 October 2007; "RIM-116 RAM Rolling Airframe Missile." *Federation of American Scientists*, www.fas.org.

21 September 2007

Russia has signed an agreement to sell Egypt the anti-aircraft, gun-missile systems Shilka-Strelets, as well as begin training members of the Egyptian military at Russian Military Colleges. It remains to be finalized when Egypt will receive the weapons. [Note: The Shilka-Strelets system is a "hybrid air-defense platform incorporating Strelets anti-aircraft missiles onto a self-propelled ZSU23-4-M4 automatic anti-aircraft gun mount. It is capable of engaging airplanes, helicopters, and cruise missiles."]

— "Russia sells missile systems to Egypt, trains servicemen," *BBC Monitoring*, 21 September 2007; M. Ritchie, "Russia Signs Air Defense Contract with Egypt," *Forecast International*, 25 September 2007, www.fi-zap.com.

2 August 2007

In reaction to a vote by the United States Senate to withhold part of its annual military aid to Egypt to pressure the country to crack down on weapons smuggling through Gaza and improve its human rights record, the Prime

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Minister, Ahmad Nazif said the country "will not accept conditional aid whatever the price is."

— "Egypt Will Not Accept Conditional Aid "Whatever the Price is,"" BBC, 2 August 2007.

30 July- 24 August 2007

The United States has announced its plans to increase military assistance to Egypt. The proposed package to Egypt is a 10 year, \$13 billion deal. Washington also proposed new arms packages for other states in the Middle East including Saudi Arabia, Bahrain, Kuwait, Oman, Qatar, and the United Arab Emirates. Alongside these new deals was a significant increase in military aid to Israel.

— Nathan Hodge, "US plans greater military assistance for gulf states," *Jane's Defense Weekly*, 3 August 2007; "Bush to forge big arms deals to counter Iran," *The New Zealand Herald*, 30 July 2007; Adam Morrow and Khaled Moussa al-Omrani, "Mideast: U.S. Arms Sales Stoke Arab-Israeli Tensions," *Inter Press Service*, 20 August 2007; "Pentagon announces possible weapons sales to Egypt, Israel," *Agence France Presse*, 24 August 2007; Adam Morrow and Khaled Moussa al-Omrani, "Massive military-aid packages and arms sales to Arab allies; Mideast: U.S. Arms Create New Divisions," *IPS (Latin America)*, 22 August 2007.

26 June 2007

Recent moves by the U.S. Congress to place requirements on \$200 million of the foreign military financing (FMF) offered to Egypt by the United States could jeopardize the Egyptian military's fast missile craft program. VT Halter Marine, the U.S. shipyard for Singapore Technologies Engineering won the contract to "procure materials for the Phase 2 construction work on the Egyptian Navy's three missile-armed fast missile craft." The actual work for Phase 2 is expected to be awarded in 2008. Any changes in military funding, and the proposed withholding of \$200 million by the United States could leave the VT Halter Marine contract as well as Egypt's Fast Missile Craft program in jeopardy.

— Jon Grevatt, "VT Halter Marine wins Egyptian ships work for USN," *Jane's Defense Industry*, 26 June 2007; Tara Copp, " US Congress votes to withhold FMF funds for Egypt," *Jane's Defense Industry*, 27 June 2007; Tara Copp, " Egypt's Fast Missile Craft programme faces uncertainty," *Jane's Defense Industry*, 27 June 2007.

20 April 2007

Raytheon's Skyguard "Amoun" successfully test fired a missile at a test range near Cairo. The Skyguard Amoun consists of "two launchers, each with four missiles, two 35 mm guns, and a fire control radar." The new battery will upgrade Egypt's air defense system, with all 40 of Egypt's Amoun launchers upgrading to this solid-state transmitter.

— Skyguard AMOUN Scores Direct Hit in Live Missile Firing Using Raytheon-Upgraded Launcher," *United Press International*, 20 April 2007.

17 April 2007

Russia successfully launched its Dnepr rocket, which sent Egypt's MisrSat-1 satellite into orbit alongside satellites from Saudi Arabia, and the United States, among others. The MisrSat-1 is "intended for remote sensing of Earth and scientific research.

— "Russia's RS-20B Missile to Remain on Combat Duty," *BBC*, 17 April 2007; "Dnepr Rocket Launches 14 Satellites,"

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Agence France Presse, 17 April 2007; "Russian Rocket Launches Cluster of Foreign Satellites, Including 7 Built by U.S. Students," Associate Press, 17 April 2007.

27 March 2007

Russia announces that the launch of its Dnepr rocket will be delayed. The rocket will carry Egypt's MisrSat-1 satellite into orbit. The launch was originally scheduled for March 27, 2007, but will now be launched the on the 17th or 18th of April.

— Russia Satellite Launch from Baikonur Delayed," BBC, 27 March 2007.

19 March 2007

Boeing has renewed its contract to provide the Egyptian government with the Avenger defense system. According to the contract, Egypt should receive the Avengers by September 2008. Prior to this order, Boeing delivered the system to Egypt from 2000-2004. [Note: The Avenger is a pedestal mounted Stinger. It is a "man-portable shoulder or platform fired, anti-cruise/aircraft missile for Short Range Air Defense (SHORAD)."]

— "Egypt to Receive Avenger Low-Level Air Defense System," *Inside the Army*, 19 March 2007; Raytheon, *Missile Systems of the World*, (Lexington, Massachusetts: AMI International, 1999), p.204; "Avenger (Pedestal Mounted Stinger)," *Military Analysis Network*, Federation of American Scientists, www.fas.org, March 2007.

25 February 2007

The *Jerusalem Post* reports that Egypt is preparing to launch a surveillance-satellite in March. The report claims the first satellite will be launched from Kazakhstan and that a second satellite is being constructed in Italy, with completion anticipated by the end of the year.

— Yaakov Katz, "Egypt to launch first spy satellite Tuesday," *Jerusalem Post*, 15 January 2007; "Iran Rocket Test 'wake up' Call," United Press International, 25 February 2007.

January 2007

Raytheon Co. is awarded the contract to provide support for Egypt's SM-1 missile fleet. Missile assembly, testing and delivery are included in the contract.

[Note: The SM-1 is a medium-range naval air defense cruise missile.]

— "Raytheon Gets 60 mln usd of Contracts for Standard Missile-1 Support Services," AFX International Focus, 10 January 2007; "Raytheon Strikes SM-1 Deal with Egypt and Spain," Jane's Defense Weekly, 22 January 2007; Raytheon, *Missile Systems of the World*, (Lexington, Massachusetts: AMI International, 1999), p198.

November 22, 2006

VT Halter Marine, a U.S. shipbuilding firm, receives a \$165 million increase to a \$28.8 million contract with the U.S. Navy for the design phase of three Fast Missile Craft for Egypt under the foreign sales program. The increase is intended to cover parts for the ships that VT Halter Marine does not fabricate, such as: engines, weapons systems, and transmissions. The total project is estimated to cost \$450 million. These are anti-surface, anti-aircraft, and anti-electronic warfare ships that are intended to protect the coastal areas of Egypt from terrorist attack that could disrupt shipping. [Note: See 2 December 2005 entry.]

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— Michael Newsom, "Big Day for VT Halter: \$165M Contract Increase Gained," *The Sun Herald*, 23 November 2006.

2 September 2006

A Turkish report reveals that recently a vessel was stopped by Turkish authorities due to information from the Israeli Mossad that it was bringing weapons to HAMAS, but it was in fact loaded with parts for upgrading Egypt's SA-3 missiles as per a contract with Russia.

— "Lebanese Press Highlights 02 Sep 06," BBC, 5 September 2006.

31 July 2006

Madison Research Corp. receives a \$35,883,441 "firm-fixed-price contract" to provide Chaparral missile "shelf life items" to Egypt. [Note: The Chaparral missile is a short-range, anti-cruise and anti-unmanned aerial vehicle missile.] The deliveries should be finished by the end of July 2009.

— "US DOD: Contracts," M2 Presswire, 4 August 2006.

27 June 2006

Boeing concludes a \$50 million foreign military sales agreement to supply Egypt with an unknown number of Avenger short-range air defense systems. [Note: This system uses Stinger missiles and is intended for tactical defense and convoy protection from unmanned aerial vehicles, cruise missiles, and helicopters.] According to *Jane's Defence Weekly*, this order might be part of a 2005 package that Egypt requested, which included 25 Avenger units. Also, they state that this order will provide Egypt with two more "short-range air-defence brigades of 12 Avenger units per brigade" and one system is to be an "operational float" or a training model. Egypt should receive the systems by September 2008. Boeing provided Avengers to Egypt from 2000-2004 according to another foreign military sales agreement.

— "Boeing Awarded Contract to Build Avengers for Egypt," Boeing, 27 June 2006; Robin Hughes, "Egypt to Get More Avengers," *Jane's Defence Weekly*, 12 July 2006; Stanley Carvalho, "Boeing Signs \$50M Avenger Deal for Egypt," *Financial Times*, 30 July 2006.

27 June 2006

Boeing Integrated Defense Systems and Egypt have signed a Foreign Military Sales agreement (FMS) for an undisclosed number of Avenger short-range air defense fire units. According to a statement provided by Boeing, "the \$50 million contract includes associated spares and logistics support." The Avenger system has an anti-cruise missile capability, and delivery is due to be completed by September 2008. The purchase will provide Egypt with two more short-range air-defense brigades each consisting of twelve Avenger units.

— "Boeing Awarded Contract to Build Avengers for Egypt," Boeing, 27 June 2006; Robin Hughes, "Egypt to Get More Avengers," *Jane's Defence Weekly*, 12 July 2006; Stanley Carvalho, "Boeing Signs \$50M Avenger Deal for Egypt," *Gulf News*, 30 July 2006.

20 April 2006

A certification for the predicted retransfer of TOW missiles to Egypt from the Royal Netherlands Army is sent to the U.S. Senate Foreign Relations Committee from the Assistant Secretary of Legislative Affairs. [Note: This is a truck-

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mounted system designed to destroy armored vehicles.]

— U.S. Fed News, "State Dept. Certification of Proposed Retransfer of Defense Articles or Defense Services to Egypt Sent to Senate," U.S. Fed News, 20 April 2006; "M966/M1036 HMMWV TOW Missile Carrier M1045/M1046 HMMWV TOW Missile Carrier," *Federation of American Scientists Website*, as viewed in April 2006.

3 April 2006

The second phase of conversions of Egypt's S-125 Pechora missile system to the Pechora-2M system is beginning. [Note: The S-125 Pechora missile system is also known as the SA-3 Goa and is a Russian, surface-to-air, anti-cruise missile system. The Pechora-2M system is a longer range version that can hit multiple targets.] This task is being carried out by the Russian Defense Systems Intergovernmental Industrial and Financial Group. A total of 30 systems are being converted in three phases. The Pechora-2M system will improve the efficiency of the missiles, as well as lengthening the service life. Egypt is also acquiring an electronic warfare system that defends the Pechora-2Ms from anti-radar missiles.

— Nikolai Novichkov, "Russia's Pechora Upgrade for Egypt Begins Second Stage," *Jane's Defence Industry*, 1 May 2006; Nikolai Novichkov, "Egyptian S-125 SAM Upgrade Moves Ahead," *Jane's Defence Weekly*, 12 April 2006; "S-125 (SA-3 Goa)," *Missile Threat Website*, 1 May 2006; Raytheon, *Missile Systems of the World*, (Lexington, Massachusetts: AMI International, 1999) p. 100.

3 March 2006

Egypt is alleged to have purchased Boeing's Joint Direct Attack Munition (JDAM) system. [Note: This is a system that upgrades unguided free-fall bombs to "smart" bombs.]

— "Norway Signs Contract for Boeing JDAM," *Jane's Missiles and Rockets*, 3 March 2006; "Joint Direct Attack Munition (JDAM) Backgrounder," *Boeing website*, as viewed on February 2006

2 December 2005

The U.S. Department of Defense announces that it has issued a contract for VT Halter Marine, a U.S.-based company, to design and produce up to three fast attack crafts (FACs) for the Egyptian Navy. The first phase is a \$28.8 million contract to produce a functional design; the second phase is the production of the fleet. The Egyptian Navy is also receiving a U.S. Defense Department contract from Raytheon to outfit the FACs with the Rolling Airframe Missile (RAM) Mk-49 point-defense system [Note: This is a system that is intended to intercept anti-ship and cruise missiles.] The expected completion date of the contract is March 2009. Also, the Egyptian Navy has placed an order for the Harpoon Block-2 missile system for the FACs [Note: The Harpoon Block-2 missile system is an anti-ship and land-strike system developed by Boeing.]

— Robin Hughes, "Egyptian Fast Missile Boat Programme Revived," *Jane's Defence Weekly*, 2 December 2005; Nick Brown, "Egyptian Fast Attack Craft Set to Receive RAM System," *Jane's Navy International*, 22 December 2005; "Egypt Orders Missile Defense for FACs," *Middle East Newline*, 22 December 2005; "The Rolling Airframe Missile (RAM) Guided Missile Weapon System is the World's Most Modern Ship Self-defense Weapon," *Raytheon*, 9 February 2006; "Harpoon: Overview," *Boeing Website*, as viewed on 15 February 2006.

22 November 2005

Egypt is receiving part of a \$7.9 million U.S. Department of Defense contract from Raytheon Co. of Tucson, Arizona

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for full service support of the Standard Missile-1 (SM-1), which is deployed on Egypt's Oliver Perry-type vessels.[Note: The SM-1 is an anti-cruise missile ship-launched missile developed by Raytheon.] The contract is a "firm-fixed-price modification" of an existing contract and is expected to be completed by June 2008.

— "Raytheon Co. Awarded Contract for Full Service Support," *Info-Prod Ltd.*, 23 November 2005; "Egypt Receives SM-1 Missile Support," *Middle East Newslines*, 23 December 2005; Raytheon, *Missile Systems of the World*, (Lexington, Massachusetts: AMI International, 1999), p.198.

11 November 2005

The new Egyptian Armed Forces Chief of Staff, Lt. Gen. Sami Annan, is reportedly expected to consider long-range missiles for the Egyptian arsenal.

— "General Sami Annan," *Intelligence Online*, 11 November 2005.

30 August 2005

Egypt is hosting and participating in the joint military exercise named "Bright Star" in conjunction with the United States and 11 other countries. The operation, beginning 10 September, is due to last through 3 October 2005. It is meant to aid in "readiness and interoperability . . . [to] strengthen ties among U.S., Egyptian participating forces."

— "Washington in Brief," *Washington Post*, 7 September 2005.

3 August 2005

Egypt's proposed purchase of 25 Avenger air-defense missile launchers from Boeing Aerospace Company on 27 June 2005 is meant to outfit two "Egyptian short-range air-defense brigades whose SAM components include two six-launch vehicle battalions." One Avenger is intended for training purposes or as an operational float.

— David C. Isby, "Egypt Requests More Avenger SAM Launchers," *Jane's*, 3 August 2005.

30 June 2005

The Commander of the Egyptian Air Defense Forces Lieutenant General Sami Anan states in a news conference that Egypt is establishing a new missile system to augment the ADF's capabilities.

— "Egyptian Air Defense Corps Commander on New Missile System, Other Improvements," *Al-Akhbar*, 30 June 2005, in FBIS Document GMP20050702007009.

29 June 2005

The U.S. Department of Defense permits the sale of 25 Avenger air-defense missile launchers to Egypt. [Note: The Avenger is an anti-cruise missile Pedestal Mounted Stinger system produced by Boeing Aerospace Company.] The deal includes 25 High Mobility Multi-Purpose Wheeled Vehicle carriers for the launchers. The Department of Defense states this sale will "reduce Egypt's dependence on its old Soviet supplied air defense systems and enhance potential interoperability with U.S. forces."

— "US Agrees to Sell Anti-Aircraft Launchers to Egypt," *Associated Press*, 29 June 2005; "Pentagon Authorizes Sale of 25 Air Defense Units to Egypt," *Agence France Presse*, 29 June 2005; "Avenger - Pedestal Mounted Stinger," 5 May 2000, www.fas.org.

6 June 2005

Raytheon Co., a United States defense contractor, is given an \$11.2 million contract by the U.S. Navy for service to

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Egypt's Standard Missile-1 (SM-1). This includes "logistics support, depot repair, missile recertification, engineering and technical support."

— "Raytheon Gets \$11.2M Contract from Navy," Associated Press, 6 June 2005.

7 April 2005

Egypt proposes to purchase "over 1,000 portable missile launchers." Russia's Rosoboronexport and the Chinese State Corporation are in competition for the contract. Russia, however, is constrained by promises made to the United States vowing not to sell sensitive military technology to unstable areas.

— Leonid Gankin, "The First Coming of Putin," *Kommersant*, 26 April 2005.

27 April 2005

Head of the Russian Rosoboronexport arms enterprise Sergey Chemezov tells a reporter that negotiations for the sale of an air defense system to the Egyptian government are in their final stages. Egypt is also looking to purchase Russian anti-aerial defense missiles.

— "Russia Nears Deal to Sell Air Defence Systems to Egypt," Agence France Presse, 27 April 2005.

15 March 2005

Russia will convert and launch decommissioned intercontinental ballistic missiles to place satellites in orbit for several countries including Egypt. Anatoly Perminov, agency chief at Roskosmos, says the satellites will be launched from Russian space facilities.

— "Satan Missiles becomes Peaceful and Profitable," Yuri Zaitsev, Russian Information Agency Novosti, 14 February 2005.

8 March 2005

Serbia-Montenegrin Defense Ministry provides the Egyptian Navy with two self-propelled Rubez type anti-ship missile coastal launchers. In addition to training over the past several months in the use of the Rubez system, Egypt also purchased five Osa I class missile boats that are being modified prior to delivery. Two Serbia-Montenegrin Navy diesel-electric submarines have also been a topic of interest by the Egyptian Navy and may lead to a contract.

— "Egyptian Navy Squadron Leaves Serbia-Montenegro Carrying Missile Systems - Daily," Podgorica Vijesti, 8 February 2005, in FBIS Document GMP20050308000310.

21 February 2005

A senior U.S. official states that North Korea had been exploring and proposed selling missiles to Egypt as recently as six months ago. Egyptian apprehension of the U.S.-led Proliferation Security Initiative may have prevented the transactions from ever materializing.

— "U.S. Eyes Crackdown on N.Korea Money Laundering," Reuters, 21 February 2005.

18 February 2005

Sergey Chemezov, general director of "Rosoboroneksport" Federal State Unitary Enterprise (subordinate to the Russian committee for military technical cooperation with foreign states), announces a contract may soon be signed with Egypt to launch a spacecraft.

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— "Babkin: Rosoboroneksport's Chemezov on Russia's International Sales," *Nezavisimoye Voyennoye Obozreniye*, 18 February 2005, in FBIS Document GMP20050218000311.

8 February 2005

Mikhail Dmitriyev, head of the Russian federal service on military technical cooperation with other countries, says Egypt is one of the "Middle East states with which Russia has or establish[ed] ties in military-technical cooperation." Since 2000, Mr. Dmitriyev points out, Russia has expanded its military technical cooperation, supplies of weapons and military hardware into the Middle East region.

— "Middle East Remains Largest Regional Arms Sales Outlet for Russia," ITAR-TASS, 8 February 2005.

4 February 2005

Official Israeli sources describe Egypt's aggressive space program as a response to Israel's Ofek program. An Egyptian spy satellite, which was constructed in cooperation with the Yuzhnoye company of Ukraine, will be launched in February. In addition, another spy satellite is under construction in Italy. A launch date for this satellite has not been scheduled.

— "Israeli Article Says Ofek-6 Failed Due to Small Budget, Views Future Development," *Ma'ariv*, 04 February 2005, in FBIS Document GMP20050204000081.

1 February 2005

The Haaretz reports that Egypt's long range missiles are capable of striking any point in Israel.

— "MK Steinitz: Israel Must Develop Tactical Missiles," Haaretz, 1 February 2005.

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2004-2000

17 October 2004

Israel objects to American sales of advanced weapons to Egypt and Saudi Arabia. Yuval Steinitz, chairman of the Knesset Foreign Affairs and Defence Committee, warns that the U.S. sales could destabilize the region and insists on a "technological edge" with regard to electronics and missiles. Steinitz characterizes Egypt as a "hostile country."

Army Radio says that Israel is especially concerned about the sale of JDAMs (joint direct attack munitions), which Israel already has, to Egypt.

— Arie O'Sullivan, "U.S. Arms Sales to Egypt, Saudis Threaten Israel - MK Steinitz," *The Jerusalem Post*, 17 October 2004.

5 June 2004

Turkish Foreign Minister Abdullah Gul has announced that Egypt confirmed ownership of the seized weapons found in ship containers bound for Egypt from the Ukraine. "We have started initiatives with the Egyptian and Ukrainian authorities," states Gul.

— "Gul: Egypt Says Rocket Shipment Belongs to It," *Financial Times*, 5 June 2004.

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3 June 2004

Turkish State Minister Kursad Tuzmen states that an investigation is underway with regard to "rockets, a radio-controlled missile and rocket launcher pads" discovered in containers on a ship transiting from Ukraine to Egypt. The ship was docked in Istanbul for refuelling; the cargo had been declared as spare parts.

— "Turkish Minister Says 'Sophisticated' Weapons Found Aboard Ship," *Anatolia News Agency (Ankara)*, 3 June 2004.

31 March 2004

WorldTribune.com suggests that evidence uncovered by a British-U.S. team of nuclear inspectors in Libya confirms an exchange of nuclear and missile technology between Libya and Egypt in late 2003. U.S. officials opine that the alleged cooperation is unlikely to be raised during the April 12th meeting between Presidents Bush and Mubarak.

— "Report: Libya, Egypt Swapped Nukes," *United Press International*, 31 March 2004.

6 February 2004

Middle East Newline reports the award of a \$54 million contract to Raytheon Systems by the U.S. Department of Defense, supplying 414 AIM-9M-2 missiles to Egypt and another 182 to Taiwan.

— "U.S. Sells Advanced Missiles to Egypt," *United Press International*, 6 February 2004.

28 August 2003

Lt. Gen. Sami Annan, chief of Egypt's air defense command, revealed in a "recent" news conference that an unidentified new, advanced SAM (surface-to-air missile) has been deployed. The missile is described as "light, mobile and rapidly deployable, ensuring instant detection and response to enemy air strikes."

— "Egypt Deploys New SAM System," *United Press International*, 28 August 2003.

25 June 2003

Under the Foreign Military Sales Program, the Department of Defense has awarded a contract modification in the amount of \$36,323,400 to McDonnell Douglas Corp. for procurement by the Egyptian government of 25 Harpoon missiles and related hardware. Work is expected to be completed in March 2004.

— "USA: McDonnell Douglas Awarded Contract to Procure Missiles," *Financial Times*, 25 June 2003.

15 June 2003

John Bolton, U.S. Undersecretary of State for Arms Control and International Security meets with President Mubarak and his top adviser to discuss monitoring the proliferation of WMD in the Middle East.

— "US Arms Control Chief in Egypt to Discuss How to Stop WMD in Mideast," *Agence France Presse*, 15 June 2003.

4 April 2003

According to Kuwaiti news agency site KUNA, Kuwait is deploying Ammon — the advanced Egyptian anti-missile defence system.

— "Kuwait Deploys Egyptian Ammon Missile Defence Systems," *Financial Times*, 4 April 2003.

October 2002

The US General Accounting Office releases a report on nonproliferation strategies that says the Missile Technology

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Control Regime "helped stop or delay development of missile programs in Argentina, Brazil, and Egypt. However, because national governments use a variety of other policy tools to combat proliferation, it is not possible to attribute these accomplishments exclusively to the regimes."

— "Nonproliferation: Strategy Needed to Strengthen Multilateral Export Regimes," United States General Accounting Office, October 2002.

17 September 2002

Middle East Newslines reports that according to US officials, North Korea has tested components of its Nodong missile in Egypt. The tests were to see if North Korean missile parts and technology could be used in Egypt's missile programs, as well as that of other countries in the region. The tests have mostly failed, according to the officials, a setback for Egypt's intermediate-range missile program. North Korea sent missile experts to Egypt in 2001 for the tests. Egypt has bought some parts, but not enough to make its own missiles. A US official says, "North Korea is making a major effort to sell its Nodong and Taepodong intermediate-range missiles. Several Middle East countries, such as Egypt, Iran, and Libya, are highly interested but they don't want complete missiles, rather technology and key components. What these countries want is North Korean help to establish indigenous missiles based on the Nodong." Assistant Secretary of State John Bolton has pushed a tougher line against Egypt on proliferation. This may have led to the administration's rejection of an Egyptian request for \$130 million for counterinsurgency, perhaps the first time the United States has increased aid for Israel without increasing aid for Egypt.

— "US confirms Egypt tests of N. Korean missiles," *Middle East Newslines*, Vol. 4, No. 349, 17 September 2002.

10 September 2002

The Associated Press reports that Egypt is among 16 nations, aside from the major nuclear powers, with missile technology capable of carrying nuclear weapons.

— William J. Kole, "Proliferation of weaponry has some wondering: Why single out Iraq," Associated Press, 10 September 2002.

14 August 2002

Middle East Newslines reports that a North Korean delegation met with Egypt's parliamentary budget committee, possibly to discuss missile sales. Western diplomatic sources say that this is doubtful however, because Egypt's parliament does not have oversight over military spending. US officials suggest the meeting may be a prelude to a large payment to North Korea for military equipment and missiles; one official states: "Any meeting on cooperation with North Korea involves military. It's as simple as that."

— "Cairo, Pyongyang talks reportedly dealt with new North Korea missile sales," *Middle East Newslines*, 14 August 2002; in FBIS Document GMP20020814000089, 14 August 2002.

9 July 2002

According to *Middle East Newslines*, coincident with a panel presentation to UN Secretary General Kofi Annan on missile proliferation, Egyptian envoy Ahmed Abul Gheit declares that, "Egypt believes that the dangers ensuing from the weapons of mass destruction, mainly nuclear weapons, should have been firstly addressed before dealing

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with the missile issue."

— "Egypt opposes missile proliferation control," *Middle East Newslines*, Vol. 4, No. 256, 11 July 2002.

27 June 2002

Asked in a congressional hearing about Egypt's alleged acquisition of North Korean Nodong missiles, Lt. Gen. Ronald Kaddish does not deny the acquisition, but asks that the matter be discussed in closed session. A congressional staffer says the general's response indicates that Egypt did buy the missiles: "He could have said 'Egypt is an ally' and that's it."

— "Pentagon acknowledges Nodongs to Egypt," *Middle East Newslines*, Vol. 4, No. 246, 2 July 2002.

7 June 2002

Maariv reports that Egypt is buying 50 Harpoon Block II missiles from the United States in a \$400 million deal, but that the land attack feature of these missiles has been eliminated because of Israeli objections. The report says Egypt has 24 Scud launchers.

— Jackie Hugi, "A large and smart army," *Maariv* (Tel Aviv), 7 June 2002; in FBIS Document GMP20020607000177, 7 June 2002.

7 June 2002

Maariv reports that Egypt is buying 50 Harpoon Block II missiles from the United States in a \$400 million deal, but that the land attack feature of these missiles has been eliminated because of Israeli objections. The report says Egypt has 24 Scud launchers.

— Jackie Hugi, "A large and smart army," *Maariv* (Tel Aviv), 7 June 2002; in FBIS Document GMP20020607000177, 7 June 2002.

25 April 2002

Middle East Newslines reports that some countries, such as Japan and South Korea, believe North Korea has had trouble shipping missiles to countries in the Middle East, including Egypt, because of international pressure. But the United States believes that North Korean missile shipments continue via Pakistan and China.

— "Dispute rages over N. Korean missile exports," *Middle East Newslines*, 25 April 2002, www.menewslines.com.

1 April 2002

Middle East Newslines reports that, according to the CIA, Egypt is one of the four largest missile clients of North Korea. North Korea plans to offer new parts and missiles to Egypt this year, including the Taepodong-1, according to US officials.

— "CIA: Egypt is key missile customer of N. Korea," *Middle East Newslines*, 1 April 2002, www.menewslines.com.

9 March 2002

Egypt's ambassador to South Korea, Amr Helmy, denies that Egypt is cooperating with North Korea on missiles.

— "Egyptian ambassador refutes allegations of missile cooperation," *Korea Herald*, 9 March 2002; in Lexis-Nexis, www.lexis-nexis.com.

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4-8 March 2002

During his trip to the United States, US officials question Egyptian President Hosni Mubarak about Egypt's dealings with North Korea on ballistic missiles.

— "Egyptian ambassador refutes allegations of missile cooperation," *Korea Herald*, 9 March 2002; in Lexis-Nexis, www.lexis-nexis.com.

19 February 2002

JoongAng Ilbo reports that since the 1980s, North Korea has sold 250 missiles worth \$580 million to the Middle East, including Egypt.

— Brent (Won-ki) Choi, *JoongAng Ilbo* (Seoul), 19 February 2002, <http://english.joins.com>.

6 February 2002

CIA director George Tenet testifies before the US Senate Intelligence Committee that North Korea continues its exports of ballistic missiles and parts, and Egypt is a major recipient. In a closed session, officials say Egypt has tried to buy the Nodong missile. [Note: See 28 November 2001 entry.]

— "Report: N. Korea preparing new long-range missile test," *World Tribune*, 7 February 2002, www.worldtribune.com;
"CIA: Egypt continues missile projects with N. Korea," *Middle East Newslines*, 12 February 2002, www.menewslines.com.

14-22 January 2002

US Congressional delegations to the Middle East question Egypt about its missile cooperation with North Korea and say the United States will not tolerate it. A delegation of five members led by House Minority Leader Richard Gephardt meets with Egyptian Defense Minister Husein Tantawi. Rep. Henry Waxman says, "We made it clear that we weren't supportive of any effort to go to North Korea for missiles. They said they weren't interested."

Congressional leaders are concerned about a recent classified CIA report that said Egyptian President Hosni Mubarak lied in his denials of missile cooperation with North Korea.

— "Congress discusses N. Korean missiles with Egypt," *Middle East Newslines*, Vol. 4, No. 29, 22 January 2002.

28 November 2001

Egyptian President Hosni Mubarak denies that Egypt is buying North Korean Nodong missiles. "Had there been such a deal, we would have announced it," he says. [Note: See 19 and 27 November 2001 entries.]

— "Mubarak denies Egypt has bought weapons from North Korea," *Agence France Presse*, 28 November 2001; in Lexis-Nexis, www.lexis-nexis.com.

27 November 2001

US congressional sources say Congress has begun an investigation into whether Egypt has bought North Korean Nodong missiles.

— "ROK's Yonhap: US Congress to investigate reports of N.K.-Egypt missile trade," *Yonhap* (Seoul), 28 November 2001; in FBIS Document KPP20011128000008, 28 November 2001.

27 November 2001

Referring to reports that Egypt has agreed to buy North Korean Nodong missiles, a US State Department official

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says, "We believe we should hear what Egypt has to say regarding the latest report on armament transactions with the North and confirm the fact." [Note: See 19 and 28 November 2001 entries.]

— "US out to confirm reports of Egypt's missile purchase," *JoongAng Ilbo*, 28 November 2001; North Korea Net <http://joins.com>.

19 November 2001

Chungang Ilbo reports that according to a diplomatic source in Seoul, "North Korea already clinched a deal that promised to provide its counterpart [Egypt] with Rodong [Nodong] missiles early this year." A researcher for the Korean Institute for Defense Analyses says that North Korea has sold 10 to 24 missiles to Egypt. [Note: The report is unclear as to when or what type of missile.]

— "ROK Daily analyzes possible missile deal between North Korea, Egypt," *Chungang Ilbo* (Seoul); in FBIS Document KPP20011119000096, 19 November 2001.

8 November 2001

A Bush administration official says North Korea is trying sell missiles to three or four countries in the Middle East, though the unnamed official does not name the countries. North Korea and Egypt have reportedly agreed on a missile sale, the report says, though this is not confirmed. [Note: It is not clear whether the US official is the source of this aspect of the report.]

— George Gedda, "North Korea said to be trying to sell missiles in Mideast," Associated Press, 9 November 2001; in Lexis-Nexis, www.lexis-nexis.com.

2 November 2001

The Bush administration sends a classified memorandum to Congress informing it that it intends to provide 53 Harpoon Block II missiles to Egypt.

— John Lancaster, "US-Egypt arms deal questioned," *Washington Post*, 27 November 2001; in Lexis-Nexis, www.lexis-nexis.com.

17 October 2001

Kuwait signs an agreement to buy Egyptian Amun air defense missiles.

— "Kuwait, Egypt sign agreement on purchasing Amun air defense missile system," MENA (Cairo), 17 October 2001; in FBIS Document GMP20011017000272, 17 October 2001.

2 October 2001

Egyptian Minister of Industry and Technological Development Dr. Mostafa al-Refai announces that Egypt has discovered the mineral Tantalum in the eastern desert in the Abu Diab area. The reserve is 50 million tons, making Egypt the world's fourth largest holder of the mineral, which is used in missile and aircraft engine production.

— "Rare mineral Tantalum found in eastern desert," MENA (Cairo), 2 October 2001; in FBIS Document GMP20011002000124, 2 October 2001.

10-12 September 2001

A US military delegation in Cairo, led by Assistant Secretary of Defense Peter Rodman, raises the issue of Egypt's

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missile cooperation with North Korea.

— "Egypt and US hold strategic dialogue," *Middle East Newslines*, Vol. 3, No. 359, 12 September 2001.

7 September 2001

The CIA releases its "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." The report says that, in the period covered by the report, Egypt continued to cooperate with North Korea on ballistic missiles and maintained an inventory of Scud missiles.

— "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," Central Intelligence Agency, www.cia.gov.

9 August 2001

Middle East Newslines reports that Egypt has assured US officials that its missile program remains within "acceptable limits," and does not include developing a variant of the North Korean Nodong missile. The United States believes Egypt's cooperation with North Korea is limited to Scud missiles, and does not pose a short-term threat to Israel or the Middle East, according to State Department officials. US officials have said a panel will be created to talk to Egypt about its missile program, but a State Department spokesman refused to confirm this.

— "State Dept. believes Egypt remains within missile limits," *Middle East Newslines*, Vol. 3, No. 312, 9 August 2001.

26 July 2001

At a US congressional hearing, Congressman Brad Sherman asks Assistant Secretary of State William Burns about Egypt's alleged acquisition of the 800-mile Nodong missile. Burns does not deny Egypt's acquisition of the missile, but asks for the matter to be discussed in closed session. *Middle East Newslines* interprets this as a public acknowledgement of the deal.

— "US acknowledges concern over Egypt's Nodong," *Middle East Newslines*, Vol. 3, No. 296, 30 July 2001.

23 July 2001

Middle East Newslines reports that progress on Egypt's intermediate-range missile program has been halted at the second phase because of US pressure to block Egypt's purchase of 50 missile engines from North Korea. The second phase was to include the production of tubes, guidance systems and North Korean engines, and was to have been completed this year. The third phase involved assembling the missile. Egypt has not developed technologies as planned for the missile and has turned to German and French companies for the necessary technologies, such as guidance systems. US officials believe Egypt is not close to finishing a Nodong variant, but congressional sources say that in November Egypt completed the program's first phase, which consisted of making 10 missiles and receiving North Korean engines.

— "Egypt's missile program stuck in second phase," *Middle East Newslines*, Vol. 3 No. 286, 23 July 2001.

16 July 2001

Middle East Newslines reports that Egypt has suspended plans to buy 50 North Korean missile engines because of US concerns. The report says that starting in 1999, Egypt stepped up its intermediate-range missile program, termed Al-Fatah by a US defense source. The program includes the participation of Libya and has employed parts

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and technology from Iraq and China.

— "Israel doesn't fear Egypt's No-Dong missile," *Middle East Newslines*, Vol. 3 No. 276, 16 July 2001.

11 July 2001

Middle East Newslines reports that Egypt is discussing the resumption of military cooperation with China, which in the past has contributed to Egypt's missile program.

— "China, Egypt discuss weapons cooperation," *Middle East Newslines*, Vol. 3, No. 270, 10 July 2001.

9-13 July 2001

A secret Egyptian Defense Ministry delegation in Washington discusses its ballistic missile cooperation with North Korea. The team gives "satisfactory" replies to US inquiries regarding Egypt-North Korea missile dealings.

— Natan Guttman, "Egypt gives US 'satisfactory replies' on missile deal with North Korea," *Haaretz* (Tel Aviv), 15 July 2001; in FBIS Document GMP20010715000115, 15 July 2001.

5 July 2001

Egyptian President Hosni Mubarak denies reports that Egypt is attempting to produce intermediate-range ballistic missiles. He says Egypt does not need such a missile because it does not have any hostile intentions.

— "Mubarak Denies Nodong Missile Program," *Middle East Newslines*, Vol. 3 No. 262, 5 July 2001.

Second half of 2001

According to *Middle East Newslines*, Egypt receives a shipment of 24 North Korean Nodong missiles, range 1200km. The missiles do not have engines, but Egypt reportedly also receives a shipment of 50 North Korean engines through Libya. [See 19 November 2001 entry.]

— "Evidence emerges of Egypt Nodong purchase," *Middle East Newslines*, Vol. 4, No. 208, 5 June 2002.

24 June 2001

Egyptian Foreign Minister Ahmed Maher in Washington rejects reports that Egypt is developing medium- or intermediate-range ballistic missiles.

— "Maher rejects US criticism of Egyptian rights record," *Middle East Newslines*, Vol.3, No.245, 23 June 2001.

21 June 2001

Coinciding with Egyptian Foreign Minister Ahmad Maher's arrival for his first official visit in Washington, *Middle East Newslines* reports that as many as 300 North Koreans work in Egypt on its missile program. In the last two years, the number of North Koreans working on missile programs in Libya and Egypt has risen, and Egypt may be developing missiles in Libya. US officials say the issue of North Korean participation will not be raised with Maher because he is not the appropriate person, according to the report. Some members of Congress are considering cutting aid to Egypt if the sale of Nodong engines is not curtailed. *Novosti Nedeli* reports that the North Koreans in Egypt are working to increase the range of Egypt's Scud missiles and that according to sources at the Israeli embassy in Washington, Israeli "special services" and the American-Israeli Public Affairs Committee were involved in leaking the news concerning Egypt and North Korean missile cooperation on the eve of Maher's visit to the United States.

— "Up to 300 N. Koreans aid Egypt's missile program," *Middle East Newslines*, Vol. 3, No. 242, 21 June 2001; Mikhail

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Falkov, "Jerusalem attacks Cairo via Washington," *Novosti Nedeli* (Tel Aviv), 21 June 2001; in FBIS Document GMP20010625000058, 21 June 2001.

21 June 2001

Egyptian Foreign Minister Ahmed Maher meets with Secretary of State Colin Powell. The Bush administration is concerned about Egypt's missile cooperation with North Korea, which is said to include the purchase of 50 Nodong engines. However, Maher says that Egypt's missile cooperation with North Korea has ended.

— "Cooperation," *Middle East Newslines*, Vol. 3, No. 244, 22 June 2001.

18 June 2001

Middle East Newslines reports that, according to US government sources, Egypt is negotiating with North Korea to buy 50 Nodong missile engines, the most major component Egypt has bought in its 20 years of missile cooperation with North Korea. The United States wants to stop the sale and has raised the issue with Egyptian officials.

According to the report, the story was first reported in the *Maariv* daily newspaper in Israel.

— "U.S. tries to stop No-Dong sale to Egypt," *Middle East Newslines*, Vol. 3, No. 236, 18 June 2001.

June 2001

The Arms Control Association publishes a report on missile proliferation that says Egypt has the following operational missiles: Scud-B (range 300km, 1000kg payload) from the Soviet Union; Project-T (range 450km, payload 985kg) made domestically with help from North Korea; the Scud-C (range 550km, payload 600kg) from North Korea. In addition, Egypt is developing Vector missiles (range 685km, payload 450kg) with help from North Korea.

— "Global Missile Proliferation," Arms Control Association Fact File, www.armcontrol.org.

June 2001

The Jerusalem Center for Public Affairs publishes a report by Gerald Steinberg that states, "Following the Iranian model, Egypt appears to be seeking the technological capabilities to produce its own missiles. These activities have reportedly led to tension between Washington and Cairo."

— "Israel doesn't fear Egypt's Nodong missile," *Middle East Newslines*, Vol. 3 No. 276, 16 July 2001.

14 May 2001

US and European intelligence sources report that Egypt is pursuing its missile program. The sources report that Egypt has obtained components from Germany via North Korea to develop the 450km Project-T missile, the 900km Al Bader [Badr 2000], and the 1200km Vector missile.

— Steve Rodan, [no title], *Middle East Newslines*, 14 May 2001, www.menewslines.com; 23 August 2002 www.menewslines.com.

27-30 April 2001

Egyptian President Hosni Mubarak and Russian President Vladimir Putin meet in Moscow. Among other things, they are expected to discuss the sale of Russian missiles to Egypt. Russian and Egyptian sources say Mubarak is interested in medium-range missiles and wants to discuss the possibility of Egypt manufacturing them. Mubarak reportedly cuts his trip short and skips a visit to a missile factory, but Russian Foreign Minister Ivan Ivanov says

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Mubarak left on schedule.

— "Egypt, Russia prepare to sign nuke accord," *Middle East Newslines*, 27 April 2001, www.menewslines.com;
"Egypt, Russia agree on nuclear cooperation," *Middle East Newslines*, 30 April 2001, www.menewslines.com.

5 April 2001

At a luncheon in Washington, Egyptian President Hosni Mubarak denies Egypt is cooperating with North Korea on ballistic missiles.

— *Middle East Newslines*, Vol. 3, No. 136, 5 April 2001.

15 March 2001

The Carnegie Endowment for International Peace publishes a report on ballistic missiles in the Middle East that says Egypt fields Frog-7 and Scud-B missiles. The report says Egypt can probably also field the Scud-C missile with a range of 500km, or a close variant of it, with North Korean help.

— Justin Anderson, "Ballistic Missile Arsenals in the Middle East," *Proliferation Brief*, Vol. IV, No. 3, 15 March 2001, Carnegie Endowment for International Peace, www.ceip.org.

9 March 2001

Middle East Newslines reports that the latest CIA report on proliferation states, "Egypt continues its effort to develop and produce ballistic missiles with the assistance of North Korea. This activity is part of a long-running program of ballistic missile cooperation between these two countries."

— "Egypt continues to obtain N. Korean missile help," *Middle East Newslines*, 9 March 2001, www.menewslines.com.

9 March 2001

Middle East Newslines reports that Egypt continues cooperation with North Korea to develop missiles, including parts, material, and expertise. Egypt has rejected warnings from the United States on the matter, according to US officials.

— "Egypt continues to obtain N. Korean missile help," *Middle East Newslines*, 9 March 2001, www.menewslines.com.

March 2001

Israeli Prime Minister Ariel Sharon visits the US Congress and tells an informal group of House and Senate members that Egypt is trying to procure "advanced" Scud missiles from North Korea.

— Eli J. Lake and Richard Sale, "Egypt Buys Missiles from North Korea," *United Press International*, 18 June 2001.

6 February 2001

Al-Akhbar reports that the Arab Organization for Industrialization, which represents Egypt's military industry, has increased the range of the Sakr-36 missile to 43km while retaining the 122mm caliber launcher. The Sakr-36 is designed to shell targets such as mechanized infantry and air defense, and can penetrate 70mm of armor, the report says.

— Faruq al-Shadhuli, "Development of Egyptian Sakr missile range to 43 km," *Al-Akhbar* (Cairo), 6 February 2001; in Lexis-Nexis, www.lexis-nexis.com.

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November 2000

Egypt completes the first phase of its intermediate-range ballistic missile, which consists of producing 10 missiles and receiving North Korean missile engines, according to US congressional sources.

— "Egypt's missile program stuck in second phase," *Middle East Newslite*, Vol. 3 No. 286, 23 July 2001.

11 August 2000

The CIA releases a report that says Egypt continues to develop and build ballistic missiles with North Korean help. An Egyptian source denies the report, calling the report "biased and selective."

— Khalid Mahmud, "Cairo surprised by CIA charges on missiles," *Al-Sharq al-Awsat* (London), 12 August 2000; in FBIS Document GMP20000812000020, 12 August 2000.

1 July-31 December 2000

According to the CIA, North Korea obtains raw materials and components for ballistic missiles from "various foreign sources, especially through North Korean firms based in China." Chinese firms are also said to provide "dual-use missile-related items, raw materials, and/or assistance to North Korea." As a supplier, North Korea provides "significant ballistic missile-related equipment, components, materials, and technical expertise to countries in the Middle East, South Asia, and North Africa." North Korea is said to "maintain a missile relationship" with Egypt, and 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, <http://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.

7 June 2000

Defense Daily reports Egypt is buying 21 percent of a Harpoon weapon system production requirement consisting of two All Up Round (AUR) cans, four AUR containers, five sustainer sections, three sustainer section containers, one rocket motor assembly, four guidance sections with government-furnished equipment seeker, one control section, one control section container, four guidance control units, two AUR Tartars, one exercise section, 13 Tartar launch kits, eight Tartar AUR containers, eight Tartar booster assembly kits, 11 seekers, 34 canister firing kits, 15 capsule canister launch kits, five missile booster kit assemblies, five section container, five sustainer containers, five rocket motor booster container, and five seeker assembly containers. The report also says Egypt is receiving an award for the modification of Phase III of the Harpoon Sustaining Engineering, Seeker Life Extension Program and incorporation of a flight-control electronics ring for guidance control unit-equipped all-up-round missiles.

— "Defense Contract," *Defense Daily*, 7 June 2000.

29 May 2000

Haaretz reports that North Korea is negotiating with Egypt for the sale of new longer-range Scud ballistic missiles. The longer range Scud-D has an approximate range of 700 km. *Haaretz* also reports that "Some believe that Syria is

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producing Scud parts and selling them to Egypt."

— Ze'ev Schiff, "Syria adds new long-range Scuds to arsenal," *Haaretz*, May 29 2000, www3.haaretz.co.il.

24 May 2000

Jane's Defence Weekly reports that Egypt is receiving expertise from North Korea in ballistic missile development.

— Steve Rodan, "Israeli General Voices Concerns Over Egypt," *Jane's Defence Weekly*, 24 May 2000 p. 3.

28 March 2000

Middle East Newslines reports that, "Egypt is importing engines for missiles without any US interference, and government sources warn Washington may be the next exporter of the system.... Egypt is importing missile engines for its ballistic missile program."

— "Egypt Iran Import Engines for Missiles," *Middle East Newslines*, 28 March 2000, www.menewslines.com.

23 February 2000

Jane's Defence Weekly reports that US and Israeli intelligence sources have said that Egyptian government-owned companies have obtained Western technology that is being sent to North Korea. The North Koreans reportedly adapt this technology and return it to Egypt in the form of advanced missile components for Egypt's medium-range ballistic missile program. Israeli sources reportedly claim that Egypt has Scud-C medium-range ballistic missiles with a range of 500km. A US defense analyst reportedly said that Egypt has cooperated with North Korea on missile development and is reportedly able to manufacture a version of the Scud-B ballistic missile.

US defense officials also believe that Egypt might have transferred technology from the Condor missile program, which ended in the late 1980s, to North Korea. The Condor had a range of 800km to 1,000km. In return, Egypt reportedly received advanced missile components for its medium-range ballistic missile program from North Korea's Nodong and the Taepodong missiles.

— Steve Rodan, "Israel, USA Claim Egyptian Missile Links with North Korea," *Jane's Defence Weekly*, 23 February 2000, p. 18.

16 February 2000

Michael Hardin, former CIA Senior Analyst on missile proliferation, identifies the Condor's termination as the foremost missile nonproliferation success to date, and offers a technical overview of the program. His public address before the Carnegie Endowment for International Peace in Washington, DC, was reviewed and approved by the CIA's Publication Review Board. Hardin says, "the most successful and significant case study of missile nonproliferation is that of the Condor II SRBM (a.k.a. Vector and Badr 2000). This multibillion dollar program was a direct derivative of the US Pershing 2 and was in development in Argentina, Egypt, and Iraq but had never reached the flight-test phase of development." Hardin notes that, "although the Condor II was designed with a solid-propellant first stage similar to that of the US Pershing 2, a liquid-propellant second-stage was designed based on an upper stage of an Ariane SLV engine. This original Condor II solid/liquid configuration had many of the same problems as the Indian Agni I MRBM and a solid-propellant second stage was also designed for the Condor II. The new solid-propellant second-stage approach significantly increased the overall system cost and development time as different staging and thrust termination technology had also to be designed or obtained and flight tested — a

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phase never reached." Hardin adds, "the Condor II/Badr 2000 was designed as a mobile two-stage missile with a separating unitary or submunitions dispensing, re-entry vehicle that would have been more difficult to detect and intercept than the several Scud variants actually used by Iraq. The Condor II was also the basis for even larger MRBM, ICBM and SLV designs. History shows that the most economical way to defend against a missile attack is to ensure that the offensive missile system never reaches the production/deployment phase." [Note: A source interviewed by the Center for Nonproliferation Studies (CNS) refutes Hardin's assertion that the Condor II was a derivative of the Pershing 2, stating that the only similarities were "shared ideas on guidance and hardware."] — Michael Hardin, "Missile Defense and Missile Non-Proliferation: The Interactions," remarks before the Proliferation Roundtable at the Carnegie Endowment for International Peace, 16 February 2000, www.ceip.org, 23 August 2002; CNS interview with missile engineer familiar with technical dimensions of Argentine missile program. Source wishes to remain anonymous.

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1999-1997

22 December 1999

Haaretz reports that Egypt has doubled the number of missile launchers this year from 10 or 12 to 24, with about 10 missiles per launcher.

—Amnon Barzilai, "News: In the Middle East, more missiles, same old threats," *Haaretz*, 22 December 1999; in Lexis-Nexis, www.lexis-nexis.com.

12 November 1999

A commentary in *Haaretz* says the United States is forgiving transfers of Scud parts from North Korea to Egypt because the United States wants to improve relations with Egypt and because Egypt is a major military client.

—Ze'ev Schiff, "View from the Nile," *Haaretz* (Tel Aviv), 12 November 1999; in Lexis-Nexis, www.lexis-nexis.com.

28 October 1999

The *Washington Times* reports that a shipment of steel used for missiles arrived in Egypt via Hong Kong in July 1999 from North Korea.

—Bill Gertz, "North Korea Continues to Develop Missiles," *Washington Times*, 28 October 1999, p. 1.

21 October 1999

CNN reports that William Cohen, US defense secretary, has urged Egypt to move forward on the purchase of US-built Patriot air defense missiles to address the emerging missile proliferation threat.

—"Cohen Urges Egypt to Buy Patriot Missile," CNN, 21 October 1999, www.cnn.com.

12 October 1999

Defense Week reports that the US government sold Egypt equipment used in the construction of ballistic missiles, specifically the equipment to help build the gun barrel of M1A1 Abrams Tanks, which can also be used to develop

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ballistic missiles.

—"US Accidentally Sold Missile Tech to Egypt," *Defense Week*, 12 October 1999.

16 September 1999

Robert Walpole, CIA national intelligence officer for strategic and nuclear programs, tells the Senate Foreign Relations Committee, "I ended up working to help stop the Condor II program being worked on by Argentina, Iraq and Egypt. Had it come to fruition, it would have made the Nodong and Taepodong-1 look like toys. It would have been a much better system." [Note: there is speculation that Egypt may have transferred technology from the Condor program to North Korea].

—Steve Rodan, "Israel, USA Claim Egyptian Missile Links with N Korea," *Jane's Defence Weekly*, Vol. 33, No. 8, in Lexis-Nexis, www.lexis-nexis.com.

30 August 1999

Al-Wasat reports that Egypt's limited missile program is a result of Cairo's stance in favor of removing weapons of mass destruction from the Middle East. The report says that Egypt's "Project-T" program, begun in the early 1990s to develop a medium-range ballistic missile based on the Scud-B, is the backbone of its strategic missile deterrent.

—"A dangerous race in a multi-axial world: The missiles club in the Middle East: The century of mass destruction," *Al-Wasat* (London) 30 August 1999; in FBIS Document FTS19990903000290, 30 August 1999.

23 August 1999

The *Los Angeles Times* reports that Kang Thae Yun, a North Korean diplomat and arms dealer who allegedly facilitated transfers between North Korea and Pakistan, is also suspected of arranging to send missile parts to Egypt.

—Dexter Filkins, "N. Korea aid to Pakistan raises nuclear fears," *Los Angeles Times*, 23 August 1999; in Lexis-Nexis, www.lexis-nexis.com.

13 August 1999

The *Jerusalem Post* reports that Egypt has a missile brigade of Scud-Bs and one of Frog-7s, plus perhaps some Scud-Cs.

—"Is Egypt the new enemy?" *Jerusalem Post*, 13 August 1999; in Lexis-Nexis, www.lexis-nexis.com.

17 July 1999

The *Washington Post* reports that the CIA says Egypt is trying to buy technology for improved missiles.

—Steven Mufson, "Losing the Battle on Arms Control; Pakistan-India Nuclear Race is Just Part of a Disturbing Trend," *Washington Post*, 17 July 1999, p. A01.

July 1999

North Korea ships specialty steel with missile applications to Egypt. The steel is shipped through a Chinese firm in Hong Kong.

—Bill Gertz, "North Korea Continues To Develop Missiles; Sells Technology to Rogue Nations," *Washington Times*, 28 October 1999, p. A1; Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Nonproliferation Studies, November 1999, p. 26.

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Mid 1999

US Secretary of Defense William Cohen raises the issue of Egypt-North Korean missile cooperation during his visit to Cairo. According to *Jane's Defence Weekly*, sources in US and Israeli intelligence agencies believe Egyptian firms are sending missile technology from the US and other Western countries to North Korea.

—Steve Rodan, "Israel, USA Claim Egyptian Missile Links with N Korea," *Jane's Defence Weekly*, Vol. 33, No. 8, 23 February 2000.

14 April 1999

Jane's Defence Weekly reports that North Korea is suspected of selling Scud-B and -C missiles to Egypt.

—Robert Karniol, "Vietnam Stocking Up 'Scuds'," *Jane's Defence Weekly*, 14 April 1999, p.17.

23 March 1999

The US State Department implements sanctions against three Egyptian firms for "transferring dual-use technology and missile components" to North Korea. The firms are: Arab-British Dynamics, Helwan Machinery and Equipment Company, and Kader Factory for Developed Industries. Israeli and US intelligence sources reportedly say they believe Egypt has transferred technology acquired from participation in the Condor missile program. Egypt ended its participation in the program in the late 1980s under US pressure.

—Steve Rodan, "Israel, USA Claim Egyptian Missile Links with N Korea," *Jane's Defence Weekly*, Vol. 33, No. 8, 23 February 2000.

19 March 1999

Egypt acquires 24 Northrop Grumman [NOC] AN/APG-68 radars, capable of being integrated with Boeing's Harpoon anti-ship missile.

—"Hill Notifies of F-16s for Egypt, F-11s for Australia," *Defense Daily*, 14 April 1999.

11 March 1999

The United States offers to sell 32 Patriot missiles to Egypt.

—"In brief," Middle East Economic Report, 19 March 1999; in Lexis-Nexis, www.lexis-nexis.com.

11 March 1999

Jane's Defence Weekly reports that Egypt has sought to expand its surface-to-surface missile (SSM) inventories. According to *Jane's*, Egypt also possesses ballistic missiles and is believed to have continued a clandestine missile program as an extension of the Condor project. US and Israeli sources have said that Egypt has acquired North Korean intermediate-range missile technology.

—"Ballistic Missile Forces Shifting Balance," *Jane's Defence Weekly*, 11 March 1999.

13 February 1999

Egyptian General Salah Halabi says the Arab Organization for Industrialization has upgraded the Sakr-40 surface-to-surface missile.

—"Cairo press review via internet 14 March 1999," Cairo Press Review, 14 March 1999; in FBIS Document FTS19990314000724, 14 March 1999.

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February 1999

The CIA publishes a report that says, "Egypt is continuing its efforts to develop and produce Scud-B and Scud-C missiles and to develop two-stage, short-range Vector ballistic missiles. Cairo is also interested in producing medium-range ballistic missiles. In the first half of 1998 Egypt continued to acquire ballistic missile components and related equipment from North Korea. This activity is part of a long-range program of cooperation between these two countries in the sphere of ballistic missiles."

—Usamah al-Ghazali Harb, "Who is destroying US-Egyptian relations?" *Al-Ahram* (Cairo), 18 February 1999; in FBIS Document FTS19990219000533, 18 February 1999.

1999

Egypt steps up its intermediate-range missile program, termed Al-Fatah by a US defense source, which includes the participation of Libya and which has used parts and technology from Iraq and China. Also in 1999, the number of North Koreans working on missile projects begins to increase in Egypt and in Libya, where much of Egypt's missile development is reportedly done.

—"Israel doesn't fear Egypt's Nodong missile," *Middle East Newslines*, Vol 3 No. 276, 16 July 2001; "Up to 300 N. Koreans aid Egypt's missile program," *Middle East Newslines*, Vol. 3 No. 242, 21 June 2001.

8 December 1998

Aerospace Daily reports Egypt is purchasing 33.2 percent of a package of 217 Harpoon missiles, four ballistic air test vehicles, nine launch kits, five midcourse guidance units, six guidance sections, four sustainer sections, four booster sections, two exercise sections, nine booster kit assemblies, and 159 containers.

—"McDonnell Douglas Corp.," *Aerospace Daily*, 8 December 1998; in Lexis-Nexis, www.lexis-nexis.com.

2 December 1998

The *St. Louis Post-Dispatch* reports that the US firm Boeing has been awarded a contract worth about \$245 million to produce 217 Harpoon 1G anti-ship missiles, some of which would be delivered to Egypt.

—Song Kyung M., "Boeing to Make Missiles for Overseas Buyers," *St. Louis Post-Dispatch*, 2 December 1998.

23 November 1998

Al-Ittihad reports that Egypt has agreed to the purchase of the Russian S-300 surface-to-air missiles to increase its defense capabilities against aircraft and ballistic missiles.

—"Patriotski' in a Strategic Deal for Hundreds of Millions, Egypt is Headed Towards the Purchase of Russian S-300 Missiles," *al-Ittihad* (Abu Dhabi), 23 November 1998, www.alittihad.co.ae.

November 1998

Aerospace Daily reports Egypt is buying Harpoon Weapon Station seeker test assemblies with associated spare parts for \$1,810,331.40.

—"Air Force," *Aerospace Daily*, 14 May 1996.

25 September 1995

Hatzofo reports that Egypt is developing a 1,500km-range missile.

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—"Egypt war preparations against IDF viewed," *Hatzofe* (Tel Aviv), 25 September 1998; in FBIS Document FTS19981116001257, 25 September 1998.

4 September 1998

The Pentagon reports that Egypt is receiving missile and space intelligence command lab support services worth \$42.5 million from Sparta Inc.

—"Sparta Inc." Department of Defense News Release, 4 September 1998; in Lexis-Nexis, www.lexis-nexis.com.

September 1998

Aaron Karp, a Senior Faculty Associate at Old Dominion University, writes that Egypt appears to be receiving new installments of technical assistance from North Korea, probably supporting improved Scuds.

—Aaron Karp, "Lessons of Iranian Missile Programs for US Nonproliferation Policy," *The Non-proliferation Review*, Summer 1998 Vol. 5, Number 3.

9 August 1998

An *Al-Ahram* editorial affirms that the United States criticizes Egypt's Scud missiles because it wants Israel to have missile and nuclear superiority over Egypt.

—Cairo Press Review, 9 August 1998; in FBIS Document FTS19980809000465, 9 August 1998.

1 August 1998

Egyptian Foreign Minister Amr Moussa denies that Egypt is developing medium- or long-range missiles.

—"Egypt says no medium-range Scud missiles possessed," *Xinhua*, 1 August, 1998; in Lexis-Nexis, www.lexis-nexis.com.

1 August 1998

A Cairo newspaper editorial criticizes the United States for its concern over Egypt's possession of missiles while remaining silent on Israel's longer-range missiles.

—Abbas Tarabill, "Egypt's missiles and Israel's missiles," *Al-Wafd* (Cairo), 1 August 1998; in "Paper raps US-Israeli campaign against Egypt's missiles," in FBIS Document FTS19980806002129, 1 August 1998.

31 July 1998

President Mubarak says he is astonished by concern over reports that Egypt is developing Scud missiles while other states in the region have longer range missiles.

—"Egypt's Mubarak says Middle East situation 'Getting more complicated,'" MENA (Cairo), in BBC Worldwide Monitoring, 31 July 1998; in Lexis-Nexis, www.lexis-nexis.com.

July 1998

The CIA reports that Egypt obtained in 1997 ballistic missile-related technology components and equipment from North Korea, a partner in joint ballistic missile development.

—"CIA Report On Arms Acquisitions by Selected Nations," July 1998, p. 2.

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5 June 1998

The *Hindu* writes that China may have missile dealings with Egypt, among other countries.

—"Expose may put Clinton Govt. in a spot," *Hindu*, 5 June 1998; in Lexis-Nexis, www.lexis-nexis.com.

5 June 1998

Egypt's former Defense Minister Field Marshal Abdelhalim Abu-Ghazala says nations like Egypt need not employ the threat of nuclear attack as sole deterrent against Israeli aggression. Ghazala believes that reliance on long-range, high-precision missiles with powerful warheads can provide sufficient deterrence, noting the degree of panic caused in Israel by the relatively inaccurate Scud missiles fired at the country during the 1991 Gulf War.

—"Arab Deterrent Need Not Be Nuclear, Says Egypt's Ex-Defense Chief," *Mideast Mirror*, 5 June 1998; in Lexis-Nexis, www.lexis-nexis.com.

21 April 1998

During his tour of the Middle East, US Defense Secretary William Cohen states that the United States will provide Egypt with 50 mobile missile launchers as well as missiles and other weaponry, in addition to the annual military aid of \$1.3 billion.

—Qi Deliang, "Cohen Visit to the Middle East—A Trip Mostly for Arms Sales," Xinhua Domestic Service (Beijing), 21 April 1998; in "China: 'Roundup' on Trip by US Defense Secretary to Middle East," FBIS Document FBIS-CHI-98-114, 24 April 1998.

13 April 1998

The Egyptian government has requested details regarding a claim made by Urs von Daeniken, Swiss federal police chief, that in late 1996 Swiss authorities intercepted an illegal shipment of SCUD ballistic missile parts en route to Egypt. According to von Daeniken, the shipment was halted at the Zurich airport after federal police learned of its contents. The shipment was labeled as bulldozer parts but in fact contained parts for the Russian-made BM-21 rocket launcher used by Egyptian forces. It is believed to have come from an arms procurement agency in North Korea, and to have been transhipped via China for export to Egypt.

—"Egypt Seeks Answers on Swiss Scud Missile Transfer Story" *Haaretz* (Tel Aviv) 13 April 1998 www3.haaretz.co.il.

13 April 1998

Yiftah Shafir of the Jaffe Institute for Strategic Studies says there is limited information available about the Egyptian Al-Badr 2000 missile program, which started in late 1980s with Argentine and Iraqi assistance.

—Amnon Barzilai, "The Chill Wind from the Southwest," *Haaretz* (Tel Aviv), 13 April 1998, www3.haaretz.co.il.

12 April 1998

Egypt summons the Swiss ambassador to Egypt to the foreign ministry following allegations by the Swiss federal police chief that Switzerland had discovered and blocked in 1996 an attempt to smuggle Scud missiles to Egypt.

—"Swiss ambassador summoned over missiles to Egypt claim," Agence France Presse, 12 April 1998; in Lexis-Nexis, www.lexis-nexis.com.

9 April 1998

Egypt's ambassador to the United Nations, while in Switzerland, responds to claims by the Swiss federal police

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chief that Switzerland blocked the sale of Scud parts to Egypt from North Korea in 1996: "It is the first time I have heard about this. If this affair happened in 1996 why was it not disclosed immediately?"

—"Egypt 'Surprised' at Swiss SCUD revelations," Agence France Presse, 9 April 1998; in Lexis-Nexis, www.lexis-nexis.com.

7 April 1998

The chief of the Swiss Federal Police, Urs Von Daeniken, declares that in late 1996 Switzerland blocked sales of Scud-B missile parts shipped from North Korea via China to Egypt. Switzerland seized two shipments at the Zurich airport. The cargo falsely claimed to be parts for bulldozers and machines. This was the first ever discovery of an illegal missile ship through Switzerland, according to Daeniken. The parts were shipped by a North Korean arms supplier. The recipient was an Egyptian company involved with production of chemical and biological weapons, which raised Swiss suspicions. [Note: See 9, 12 and 13 April 1998 entries.]

—"Swiss Blocks N. Korea, China, SCUD Missile Sales to Egypt," Agence France Presse, 7 April 1998; in Lexis-Nexis, www.lexis-nexis.com.

27 March 1998

The *Washington Times* reports that US officials say Egypt has a new 425 mile-range missile called Vector.

—"Pentagon Confirms Details on Iranian Missiles Russia, China Provided Technology," *Washington Times*, 27 March 1998.

12 February 1998

Aerospace Daily reports that Egypt will acquire 42 US Harpoon missiles and containers along with upgrade modification kits for 20 SM-1 missiles. The deal is estimated at \$355 million.

—"Egypt Would Get Frigates, Harpoon Missiles," *Aerospace Daily*, 12 February 1998, p.223; in Lexis-Nexis, www.lexis-nexis.com.

First half of 1998

Egypt continues to get ballistic missile parts from North Korea, according to a report published by the CIA in February 1999.

—Usamah al-Ghazali Harb, "Who is destroying US-Egyptian relations?" *Al-Ahram* (Cairo), 18 February 1999; in FBIS Document FTS19990219000533, 18 February 1999.

December 1997

Egypt is receiving 9 percent of Harpoon and SLAM (Standoff Land Attack Missile) missiles worth \$139,056,372 from the US Navy.

—"Mc Donnell Douglas Aerospace," Department of Defense news release, 15 August 1995.

11 November 1997

Aerospace Daily reports Egypt is receiving slightly more than half [54 percent] of a package of 105 Harpoon missiles, 31 launch kits, 53 sections, 8 spares, 95 shipping containers, integrated logistics support and depot support equipment engineering services.

—"Navy," *Aerospace Daily*, 11 November 1997.

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21 October 1997

Choi Ju-Hwal, a colonel with the North Korean Army who defected to South Korea in 1995, testifies before Congress that North Korea and Egypt have been cooperating in missile-making.

—"North Korea Missile Proliferation," US Congress, Senate Committee on Governmental Affairs, Subcommittee on International Security, Proliferation, and Federal Services 21 October 1997.

2 October 1997

The *New York Times* reports that, according to US intelligence, Egypt has developed the capability to build and launch short-range (185km to 375km) liquid-fueled Scud-type missiles.

—Thomas L. Friedman, "Missile Myopia," *New York Times*, 2 October 1997.

19 September 1997

US Deputy Assistant Secretary of State Bob Einhorn claims that North Korea has exported missile technology to several countries in exchange for oil and hard currency. According to Einhorn, North Korea has earned close to \$1 billion for its missile exports over the past decade and has become the world's largest missile exporter. Einhorn also claims that North Korea's 1,300km-range Nodong missile is already "in the advanced stage" of development.

—Kyodo News Service, "N. Korea Earned 1 Bil Dlr in Missile Exports," Japan Economic Newswire, 20 September 1997; in Lexis-Nexis, www.lexis-nexis.com.

6 September 1997

North Korea denies allegations made by Israeli Prime Minister Benjamin Netanyahu, during a visit to South Korea, about North Korea's missile exports to the Middle East. A Foreign Ministry spokesman condemns the allegations as "a foolish effort to justify the military tie-up between Israel and South Korea."

—"DPRK Foreign Ministry Spokesman on Israeli Prime Minister's Tour of South Korea," Korean Central News Agency, 6 September 1997, www.kcna.co.jp; Korean Central News Agency, 6 September 1997, in "North Korea Rejects South's, Israeli Allegation of Arms Sale to Middle East," BBC Summary of World Broadcasts, 8 September 1997; in Lexis-Nexis, www.lexis-nexis.com.

Early September 1997

The Pentagon notifies Congress that it may sell 32 Harpoon missiles to Egypt.

—James R. Asker, "Let's make a deal," *Aviation Week and Space Technology*, 8 September 1997; in Lexis-Nexis, www.lexis-nexis.com.

28 August 1997

Turkish Deputy Prime Minister Bulent Ecevit says that an Egyptian ship was searched in the Sea of Marmara and was found to be carrying nuclear missile components.

—"Turkey Intercepts Egypt Missile Parts," United Press International, 2 September 1997.

27 August 1997

North Korea cancels missile talks with the United States 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.

—Steven Lee Meyers, "North Koreans Quit Arms Talks over Defections," *New York Times*, 28 August 1997, p. A1; in

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Lexis-Nexis, www.lexis-nexis.com; R. Jeffrey Smith, "North Koreans Cancel US Talks: Protesting Diplomats' Defection, Pyongyang Recalls Team on Missile Issues," *Washington Post*, 28 August 1997, p. A30; in Lexis-Nexis, www.lexis-nexis.com; Norman Kempster, "US Accepts 2 Defecting N. Korean Diplomats," *Los Angeles Times*, 27 August 1997, p. A4; in Lexis-Nexis, www.lexis-nexis.com; US Grants Asylum to Senior North Korean Defectors," Agence France Presse, 27 August 1997; in Lexis-Nexis, www.lexis-nexis.com; "North Korea Pulls Out of Missile Talks with US," Agence France Presse, 27 August 1997; in Lexis-Nexis, www.lexis-nexis.com; Jennifer Hewett and Reuter, "N Korea Demands Return of Defectors," *The Age* (Melbourne), 28 August 1997, p. 15; in Lexis-Nexis, www.lexis-nexis.com; "Foreign Ministry Spokesman Interviewed," Korean Central News Agency, 27 August 1997, www.kcna.co.jp.

26 August 1997

A US official announces that North Korea has exported 370 Scud missiles to Arab countries and is capable of producing 150 Scuds per year.

—Barry Schweid, "North Korean Ambassador, Trade Official Defect, Given Asylum in United States," Associated Press, 26 August 1997; in Lexis-Nexis, www.lexis-nexis.com.

May 1997

The *Washington Times* reports that, "according to sensitive US intelligence information," North Korea is asked to provide Egypt with spare parts for its Scud-Cs, particularly for its guidance systems.

—Bill Gertz, "CIA Seeks Missile Data from Defector," *Washington Times*, 27 August 1997.

August 1997

Egypt receives \$346,000 worth of US Harpoon launch systems.

—"Mc Donnell Douglas Aerospace won a 17.3 mil Navy contract for Harpoon Launch System," Department of Defense news release, 31 January 1996.

31 May 1997

Maj. Gen. Faruq Fayid, chairman of the Sakr factory, says the Fatah-3 missile was recently developed to open gaps in minefields. He says the range of the Sakr and Sakr 36 122mm rockets has been extended to 36km.

—"Report on Military Factories," *MENA*, 5 May 1997, in FBIS Document ID FTS1997060200151.

May 1997

Egypt asks North Korea to provide guidance and control spare parts for Egypt's Scud program, according to US intelligence sources.

— Bill Gertz, "Defector Eyed for Missile Data," *Washington Times*, 27 August 1997.

10 April 1997

The *Washington Times* reports that the US Office of Naval Intelligence (ONI) has said that China has increased the marketing of its anti-ship cruise missiles in the last two years and that Egypt is a likely customer.

—Bill Gertz, "Beijing Creates Military Monster," *Washington Times*, 10 April 1997, p. A1.

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18 March 1997

Aerospace Daily reports that the US Office of Naval Intelligence (ONI) has said that Egypt is expected to buy Chinese-made anti-ship cruise missiles in the near future.

—"US Navy Sees Growing Mine Warfare Threat," *Aerospace Daily*, 18 March 1997.

1997

Egypt obtains ballistic missile-related technology components and equipment from North Korea, a partner in joint ballistic missile development, according to the CIA.

—"CIA Report on Arms Acquisitions by Selected Nations," July 1998, p. 2.

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1996-1994

5 December 1996

The *Defense Daily* reports Egypt is receiving 6.4 percent of a contract for 24 Harpoon missiles and related Standoff Land Attack Missile hardware from McDonnell Douglas.

—"Defense Contracts," *Defense Daily*, 5 December 1996; in Lexis-Nexis, www.lexis-nexis.com.

Late 1996

Swiss authorities intercept an illegal shipment of Scud ballistic missile parts en route to Egypt. According to Urs von Daeniken, Swiss federal police chief, the shipment was halted at the Zurich airport after federal police learned of its contents. The shipment was labeled as bulldozer parts but in fact contained parts for the Russian-made BM-21 rocket launcher used by Egyptian forces. It is believed to have come from an arms procurement agency in North Korea and to have been transshipped via China for export to Egypt. [Note: See 13 April 1998 entry.]

—"Egypt Seeks Answers on Swiss Scud Missile Transfer Story" *Haaretz* (Tel Aviv) 13 April 1998 www3.haaretz.co.il.

Late 1996

North Korea repairs missile production facilities in Egypt that North Korea had provided, including special gyroscope-measuring equipment and pulse code modulation equipment, equipment too sophisticated to make Scuds, according to intelligence sources.

— Bill Gertz, "Defector Eyed for Missile Data," *Washington Times*, 27 August 1997, p. A1.

14 August 1996

Flight International reports that Egypt is contemplating the acquisition of S-300 PMU-1 anti-tactical ballistic missile (ATBM) systems from Russia. According to sources in the Middle East, Egypt is seeking to increase both its ATBM and tactical ballistic missile capabilities. North Korea recently transferred Scud-B missile parts to Egypt to be assembled by "local missile company." Also, the United States has proposed selling Egypt updated Raytheon Hawk missiles.

—"Egypt Checks Up On Russian Anti-Missile," *Flight International*, 14 August 1996, p. 21.

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4 July 1996

Pyongyang Sinmun reports that a Republic of Korea foreign ministry official said that the United States confirmed that Egypt bought North Korean Missiles through the North Korean Changgwang Sinyong Corporation.

— *Pyongyang Sinmun*, 4 July 1996; Gulf 2000, www1.Columbia.edu.

1 July 1996

Armed Forces Newswire Service reports that following Egypt's fallout with Israel over its purchase of Scud missiles, Egypt says that it is resolved to increase its military capabilities in order to defend its national security.

— "Egypt Determined to Proceed with Scud Capability," Armed Forces Newswire Service, 1 July 1996; in Lexis-Nexis, www.lexis-nexis.com.

Second half of 1996

Egypt obtains Scud-related ballistic missile equipment from North Korea and Russia.

— Director of Central Intelligence, "The Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions," Biannual Report To Congress, July 1996 to December 1996.

6 October 1996

Egyptian President Hosni Mubarak says of US and Israeli criticism of Egypt's acquisition of Scud missile parts: "There are cards in a political game called pressure cards. They will not frighten me or anger me....It is not natural to talk about missiles without talking about chemical weapons, especially since everyone says Israel has nuclear powers. We have to solve all these issues equally if we want peace."

— "Mubarak: Criticism of Egyptian-owned Scuds is a political game," Associated Press, 6 October 1996; in Lexis-Nexis, www.lexis-nexis.com.

4 October 1996

Egyptian Field Marshal Muhammad Hussein Tantawi says, "Egypt has possessed Scud missiles for a long time and it is natural for us to constantly perform maintenance on them. Our possession of Scuds is in line with all international agreements and is part of our legitimate right to defend our territory, rights, and gains."

— "Defense minister discusses training, weapons, Scuds," MENA (Cairo), 4 October 1996; in FBIS.

October 1996

The Heritage Foundation publishes a report on worldwide military capabilities. It says Egypt can make Scud missiles, in part because of assistance provided by North Korea. The report says Egypt probably recently bought Scud-C missiles from North Korea with a range of 600 miles; also, Egypt is developing the Vector missile, based on either the Condor II or Scud.

— "Appendix: A military threat assessment," Heritage Foundation Reports, October 1996; in Lexis-Nexis, www.lexis-nexis.com.

22 August 1996

Egyptian President Hosni Mubarak says, "The missiles we own have been with us since 1973; they are not new. If someone is thinking of asking Egypt to eliminate its missiles, then let this apply to all....The missiles we have comply with international laws....I absolutely cannot eliminate missiles owned by our armed forces unless there is

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an all-embracing plan to eliminate all weapons of mass destruction from the region." He says "this matter started after the US secretary of state visited Israel, after the formation of the new government. The Israeli foreign minister indeed said that they would raise the issue of the Scud missiles with the US secretary."

— "Mubarak Addresses Egyptian University Students, Professors," ESC Television (Cairo), 22 August 1996; in FBIS Document FTS19960822000472, 22 August 1996.

6 August 1996

Al-Shaab reports that in his recent visit to the United States, Egyptian President Hosni Mubarak rejected US objections to Egypt's possession of missiles. He said the missiles are in reaction to threats posed by Israel's weapons, and that Egypt has no weapons that threaten other countries.

— "Mubarak reportedly warned US against attacking Libya," *Al-Shaab* (Cairo), 6 August 1996; in FBIS Document FTS19960806000635, 6 August 1996.

30 July 1996

US State Department spokesman Nicholas Burns says Egypt has acknowledged receiving Scud parts from North Korea, but it remains to be determined whether Egypt broke US law or a treaty banning trade in missiles.

— Roy Gutman, "Mubarak: Israel must move quickly," *Newsday*, 30 July 1996; in Lexis-Nexis, www.lexis-nexis.com.

27 July 1996

Arab Republic of Egypt Radio Network reports that Egyptian President Hosni Mubarak will discuss Egypt's view of weapons of mass destruction in his 30 July meeting with President Clinton because of the diplomatic uproar over Egypt's acquisition of Scud missile parts from North Korea.

— Abbas Mutawalli, "Radio suggests Mubarak to raise nuclear file in US talks," Arab Republic of Egypt Radio Network, 27 July 1996; in FBIS Document FTS19960727000206, 27 July 1996.

23 July 1996

Egyptian President Hosni Mubarak says the "Jewish community" in the United States tried to use the Scud missile issue to embarrass Egypt. He says Egypt received a shipment of "spare parts" from North Korea for Scuds purchased from the Soviet Union in March 1973.

— John Lancaster, "Mubarak to Netanyahu: Help me, I'll help you," *Washington Post*, 23 July 1996; in Lexis-Nexis, www.lexis-nexis.com.

7 July 1996

Egyptian President Hosni Mubarak says that reports about Egypt's purchase of Scud missile parts from North Korea are part of a "campaign of incorrect and planned propaganda." He states, "Any time we move forward on our path, we undergo these sorts of campaigns whose authors have their own aims."

— "Mubarak rules out Egypt-Iran-Syria meeting," Agence France Presse, 7 July 1996; in Lexis-Nexis, www.lexis-nexis.com.

7 July 1996

In an interview, Egyptian Foreign Minister Amr Musa says Israel should not protest Egypt's long-range missiles while Israel has nuclear weapons.

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— "Musa on Palestinian Issue, Israel, Missiles," MENA, 7 July 1996; in FBIS Document FTS19960707000141, 7 July 1996.

4 July 1996

Egyptian Foreign Minister Amr Musa says if the issue of missiles is to be discussed, one should include Israeli missiles. Musa says US Secretary of State Warren Christopher did discuss the issue of Scud missiles with Egyptian President Hosni Mubarak in their recent meeting, but it was not a main topic of the meeting.

— "Musa on peace, Scud missiles, other topics," MENA, 4 July 1996; in FBIS Document FTS19960704000273, 4 July 1996.

30 June 1996

General Mohammad Abdel Hamid Shehata, head of the Egyptian Air Force, says Egypt is "currently reinforcing its potential with modern missile systems in order to face sophisticated offensive weapons such as ballistic missiles."

— "Egypt determined to boost military capability," Agence France Presse, 30 June 1996; in Lexis-Nexis, www.lexis-nexis.com.

29 June 1996

Egyptian Defense Minister Mohammed Hussein Tantawi says of the Scud missile issue, "Peace is Egypt's strategic choice but continuing to develop our armed forces is the only way to dissuade those who plan to attack us. An improvement in our forces' combat capability is also the only way to convince our friends and enemies that we are ready to defend our national security."

— "Egypt determined to boost military capability," Agence France Presse, 30 June 1996; in Lexis-Nexis, www.lexis-nexis.com.

29 June 1996

An editorial in *Al-Ahram* states that US and Israeli objections over Egypt's Scud-C missiles constitutes "unacceptable foreign interference" and that the missiles are necessary for Egypt's security. An editorial in *Akhbar al-Yom* states, "Uncle Sam has brought up the issue of the Scud missiles to wage a diplomatic and media war against Egypt to intimidate it and convince it not to embarrass the new Likud government in Israel."

— "Papers reject Washington's 'clamor' over Scud missiles," MENA, 29 June 1996; in FBIS Document FTS19960629000239, 29 June 1996; "Egypt determined to boost military capability," Agence France Presse, 30 June 1996; in Lexis-Nexis, www.lexis-nexis.com.

28 June 1996

Armed Forces Newswire Service reports that Israel has known for a long time about North Korean assistance to Egypt in the production of Scud-B missiles. Egypt has recently agreed to buy an unknown amount of mobile Scud launchers from North Korea, the report says. The trucks for the launchers were bought in Slovakia and modified in North Korea. [Note: Deutsche Presse-Agentur says "Slovenia."]

— "U.S. and Israel discuss Korean sale of Scuds to Egypt," Armed Forces Newswire Service, 28 June 1996; in Lexis-Nexis, www.lexis-nexis.com.

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27 June 1996

Israeli Defense Minister General David Ivri meets with CIA Director John Deutsch in Paris to discuss Egypt's purchase of Scud missiles from North Korea.

— "U.S. and Israel discuss Korean sale of Scuds to Egypt," Armed Forces Newswire Service, 28 June 1996; in Lexis-Nexis, www.lexis-nexis.com.

27 June 1996

After Israel demands an explanation from Egypt regarding its acquisition of Scud-C missiles from North Korea, the Egyptian ambassador to Israel says, "The possession of missiles and modern weapons is a legitimate right of Egypt's to strengthen its defense capabilities and defend the gains of peace." He says he was "surprised by the Israeli reaction to this affair while the Jewish state possesses weapons of mass destruction and refuses to sign the Nuclear Non-Proliferation Treaty." Israeli analyst Danny Leshem writes in the *Yediot Aharanot* that Egypt's expected acquisition of enhanced Scud-C missiles will allow it to hit all of Israel from the Suez Canal area.

— "3 Israeli troops killed, 2 wounded in border ambush by guerillas," *Houston Chronicle*, 27 June 1996; in Lexis-Nexis, www.lexis-nexis.com.; "Netanyahu places blame for Jordan Valley attack on Syria and Iran," *Mideast Mirror*, 27 June 1996; in Lexis-Nexis, www.lexis-nexis.com.

25 June 1996

Samir Ragab, chairman of the state-owned *Al-Gomhouria* newspaper, writes an editorial saying the United States revealed the "implausible" story about North Korean Scud parts shipments to prevent the Arab summit from being hosted in Egypt by sending a strong message to Israel on the Middle East peace process. He writes, "We do not deny that we have possessed Scud missiles since 1984. The range of these missiles is 300 kilometers, which is in accordance with the limits allowed by this agreement [the Missile Technology Control Regime]." Israeli Foreign Minister David Levy says, "Egypt must provide answers on this affair, which took place behind the back of the United States...." Levy says he will raise the matter with US Secretary of State Warren Christopher in a meeting today, the day before Christopher meets with Egyptian President Hosni Mubarak. [Note: See 21 June 1996 entry.]

— "Egyptian newspaper accuses US of fabrication," Xinhua News Agency, 25 June 1996; in Lexis-Nexis, www.lexis-nexis.com; "Concern in Israel over Egyptian Scud missile deal," Deutsche Presse-Agentur, 25 June 1996; in Lexis-Nexis, www.lexis-nexis.com; "Israel demands answers from Egypt on reported missile buy," Agence France Presse, 25 June 1996; in Lexis-Nexis, www.lexis-nexis.com.

24 June 1996

Referring to the recently exposed shipments of Scud materials from North Korea to Egypt, Israeli state television reports, "It is obvious that these surface-to-surface missiles will not be used against Libya or Sudan, but against Israel if the situation deteriorates." Israeli TV Channel 1 reports that North Korea transferred missile launchers from Eastern Europe. [Note: From Slovenia, according to Deutsche Presse-Agentur, to Egypt; see 21 June 1996 entry.]

— "Israel under threat from Egyptian Scuds: TV," Agence France Presse, 24 June 1996; in Lexis-Nexis, www.lexis-nexis.com; Eldad Beck, "News in brief," *Jerusalem Post*, 25 June 1996; in Lexis-Nexis, www.lexis-nexis.com; "Concern in Israel over Egyptian Scud missile deal," Deutsche Presse-Agentur, 25 June 1996; in Lexis-Nexis, www.lexis-nexis.com.

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21 June 1996

The *Washington Times* writes that, according to a CIA report, North Korea has sent materials to Egypt for Scud-C production. This violates US laws and would trigger sanctions, US officials say. The United States has sent a diplomatic protest and US Secretary of State Warren Christopher will probably discuss the issue when he meets Egyptian President Hosni Mubarak next Wednesday. The deliveries have reportedly included steel sheets to make missiles plus support equipment; one shipment in April was so large that Egypt had to find a freighter large enough to handle it. United Press International reports that State Department analysts believe the evidence is "inconclusive at best," according to an aide to Secretary of State Christopher. State Department spokesman Nicholas Burns says Christopher will not raise the issue with Mubarak next week. Burns says, "The United States takes very seriously reports of transfers of items that might contribute to proliferation. We will look into this. If the facts warrant it, we will pursue sanctions." [Note: See March-April 1996 entry.]

— Bill Gertz, "Cairo's missile buy violates U.S. laws," *Washington Times*, 21 June 1996; in Lexis-Nexis, www.lexis-nexis.com; Sid Balman Jr., "US probes Scud shipments to Egypt," United Press International, 21 June 1996; in Lexis-Nexis, www.lexis-nexis.com.

9 May 1996

Aerospace Daily reports that Egypt is receiving 10 percent of an \$18 million modification for a previously awarded contract, for purchases of seeker test assemblies with related spares for a Harpoon Weapons Station manufactured by McDonnell Douglas. [Note: See January 31 1996 entry for previous contract]

— "McDonnell Douglas Aerospace," *Aerospace Daily*, 14 May 1996; in Lexis-Nexis, www.lexis-nexis.com.

19 April 1996

Aerospace Daily reports Egypt is receiving installation and integration capabilities for Harpoon and GBU-15 weapons, and 40 SM-1 Standard missiles.

— "Pentagon Plans Nearly \$2 billion in International Weapons Sales," *Aerospace Daily*, 19 April 1996; in Lexis-Nexis, www.lexis-nexis.com.

17 April 1996

Jane's Defence Weekly reports that Egypt is among the countries that use the SS-1 Scud B [Russian designation R-17]. The missile has a payload of 985kg and a range of 300km; Egypt also has Project T with a 985kg payload and 450km range.

— Duncan Lennox, "Ballistic Missile," *Jane's Defence Weekly*, 17 April 1996.

March-April 1996

The *Washington Times* cites CIA sources in its report of North Korea's delivery to Egypt, between March and April 1996, of seven shiploads of equipment and materials for the production of Scud-C missiles, part of a 1980s licensing agreement between Egypt and North Korea. The *Washington Times* reports that the shipments include "steel sheets for Scuds and support equipment," but the Korean press describes the shipments as containing "rocket motors and guidance systems." Also, the *Washington Times* affirms that Egypt is using technology acquired while working on the Condor missile project in the 1980s to develop a new missile called Vector, with a possible range of 744 miles. According to the International Defense Review, North Korea also assists in the production of

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Scud-C TELs (Transporter-Erector-Launchers) and to "produce a variant with a greater range (450km) under Project T."

— Bill Gertz, "Cairo's Missile Buy Violates U.S. Laws; North Korea Sold Scuds, CIA Says," *Washington Times*, 21 June 1996, pp. A1, A22; Bill Gertz, "CIA Seeks Missile Data from Defector," *Washington Times*, 12 August 1997; Kim Chae Yong, "Puk 3-4 Wöl Egypt'e Scud Missile Chaejoyong Mulcha Konggŭp," *Taehan Maeil*, 23 June 1996, www.joins.com; "Missile Chejoyong Mulchil Pukhan, Egypt'e Konggŭp," *Joongang Ilbo*, 22 June 1996, www.joins.com; "Ballistic Missile Threat Evolves," *International Defense Review*, Vol. 33, No. 10, 1 October 2000; in Lexis-Nexis, www.lexis-nexis.com.

31 January 1996

McDonnell Douglas Aerospace is awarded \$17 million contract for the manufacture of Harpoon Launch Systems and spare parts for Foreign Military Sale (FMS). Egypt will receive 2 percent of the total contract.

— "McDonnell Douglas Aerospace," Department of Defense News Release, 31 January 1996; in Lexis-Nexis www.lexis-nexis.com.

1996

Egypt claims missile cooperation with North Korea ends.

— "Up to 300 N. Koreans in Egypt for Missile Program," *World Tribune*, 21 June 2001, www.worldtribune.com; "Up to 300 N. Koreans Aid Egypt's Missile Program," *Middle East Newslines*, Vol. 3, No. 242, 21 June 2001, www.menewslines.com; "Egypt May Have Acquired No Dong Technology," *Jane's Missiles and Rockets*, September 2001, p. 3.

October 1995

Military Balance 1995-1996 reports that, according to the International Institute of Strategic Studies, Egypt possesses several Soviet-manufactured missiles: the 70km-range FROG-7 and the 300km-range Scud-B.

— International Institute of Strategic Studies, "Missile Proliferation," *Military Balance 1995-1996*, October 1995, pp. 281-285; in Lexis-Nexis, www.lexis-nexis.com.

25 September 1995

Flight International reports that Egypt plans to purchase tactical missiles, aircraft, and fighter-aircraft upgrades worth \$246 million from the US Department of Defense.

— "Egyptian Weapons," *Flight International*, 25 September 1996, p. 4.

June 1995

Rolf Ekeus, head of UNSCOM, meets with Egyptian officials about Egypt's past missile and chemical cooperation with Iraq.

— "UN's Ekeus investigates past weapons cooperation," *Voice of Iraqi People*, 7 June 1995; in FBIS Document FTS19950607000514, 7 June 1995.

3 May 1995

Al Shaab reports that Egyptian missiles have ranges of 50 to 130km, although Israel has stated that Egypt has

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300km-range missiles, possibly referring to modified Scuds.

— Magdi Ahmed Hussein, "Political Islam Review: Al Sha'b," *Al Shaab*, 18 April 1995.

18 April 1995

Chief Editor Magdi Ahmed Hussein of the newspaper *Al Shaab* writes in an editorial that Egypt's lack of action to close the technology gap between Israel and Egypt represents a clear threat to Egyptian national security. Hussein writes that a wide missile technology gap between Israel and Egypt was demonstrated by Israel's recent launch of a satellite using a Jericho missile and Egypt's inability to react accordingly. Hussein notes that the Israeli missile, which can carry a satellite a distance of 6,000km, significantly outpaces any missile in Egypt's inventory.

— Magdi Ahmed Hussein, "The Dangers of the Israeli Satellite and the Irresolute Response," *al-Shaab*, 18 April 1995; in "Writer Laments Lack of Response to Israeli Satellite Program," FBIS Document FBIS-NES-95-085, 3 May 1995.

27 February 1995

Commentator and military analyst Danny Leshem writes in Israel's *Yediot Aharanot*, criticizing a recent intelligence report on Egypt. He writes, "There was, for example, no reference to Egypt's efforts in the field of developing and manufacturing long-range ballistic missiles...."

— "Agreement near on 11 industrial parks for the self-rule areas," *Mideast Mirror*, 27 February 1995; in Lexis-Nexis, www.lexis-nexis.com.

3 February 1995

Israeli Likud leader Ariel Sharon writes in the Israeli newspaper *Yediot Aharanot* that "there are apparently also dangerous concessions to Egypt on the issue of Israel's deterrent strength, instead of demanding that it stop the massive arms buildup and manufacture of missiles."

— "All profits, no losses on any front in Cairo," *Mideast Mirror*, 3 February 1995; in Lexis-Nexis, www.lexis-nexis.com.

30 August 1994

Aerospace Daily reports Egypt is buying 16 Harpoon missiles from McDonnell Douglas Corp. [Note: See 12 April 1994 entry.]

— "Navy," *Aerospace Daily*, 30 August 1994; in Lexis-Nexis, www.lexis-nexis.com.

11 July 1994

The *Jerusalem Post* reports that according to US intelligence officials, North Korea was involved in Egypt's Condor-based missile program in the late 1980s. The officials say Egypt may still be secretly working on the Condor-based program with North Korea. "There is a belief that North Korea has stepped in to replace Egypt's previous partners in the Condor," a US official says. "Together, Egypt and North Korea could be developing a missile that would not be as sophisticated as Condor but far more advanced than anything Pyongyang has today."

— Steve Rodan, "North Korea's leader: A shot in the dark," *Jerusalem Post*, 11 July 1994; in Lexis-Nexis, www.lexis-nexis.com.

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30 May-1 June 1994

Egypt holds military exercises in which it uses its Al-Fatah missile to clear paths in minefields.

— "M1-A1 tank joins live exercises," *Al-Ahram Weekly*, 2 June 1994; in Lexis-Nexis, www.lexis-nexis.com.

June 1994

US officials say Argentina and Egypt could restart their Condor-based missile programs anytime. According to their report, Egypt has developed the capability to make Scuds with help from North Korea and is developing the Vector 1200km-range missile, based on either the Scud or Condor program.

— Bill Gertz, "Scud's bigger brothers," *Air Force Magazine*, June 1994; in Lexis-Nexis, www.lexis-nexis.com.

11 April 1994

The Pentagon announces the potential sale of 32 Harpoon missiles to Egypt for \$57 million.

— Susanne M. Schafer, "Congress told of F-15 sale to Israel," Associated Press, 11 April 1994; in Lexis-Nexis, www.lexis-nexis.com.

11 March 1994

The *Jerusalem Post* publishes an overview of the Egyptian military, including its missile programs: According to Israeli analysts, Egypt is working with North Korea to improve the range and accuracy of the Scud-B. Egypt gave Scud-Bs to North Korea in 1981, which North Korea then reverse-engineered and enhanced into the Scud-C and -D, with ranges 600 and 1000km, respectively; these are available to Egypt. Author Herbert Krosney says Messerschmitt-Boelkow-Blohm may still be helping to develop the Condor II missile [Note: Krosney has written several books on WMD threats in the Middle East]. He says "Egypt's goal is to create a self-sufficient production unit capable of producing, within Egypt, long-range missiles." Joseph S. Bermudez, an internationally recognized analyst, author and lecturer on North Korean defense and intelligence affairs, and currently a consultant to *Jane's Intelligence Review*, says Egypt's missile programs are lesser-known than other third world programs. He says the Egyptian resources that went into the Condor II have been transferred to the improved Scud-B. He says, "There's no evidence to suggest that Egypt has stopped its ballistic missile program....But there's no evidence that it has entered the production stage. It appears that Egypt wants to be able to produce the missiles on short notice, so it continues to acquire technology." He says Egypt will not rely solely on North Korean technology, because they believe it is too crude. "It does not appear that they will produce a Nodong or Scud-C, but a missile based on Condor II with western technology," he says.

— Steve Rodan, "The battle for parity," *Jerusalem Post*, 11 March 1994; in Lexis-Nexis, www.lexis-nexis.com.

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1993-1991

3 October 1993

The *Saudi Gazette* reports that a senior US State Department analyst has said, "Iraq is working with Egypt to co-produce the Condor II missile in Argentina." [Note: It is not clear when the remarks by the unnamed analyst were made or whether they refer to ongoing cooperation between Iraq, Egypt, and Argentina, or to past cooperation.]

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— Tim Kennedy, "US moves to curb Israeli weapons proliferation," Moneyclips, 3 October 1993; www.lexis-nexis.com.

26 September 1993

Argentine Defense Minister Oscar Camilión says Argentina exported 14 rocket engines to Egypt as part of the Condor II project, and he does not know whether or not Egypt transferred them.

— William R. Long, "Argentina abolishes missile program with Iraq," *Los Angeles Times*, 26 September 1993; www.lexis-nexis.com.

30 August 1993

Following a United Nations inspection of Argentina's Falda del Carmen missile plant in Cordoba, Argentine Defense Minister Oscar Camilión says there is "at least one twin to the Carmen de Falda plant in Iraq," and one in Egypt. He says Argentina "had contracts to sell missile motors to Egypt, some of which might have been resold to Iraq."

[Note: See August 1993 entry.]

— "Argentina: Government admits war technology may have reached Iraq," Inter Press Service, 30 August; www.lexis-nexis.com.

13 August 1993

Aerospace Daily reports that Egypt signed a contract worth \$227 million with Loral Aerospace International for missiles and related ware.

— "FMF Abuses Center on Commissions, Travel, non-US Purchase," *Aerospace Daily*, 13 August 1993; www.lexis-nexis.com.

August 1993

UN Special Commission on Iraq (UNSCOM) inspectors discover three plants in Iraq that are identical to those at Falda del Carmen in Argentina. They conclude that the Iraqi Badr-2000 ballistic missile program is a "technical derivation" of the Condor II; they have also found two rocket motors with serial numbers identical to those produced at Falda del Carmen. The Argentine Defense Ministry confirms that UN weapons inspectors discovered two Condor II missile engines produced at the Falda del Carmen factory in Iraq, and that Argentina delivered Condor "elements" to Iraq via Egypt prior to the 1990-91 Persian Gulf War. The ministry also confirms that similar factories in Iraq and Egypt were identical twins of the Falda del Carmen plant that produced the engines found in Iraq. Defense Minister Oscar Camilión denies Argentine involvement in these plants, however, stating, "There has not been any transfer of Argentine technology to Iraq, as the technology in question was fundamentally German." Camilión also rejects reports of contractual agreements of expert collaboration between Argentina and Iraq, but confirms that German technicians had worked on the Condor II project. Egyptian technicians also worked with Argentine experts on the Condor II project, but there is no confirmation that Iraqi technicians participated directly with the Argentines.

— Sergio Persoglia, "Proyecto Cóndor II: entre Falda del Carmen y Bagdad," *Clarín*, 28 February 1998, www.clarin.com.ar; "UN Discovers More Evidence of Iraqi Links to Cóndor Missile Project," *International Defense Review*, November 1993, p. 842; "Government Admits War Technology May Have Reached Iraq," Inter Press Service, 30 August 1993; www.lexis-nexis.com.

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22 June 1993

The *Guardian* reports that International Military Services, a company owned by the British Ministry of Defense, exported parts to Egypt in the 1980s that were used in Russian-designed surface-to-surface missiles that could carry chemical warheads.

— Richard Norton-Taylor, "Chemical warfare equipment sold by MoD 'likely to have gone to Iraq'," *Guardian* (London), 22 June 1993; www.lexis-nexis.com.

26 May 1993

A telegraphic report by the American embassy in Cairo lists military-owned factories in Egypt. It reports that the Sakr Factory for Developed Industries (Factory No. 333) makes missiles, anti-tank weapons, artillery rockets, circuit boards, medical instruments, door knobs and handles, gold plating, farm implements including seed planters, plows, potato planters and harvesters, and grain harvesters. The report says the factory is in Heliopolis, Cairo. Its telephone numbers are 600250 and 660380, and its fax numbers are 2901978 and 660180.

— "Military-owned factories profile," *Market Reports*, 16 June 1993; www.lexis-nexis.com.

17 May 1993

Middle East Defense News reports that Egypt possesses Silkworm missile production capability.

— "Chinese Proliferation Activities," *Middle East Defense News*, 17 May 1993.

7 May 1993

The *Jerusalem Post* reports that Egypt "attaches great importance to the acquisition of surface missiles." Further, Egypt sold "tens of Scuds" to North Korea during the 1980s for help with the Badr-2000.

— Douglas Davis, "Syria, China cooperating on missile development," *Jerusalem Post*, 7 May 1993; www.lexis-nexis.com.

5 April 1993

Middle East Defense News reports that Egypt has Scud-B, FROG-7, Sakr 80, and Sakr 365 missiles.

— "Country reports: Egypt," *Middle East Defense News*, 5 April 1993; www.lexis-nexis.com.

24 February 1993

Shawky Al Saadawy, chairman of Egypt's display at the IDEX 93 Exhibition, says Egypt is negotiating to sell anti-mine missiles to several Gulf states.

— "Consultations among gulf states for purchasing Egyptian missiles," *Moneyclips*, 24 February 1993; www.lexis-nexis.com.

29 January 1993

Yevgeny Primakov, head of Russia's Foreign Intelligence Service, denies that Soviet experts are working to improve Egypt's missiles. [Note: See 11 January 1993 entry.]

— "Chief of Russian Foreign Intelligence Service Primakov cautions Washington against nuclear brain drain from America," *Russian Press Digest*, 29 January 1993; www.lexis-nexis.com.

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18 January 1993

Aviation Week & Space Technology reports that a Western European Union (WEU) study has found that Egypt is developing the 1,200km-range "Badr-2000 Vector" missile and, with North Korean help, the 600km-range "Scud 100."

— Craig Covault, "WEU seeks European missile defense plan," *Aviation Week & Space Technology*; 18 January; www.lexis-nexis.com.

11 January 1993

US News & World Report affirms that Egypt has hired private Russian scientists to work on its long-range missiles. According to this report, they are working at a factory at Al-Maza near Cairo; Egypt wants to produce missiles with a 300-mile range by 1995" and eventually with a 1,000-mile range to deter Iran and Iraq. [Note: See 29 January 1993 entry.]

— Charles Fenyesi, "Washington whispers," *US News & World Report*, 11 January 1993; www.lexis-nexis.com.

1993

A Russian Federation Foreign Intelligence Service report on the proliferation of weapons of mass destruction states that North Korea is seeking specialists from overseas "in order to convert missile manufacturing into a competitive export sector." North Korea is using Egyptian technology to upgrade its Scud missiles for export to the Middle East. [Note: Egypt has a variety of technologies that might interest North Korea, including carbon-carbon, advanced gyroscopes, and solid-fuel. This may also refer to a leakage of UK technology obtained in the British Aerospace/ Arab Organization for Industrialization joint development project. See 1 April 1992 entry.]

— Russian Foreign Intelligence Service (Moscow), 1993, in "A New Challenge After the Cold War: Nonproliferation of Weapons of Mass Destruction," JPRS-TND-93-007, 5 March 1993, pp. 1-39.

19 August 1992

According to Argentine officials, Argentina still has the solid-fueled first-stage cores of 14 Condor II missiles in storage at Falda del Carmen, near Cordoba. "The Condor really is dead, even though like the Phoenix it tends to rise up from time to time," an Argentine official says. More than \$200 million was spent on the project. [Note: See 2 July 1992 entry.]

— Nathaniel C. Nash, "Argentina lagging on missile pledge," *New York Times*, 19 August 1992; www.lexis-nexis.com.

16 August 1992

Gary Milhollin and Gerald White of the Wisconsin Project on Nuclear Arms Control write that because of foreign pressure, the Bush administration eliminated Egypt's Condor II and enhanced Scud missile projects from a Commerce Department list of dangerous missile projects. The list was intended to prevent US firms from cooperating with such projects. Egypt's projects were deleted from the list because it would have been embarrassing to keep them after eliminating the Israeli Jericho missile from the list, the editorial says.

— Gary Milhollin and Gerald White, "Winking at proliferation; Why are US firms still able to aid the Mideast missile race?" *Washington Post*, 16 August 1992; www.lexis-nexis.com.

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3 July 1992

Haaretz reports that in February 1963, Israel sent a squad to assassinate Dr. Hans Kleinwachter, a Germany scientist believed to be working for Egypt's missile program. The squad was unsuccessful despite two attempts. In September 1962, Dr. Heinz Krug, who also was believed to be working for Egypt, disappeared and is thought to have been killed by Mossad agents.

— "Report: Shamir headed Mossad assassination squad," Associated Press, 3 July 1992; www.lexis-nexis.com.

2 July 1992

According to the book *Relaciones Carnales: la verdadera historia de la construccion y destruccion del Condor II*, by journalists Eduardo Barcelona and Julio Villalonga, Saudi Arabia provided 12 missile engines to Egypt, as well as training for Egyptian scientists and technicians. The book further suggests that two Condor II missiles may still exist in Argentina. [Note: See 19 August 1992 entry.]

— "Condor II Brought Back to Life; Book Claims Air Force Has Hidden Away Two Missiles," *Latin American Weekly Report*, 2 July 1992, www.lexis-nexis.com.

29 May 1992

According to an anonymous high-level source in the US State Department, North Korea has concluded another contract to sell Scud missiles in the Middle East. Furthermore, the source says that North Korea is also trying to reach a contract to sell the new missile it is developing to the Middle East. However, the source did not reveal the countries in the Middle East.

— "Pukhan, Chungdonggukkawa Scud Maemae Kyeyak," *Joongang Ilbo*, 30 May 1992; "Pukhan, Taejungdong Such'ulyong Shinhyöng Missile Kaebal," *Joongang Ilbo*, 1 June 1992, www.joins.com.

18 May 1992

Middle East Defense News reports that North Korea is helping Egypt convert a factory south of Cairo to make advanced Scud-B missiles. The factory is owned by Arab British Dynamics, which was created in the 1970s by the Arab Organization for Industrialization to make British-licensed anti-tank missiles, the report says. Egypt hopes to sell to the missile as a local Arab supplier to the region, the report says. [Note: See 1 April 1992 entry.]

— "North Korea corners ME missile market," *Middle East Defense News*, 18 May 1992; www.lexis-nexis.com.

8 May 1992

CIA Director Robert Gates testifies before a Congressional panel [date unknown] that "Egypt has a missile support production facility that could begin at any time."

— "Hearing of the House Banking Committee; Subject H.R. 4803, Nonproliferation of Weapons of Mass Destruction and Regulatory Improvement Act of 1992," Federal News Service, 8 May 1992; www.lexis-nexis.com.

1 April 1992

Flight International reports that British Aerospace and the Arab Organization for Industrialization have agreed to dissolve Arab British Dynamics because of British government concerns that it was building parts for Scud missiles.

— "BAe withdraws from Arab-British Dynamics," *Flight International*, 1 April 1992; www.lexis-nexis.com.

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17 March 1992

The *Jerusalem Post* reports that, according to a CIA official, Egypt may have gotten Patriot missile parts from debris in Saudi Arabia and passed them on to the Chinese.

— "Egyptians involved?" *Jerusalem Post*, 17 March 1992; www.lexis-nexis.com.

13 March 1992

According to a CNN broadcast, 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.

10 February 1992

The *Financial Times* reports that Argentina's Air Force has transferred control of the Condor II project to the new civilian space agency.

— John Barham, "Argentina yields to US over missile," *Financial Times*, 11 February 1992; www.lexis-nexis.com.

5 February 1992

US Rear Admiral Sheaffer [Note: Director of Naval Intelligence] testifies before Congress that China has exported cruise missile systems to Egypt.

— Statement of RADM Sheaffer Before the SSCM (Seapower and Strategic and Critical Materials) Subcommittee House Armed Services Committee, 5 February 1992.

3 February 1992

Middle East Defense News reports that "Egypt has a missile production facility that could begin operations at any time." [Note: See 2 January 1992 entry.]

— "U.S. targets proliferation threat," *Middle East Defense News*, 3 February 1992; www.lexis-nexis.com.

29 January 1992

Flight International reports that the British government has persuaded British Aerospace (BAe) to try to end its involvement with an Egyptian company that is developing Scud variants. The British government learned in 1991 that Arab British Dynamics (ABD) in Cairo, which is 30 percent owned by British Aerospace, planned to make Scud components. The British Foreign tried to persuade British Aerospace to pull out of the joint venture, and BAe has negotiated unsuccessfully with the Egyptian government to end ABD's work on Scuds. ABD was created in the 1970s as a partnership between BAe and the Arab Organization for Industrialization to build British Swingfire anti-tank missiles. [Note: See Early 1991 and 1 April 1992 entries.]

— "BAe told to stop Scud work," *Flight International*, 29 January 1992; www.lexis-nexis.com.

15 January 1992

Moneyclips reports that Egypt will deliver "Ammon" missiles to Kuwait in mid-1992, and that Kuwaiti military personnel have gone to Egypt to train with these missiles. [Note: Referred to as "Amun" elsewhere.] The missiles are based on an Italian design adjusted for desert use, the report says.

— "Egyptian missiles for Kuwait," *Moneyclips*, 15 January 1992; www.lexis-nexis.com.

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2 January 1992

Arms Sales Monitor reports that Egypt has a missile production facility that could become operational at any time.

[Note: See 3 February 1992]

— "CIA on the Threat," *Arms Sales Monitor*, 2 January 1992.

14 December 1991

Jane's Defence Weekly reports Egypt has nine military production facilities producing rockets and missiles. The facilities are managed by the Arab Organization for Industrialization (AOI) conglomerate, established by Egypt, Saudi Arabia, Qatar and the United Arab Emirates in 1976. Egypt's Sakr factory manufactures multiple rocket launchers and the replacement for the FROG-7 missile: the 325mm Sakr-80 artillery rocket, which is reported to have a range of 80km.

— "Egypt's Winning Formula," *Jane's Defence Weekly*, 14 December 1991, pp. 1181-1182.

2 September 1991

According to Danny Leshem of the Tel Aviv Jaffe Center for Strategic Studies, Egypt will produce enhanced Scud-C missiles with a range of up to 600km.

— "Egypt To Build Scuds," *Defense News*, 2 September 1991, p.2.

22 July 1991

Kuwaiti Major General Khalid Al Sabah says Kuwait has bought missiles from Egypt.

— "Kuwaiti Military Official Denies Rift Among Damascus Accord Signatories," *Xinhua*, 22 July, 1991; in Lexis-Nexis, www.lexis-nexis.com.

10 July 1991

Aerospace Daily reports that Egypt is purchasing 20 Harpoon missiles from McDonnell Douglas Corp. [Note: See 6 November 1990 and 30 August 1994.]

— "Hike in FY' 88T-45s Programs Dictated by Exchange Rate Shifts," *Aerospace Daily*, 10 July 1991.

10 July 1991

The *Wall Street Journal* reports that North Korea has assisted Egypt in establishing a Scud-C production facility near Cairo since 1990. The facility belongs to the consortium Arab British Dynamics Co, owned by Egypt, Saudi Arabia, Abu Dhabi and Britain.

— "The Postwar Scud Boom," *Wall Street Journal*, 10 July 1991.

2 July 1991

The *Washington Times* reports North Korea hopes to sell short-range missiles to Egypt. [Note: See 30 May and 4 June 1991.]

— "China, N. Korea Secretly Deliver Missiles to Mideast via Cyprus," *Washington Times*, 2 July 1991, p. A4.

July 1991

Jane's Intelligence Review reports that the Soviet Union has exported Scuds-B to Egypt.

— "Inside the R-17 'Scud B' Missile," *Jane's Intelligence Review*, July 1991, p. 302.

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Late June 1991

The BBC investigative television news program "Panorama" reports that Arab British Dynamics, a British Aerospace and Arab Organization for Industrialization joint venture, is cooperating with North Korea in Egypt to develop and manufacture an extended-range version of the Scud-B, or Scud-C. The report also cites unidentified "intelligence sources" as saying that the program is nearing the production stage. According to the *Wall Street Journal*, the plant will begin producing missiles in eight to 12 weeks.

— Alan Cowell, "Egypt's Arms Control Plan for Region," *New York Times*, 5 July 1991, p. A5; Steven Emerson, "The Postwar Scud Boom," *Wall Street Journal*, 10 July 1991, p. A12.

9 June 1991

The *Manchester Guardian Weekly* reports that Egypt and Iraq have invested millions of dollars in the Condor II.

— Cristine Legrand, "US pressure to cancel missile chafes Argentine military," *Manchester Guardian Weekly*, 9 July 1991, www.lexis-nexis.com.

4 June 1991

The *Washington Times* reports that Egypt is in the process of negotiating for North Korean missiles. [Note: See 30 May and 2 July 1991.]

— "Libya May Buy North Korean Missiles," *Washington Times*, 4 June 1991 p. 4.

June 1991

The *Christian Science Monitor* reports that Egypt is looking into the development of Scud missiles and launchers. An Egyptian source says Egypt wants to modify the Scuds.

— Sarah Gauch, "Egypt Seeks to Beef Up Military Might, Maintain Its Leading Role in the Arab World," *Christian Science Monitor*, 17 June 1991; in Lexis-Nexis, www.lexis-nexis.com.

30 May 1991

The *Washington Times* reports that Egypt has four FROG-7 launchers and nine Soviet Scud-B launchers, and is considering the purchase of the North Korean Scud-C. [Note: See 4 June 1991 entry.]

— "Iran Now Top Threat in Region," *Washington Times*, 30 May 1991, pp. A1, A11.

May 1991

Milavnews reports that Brazil is active in missile design and until recently cooperated with Egypt and Iraq in the creation of tactical missiles and space launch vehicles.

— "Brazil," *Milavnews*, May 1991.

7 April 1991

US Secretary of Defense Dick Cheney says Egypt is purchasing missile technology from China or other countries.

— "How to Limit Everybody's Missiles," *The New York Times*, 7 April 1991, p. E19.

16 March 1991

In his "annual intelligence assessment," Admiral Brooks [director, Office of Naval Intelligence] says that Egypt is

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among 18 third world nations that have or will have ballistic missiles by 2000.

— "Adm Brooks Names Names," *Jane's Defence Weekly*, 16 March 1991, p. 366.

5 March 1991

Argentine Defense Minister González denies that his country built the Condor II ballistic missile in partnership with Egypt and Iraq, but confirms that Argentina developed Condor-II technology. González declares that "Argentina has officially decided to totally abandon any such research or development of technology for war purposes....Argentina's missile program is restricted to the development of technology, meteorology atmosphere studies, and medical research."

— "Gonzales Says Cóndor II Prototype 'Never Built'," EFE, 5 March 1991; cited in *Nuclear Developments*, 19 March 1991, p. 14.

2 March 1991

Jane's Defence Weekly reports that Soviet Scud-Bs are believed to have been partly or completely produced by Egypt.

— "Iraq 'Scud' Programme" the Tip of the Iceberg," *Jane's Defence Weekly*, 2 March 1991, pp. 301-303.

25 February 1991

Al-Ahram reports that Egypt's Fatah missile impressed Western forces when Egypt tested it in Saudi Arabia. The missile is made by the Arab Organization for Industrialization to clear minefields and is deployed by Saudi Arabia, Qatar, the United Arab Emirates, Bahrain, and Kuwait.

— "Arab Reaction to War in Brief," *BBC Summary of World Broadcasts*, 25 February 1991, www.lexis-nexis.com.

22 February 1991

Aerospace Daily reports that the McDonnell Douglas Corporation has received \$20 million for "four shipsets of Harpoon Encapsulated Command Launch Systems and five Ship Command Launch System subsets." This revenue consists of purchases made by Japan, Egypt, and Australia.

— "McDonnell Gets Funding for F/A-18 Hornet, Harpoon Buys," *Aerospace Daily*, 22 February 1991, p. 322.

February 1991

Retired Brigadier General and former Argentine Air Force Chief Ernesto Crespo reportedly states that the "Condor II project was never sold to Iraq." He cites as evidence the fact that the Argentine-Egyptian project used solid fuel for the missile, while the Iraqi project used liquid fuel, and criticized former Foreign Minister Domingo Cavallo for "giving credence to ill-intentioned magazine reports and for not producing serious evidence."

— "Ex-Air Force Chief Denies Iraqi Missile Deal," *Noticias* (Buenos Aires), 8 February 1991; cited in *Nuclear Developments*, 25 February 1991, p.16.

7 February 1991

The *Latin American Weekly Report* relates that Argentine Foreign Minister Domingo Cavallo believes that Raul Alfonsín, former president of Argentina, helped provide Iraq with missile technology. Cavallo cites two decrees between Egypt and Argentina that established guidelines for the development of the Condor II missile.

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— "Alfonsin Accused of Helping Arm Iraq; Foreign Minister Cites Secret Decrees on Condor," *Latin America Weekly Report*, 7 February 1991, p. 2.

31 January 1991

The *Jerusalem Report* affirms that the Condor II range is 800 km and its payload is 500kg.

— Herbert Krosney, "Saddam's dream bomb," *Jerusalem Report*, 31 January 1991; www.lexis-nexis.com.

31 January 1991

The *Independent* reports that the German company Messerschmitt-Boelkow-Blohm (MBB) coordinated the Condor project from 1979 to 1985, assisting Iraq, Egypt, Argentina, and Romania, in developing the missile with a 600-mile range. After 1985, MBB technicians established a firm called Consen to carry on the work in Switzerland.

— John Eisenhammer, "Crisis in the Gulf War: The merchants of death' will be brought to book'; Reports of Germany's prominent role in building Iraq's chemical arsenal have prompted Bonn to pass tougher laws," *Independent* (London), 31 January 1991; www.lexis-nexis.com.

23 January 1991

A secret French government report says Egypt attempted to buy 200 MSD 80 missile guidance systems from French electronics maker SAGEM in 1987. They were to be transferred to Iraq for the Condor II missile. France denied Egypt's request and offered the less precise MSL 800 system instead, which Egypt declined.

— "French SDGN (Secreteriat National de la Defense Generale) acknowledges SAGEM sales", *Middle East Defense News*, 18 February 1991; www.lexis-nexis.com.

14 January 1991

Business Week reports that former employees of SNIA-BPD (National Industrial Applications Company-Defense Division), a subsidiary of the Italian firm Fiat, worked on the solid fuel for the Condor II.

— Igor Reichlin, Mark Maremont, Jonathan Kapstein, Jonathan Levine, "Iraq's silent allies in its quest for the bomb," *Business Week*, 14 January 1991; www.lexis-nexis.com.

January 1991

The *Jerusalem Report* notes the disbandment of the Consen Group. [Note: The Consen Group was a consortium that reportedly managed the Condor II project. See 25 August 1988.]

— Herbert Krosney, "Saddam's dream bomb," *Jerusalem Report*, 31 January 1991; www.lexis-nexis.com.

Early 1991

The British government discovers that the Arab British Dynamics company in Cairo, 30 percent owned by British Aerospace, plans to make components for the Scud missile. [Note: See 29 January 1992 entry.]

— "BAe told to stop Scud work," *Flight International*, 29 January 1992; www.lexis-nexis.com.

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1990-1989

26 December 1990

According to court records, IFAT (Institute for Advanced Technology) Corporation of Switzerland was created by the Egyptian Ministry of Defense to procure technology for the Condor II project. [Note: IFAT is or was part of the Consen Group. See 4 November 1989 and 12 December 1989 entries.]

— Douglas Frantz, "Honeywell factor in Iraq bomb," *Los Angeles Times*; 26 December 1990; in Lexis-Nexis, www.lexis-nexis.com.

26 December 1990

According to court records, the Egyptian Ministry of Defense tried to buy 9,000 fuel-air explosives from the United States in 1984. The Egyptians said they wanted the bombs to clear minefields, but according to the Justice Department they were for the Condor II and the request was denied. [Note: See "1984," October 1989, 3 September 1990, October 1990, and 12 December 1990 entries for more on fuel-air explosives.]

— Douglas Frantz, "Honeywell factor in Iraq bomb," *Los Angeles Times*; 26 December 1990; in Lexis-Nexis, www.lexis-nexis.com.

12 December 1990

Flight International reports that Honeywell has appointed an outside law firm to investigate its own actions in helping Egypt and Iraq develop fuel-air explosives (FAEs) for ballistic missiles. According to the report, a British subsidiary, Honeywell Control Systems, signed a contract with IFAT (Institute for Advanced Technology) of Switzerland in 1984 to produce a study for the Egyptian Ministry of Defense on developing FAEs for ballistic missiles; the study was completed in 1985. IFAT was already working with Egypt on the Condor II when the contract was signed. On 4 April 1984, a Honeywell executive wrote a memorandum affirming that the Egyptian missile was to have an accuracy of 0.1 percent of its range and was "intended to attack high value, fixed targets such as cities, ports, oil refineries, and air bases." [Note: See "1984," October 1989, 3 September 1990, October 1990, and 26 December 1990 entries for more on FAEs.]

— "Honeywell implicated in FAE work," *Flight International*, 12 December 1990; in Lexis-Nexis, www.lexis-nexis.com.

6 December 1990

Hans Heino Kopietz, an analyst with the firm Control Risks, says it is possible that Argentina and Egypt have not really given up on the Condor II project. He says he recently saw Argentine engineers and technicians in Egypt.

— "How dead is the Condor II; hints surface of 'freelance' continuation," *Latin American Weekly Report*, 6 December 1990; in Lexis-Nexis, www.lexis-nexis.com.

4 November 1990

Flight International reports that the Consen Group of Switzerland, which coordinated development of the Condor II, is shrinking and that many of its companies are liquidating. The Consen company office in Zug has liquidated, IFAT (Institute for Advanced Technology) is liquidating, Delta Consult and Delta System have closed, and Tema in France has released most of its staff, the report says. Consen was created by missile experts who previously

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worked for Messerschmitt-Boelkow-Blohm. [Note: The Consen Group disbands in January 1991.]

— "Consen faces close-down as Iraq's Condor project falters," *Flight International*, 14 November 1990; in Lexis-Nexis, www.lexis-nexis.com.

5 November 1990

McDonnell Douglas Corp. receives a contract from Naval Air Systems Command for 133 Harpoon missiles, two of which are designated for Egypt. [Note: See 10 July 1991 and 30 August 1994 entries.]

— "McDonnell Douglas Corp," *Aerospace Daily*, 6 November 1990, Vol. 156, No. 26, p. 237; in Lexis-Nexis, www.lexis-nexis.com.

October 1990

An unattributed report asserts that Project Betreuungs GmbH (PBG) of Germany assisted in arming Iraq. Senior Public Prosecutor Friedrich Bethke states that PBG conveyed sensitive technologies to Iraq via Argentina and Egypt. PBG allegedly delivered German firm Messerschmitt-Bölkow-Blohm's (MBB) blueprints for fuel-air bombs to Iraq through Egypt, as well as parts of MBB's Condor missile system through Buenos Aires to Iraq. The German government could not confirm whether PBG had helped establish an R&D center for missile construction in Iraq. [Note: See 1984, October 1989, and October 1990 entries.]

— "Firm Probed for Sending Arms Technology to Iraq," *Der Spiegel* (Hamburg), 22 October 1990, p. 15; cited in *Nuclear Developments*, 15 November 1990, p. 25.

3 September 1990

The BBC reports that Iraq received warhead and fuel-air explosives (FAE) technology tested by Germany's MBB (Messerschmitt-Boelkow-Blohm) because the country was involved in a joint missile project with Egypt and West Germany. [Note: See "1984," October 1989, 3 September 1990, and 12 December 1990 entries for more on fuel-air explosives.]

— "Saddam's 'Secret' Arms Ring Reported," Panorama London BBC, 3 September 1990; in *Nuclear Developments*, 14 September 1990, p.19-24.

3 August 1990

The Independent reports that Iraq criticized Egypt during the Condor II collaboration for not meeting its commitments in developing the missile.

— Carol Berger, "The invasion of Kuwait: Mediator Mubarak offers little consolation as ministers meet," *The Independent* (London), 3 August 1990; in Lexis-Nexis, www.lexis-nexis.com.

July 1990

According to diplomatic sources in Cairo, China has agreed to help modernize Egypt's Scud-B missiles.

— "China Agrees to modernize Egyptian Scud-Bs," *Arms Control Reporter*, July 1990, p. 706, B. 36.

30 June 1990

The US Central Intelligence Agency (CIA) assesses Iraq's ballistic missile program efforts, including those based on the Condor program. At this time, Iraq is developing five distinct missile programs. Although the more ambitious Condor II will take longer to develop than the Iraqi-produced Al-Husayn and Al-Abbas missiles, it will be "easier to

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handle, require less preparation time before launch, offer more payload options, and provide better accuracy and range." The CIA estimates that the solid-fuel Condor II missile system will have a range of 750-1,000km, carry a payload of approximately 500kg, and employ a submunition warhead design. When Iraq begins to produce the system, it will likely modify the warhead submunition design to enable it to deliver chemical and/or biological weapon agents.

Judging that it will be "difficult, if not impossible, to stop" Iraqi ballistic missile projects, the CIA estimates that with continued foreign assistance, Iraq will commence production of the Condor II by the early 1990s; however, halting external aid could delay production to the mid-to-late 1990s. Iraq will likely face technical challenges in "guidance and control, second-stage configuration, and flight-testing," which could be surmounted through external assistance. Through its work on the Condor, Iraq may gain experience applicable to its other missile programs, e.g., in such areas as stage separation. Regardless of the status of the Argentine and Egyptian Condor II projects, the CIA anticipates that Iraq will continue to seek technical assistance from both countries with its Condor project. While Egypt had been Iraq's main contact in the past, the CIA expects closer ties with Argentina in the future. The agency reports, "Our growing concern is that Argentina and Egypt — despite claims of withdrawing from the program — will continue development of the Condor II through Iraq. Argentine and Egyptian engineers may train at Iraqi production facilities, which are similar to these in Argentina and almost identical to ones in Egypt. Argentina and Egypt could begin indigenous production with little or no notice shortly after its [*sic*] engineers return from Iraq. We believe Iraq will be the first of the three to produce the Condor II."

This CIA assessment is based on information available as of 29 May 1990, and is largely based on analysis of Iraqi foreign procurement efforts. The CIA also declares, "Although we have not identified a formal, coordinated nuclear weapons program, we believe Iraq's activities, especially its covert nuclear procurement, strongly suggest a weapons program exists."

— US Central Intelligence Agency, *Iraqi Ballistic Missile Developments: An Intelligence Assessment* (Washington, DC: Directorate of Intelligence, 30 June 1990), classified "Top Secret," declassified excerpts released 5 March 1998, www.foia.ucia.gov, pp. 4-6, 10, 12, 20-21, 29, accessed 23 August 2002.

14 June 1990

The Independent reports China will help Egypt upgrade its production of surface-to-air and surface-to-surface missiles in exchange for payment equivalent to millions of pounds sterling. The upgrade will focus on Egypt's Sakr factory to help it produce newer versions of Soviet anti-aircraft missiles, the surface-to-surface Scud-B and Silkworm, and the three types of Egyptian Sakr rockets. *The Independent* reports that after this upgrade, Egypt will double the production of the Silkworm DF-4 and increase its range to 90 miles; the missile's current range is 50 miles with a 1,000-pound warhead. Egypt is also expected to start the production of Silkworm DF-5 with a range of 170 miles. In addition, China will provide Egypt with frigates equipped with French Ottomat and Chinese Styx missiles, as well as Chinese-built Jainghu-class frigates equipped with the C801 Ying-ji, a Chinese version of the Exocet missiles.

— Adel Darwish, "China to Update Chinese Egypt's Missiles," *The Independent* (London), 14 June 1990; in Lexis-Nexis, www.lexis-nexis.com.

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Early June 1990

Chinese Defense Minister Qin Jiwei meets Egyptian President Hosni Mubarak in Cairo, perhaps to promote weapons sales, such as the DF-3 (CSS-2) missile.

— Liat Collins, "China's 'East Wind' missile blows through the Middle East," *The Jerusalem Post*, 13 June 1990; in Lexis-Nexis, www.lexis-nexis.com.

May 1990

Egyptian President Hosni Mubarak visits Pyongyang. He is believed to have visited the 125 Factory, where the Hwasŏng-6 is assembled.

— 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.

26 April 1990

Nucleonics Week reports that Argentina has resumed joint cooperation with Egypt and Iraq to build the Condor II. Argentina curbed its participation in the project in 1989 because of pressure by the Bush administration. [Note: See July 1989 for more on Argentina pulling out of the project.] The Argentine government has denied that construction of the Condor II with Egypt has begun. The article does not mention Iraq as a partner in the project.

— "Argentina Denies Reports of Nuclear Commerce with Iraq," *Nucleonics Week*, 26 April 1990, Vol.31, No.17, p. 13; in Lexis-Nexis, www.lexis-nexis.com.

1 April 1990

According to a Defense Intelligence Agency (DIA) Intelligence Assessment, "[a]ll the solid propellant missile production projects in Egypt, Argentina, and Iraq are highly dependent on the influx of Western technology obtained from the Consen Group. Similarly these Consen companies need these overseas markets to keep afloat financially. Because of the creation of the Missile Technology Control Regime (MTCR) in April 1987, covert cooperation took on added importance."

— US Defense Intelligence Agency, "The Grey Arms Market: Methods of Maintaining Covert Business Relationships," Intelligence Assessment declassified and partially released, available through the Digital National Security Archive, <http://nsarchive.chadwyck.com>, 23 August 2002.

25 March 1990

According to *Al-Akhbar*, Egypt tests its new missile, Amun-2, which can reportedly simultaneously engage more than one airborne target. The system can also distinguish between two targets and give precedence to the more dangerous one. The system was completely Egyptian-developed.

— "New Amun-2 Missile System Tested 25 March," *Al-Akhbar* (Cairo), 26 March 1990, p.4; in FBIS Document FBIS-NES-90-060, 28 March 1990.

7 March 1990

Flight International reports that Egypt will begin making the "Saker 80" surface-to-surface rocket next year to replace the Frog-7. [Note: Saker is more often spelled Sakr or Saqr.] It will have a CEP of 1200m, high-explosive and

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cluster warheads, and a mobile launcher, the report says.

— "Saker 80s 1991 debut," *Flight International*, 7 March 1990; in Lexis-Nexis, www.lexis-nexis.com.

3 March 1990

The Independent reports that Iraq's ballistic missile program has been hindered by the withdrawal of Egyptian experts.

— Adel Darwish, "UK missile men aid Iraq," *The Independent* (London), 3 March 1990; in Lexis-Nexis, www.lexis-nexis.com.

29 January 1990

Aviation Week & Space Technology reports that the Pentagon has proposed giving Egypt 29 Harpoon missiles worth \$69 million, including training and support.

— "The Pentagon has notified," *Aviation Week & Space Technology*, 29 January 1989; in Lexis-Nexis, www.lexis-nexis.com.

19 January 1990

Middle East Defense News (Mednews) reports that the materials confiscated by US officials from an Egyptian smuggling ring in June 1988 were intended for Iraq. [Note: See 24 June and 5 September 1988.]

— "U.S. connection for Iraqi missiles?," *Middle East Defense News*, 19 January 1990, Vol. 3, No.7, 8; in Lexis-Nexis, www.lexis-nexis.com.

1990-1991

North Korea assists Egypt in establishing a Scud-C production facility near Cairo. The facility belongs to the consortium Arab-British Dynamics Co, owned by Egypt, Saudi Arabia, Abu Dhabi and Britain.

— "The Postwar Scud Boom," *Wall Street Journal*, 10 July 1991.

1990

China and Egypt agree to upgrade Egypt's Sakr plant to make new Scud-B missiles and three types of Egyptian surface-to-surface missiles.

— "Country reports: Egypt," *Middle East Defense News*, 5 April 1993; in Lexis-Nexis, www.lexis-nexis.com.

Early 1990s

Egypt begins work on "Project-T" to develop a medium-range ballistic missile, an improved Scud-B, range 450km. The propulsion, guidance, and targeting of the Scud-B has been improved in the new missile. As of 1999, the missile forms the backbone of Egypt's missile deterrent.

— "A dangerous race in a multi-axial world: The missiles club in the Middle East: The century of mass destruction," *Al-Wasat* (London) 30 August 1999; in FBIS Document FTS19990903000290, 30 August 1999.

29 December 1989

The Associated Press reports that Egypt and North Korea are collaborating on developing missiles based on the Scud. Military analyst Aharon Levran says Egypt asked North Korea's help last year to enhance its aging arsenal of Scud missiles.

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— Nicolas B. Tatro, "North Korean missile help sought by Syria, Egypt," Associated Press, 29 December 1989; in Lexis-Nexis, www.lexis-nexis.com.

29 December 1989

Yonhap reports that "Egypt requested North Korean help to improve its Scuds."

— "North Korea Missile Aid Reportedly Sought," Yonhap News Agency Seoul Domestic Service, 29 December 1989.

27 December 1989

Egyptian President Hosni Mubarak denies that the United States has intervened regarding Egypt's cooperation with Argentina and Iraq in the field of missile manufacturing.

— "Mubarak Addresses Missiles in Interview With Qatari Papers," MENA (Cairo), 27 December 1989.

6 December 1989

Adbelkader Helmy is sentenced to 46 months in prison for trying to send restricted US missile technology to Egypt. James Huffman is sentenced to 41 months. [Note: See 24 June 1988.]

— John Howard, "Four year sentence for weapons tech plot to Egypt, Iraq," *Associated Press*, 6 December 1989; in Lexis-Nexis, www.lexis-nexis.com.

December 1989

Experts report that the al-Abid, Iraq's three-stage, 48-ton satellite-launch missile, is not (as had been previously alleged) a Condor II missile. According to experts who viewed a videotape of the 7 December 1989 launch of the al-Abid, the faint smoke plume emanating from the rocket was indicative of a liquid-fuel motor, while the Condor II has a solid-fueled engine. Further, the Condor has only two stages, whereas three stages can be seen on the tape of the al-Abid launch. According to Gary Milhollin of the Wisconsin Project on Nuclear Arms Control, five motors can be seen in the first stage, which he suggests are either Scuds or elongated Scuds welded together. This would suggest that the al-Abid is not wholly indigenously produced, but rather an adaptation of Soviet missiles similar to the al-Abbas and al-Hussein missiles. Argentine and Egyptian engineers are reportedly present for the launch.

— "Iraq Heavy Missile Launch Definitely Not Cónдор II," *Defense & Foreign Affairs Weekly*, January 1990-4 February 1990, p. 1; US Department of Defense, "IIR [Excised] Condor II Missile," Intelligence report declassified and partially released, available through the Digital National Security Archive, <<http://nsarchive.chadwyck.com>>, 23 August 2002.

27 November 1989

Egypt's Vice Admiral Muhammed Sharif al-Sadiq said that Egypt's submarines would be equipped with a wide variety of advanced missiles, including US-built Harpoons.

— "Egypt's Barakat: More F-16s," *Middle East Defense News*, 27 November 1989.

21 November 1989

US and Israeli officials believe Iraq has a contract to sell 200 Condor II missiles to Egypt for \$8 million per missile.

— Alan Friedman, "The flight of the Condor," *Financial Times*, 21 November 1989; in Lexis-Nexis, www.lexis-nexis.com.

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5 October 1989

Egyptian President Hosni Mubarak has confirmed that Egypt dropped out of the Condor II project in 1988. [Note: See 20 September 1989.]

— "Mubarak poses mystery over status of Argentina's Condor II missile," *Latin American Weekly Report*, 5 October 1989; in Lexis-Nexis, www.lexis-nexis.com.

October 1989

Five US senators formally request that the US Secretary of Defense investigate whether the German firm MBB (Messerschmidt-Boelkow-Blohm) provided fuel-air explosive (FAE) technology to Iraq in the course of its participation in the Egyptian-Iraqi Condor II project. In addition, they express concern that FAE technology may have been transferred to Iraq illegally from the United States.

— "FAEs for Iraq," *Jane's Defence Weekly*, 20 October 1990, p. 739.

20 September 1989

US Assistant Secretary of State John H. Kelly tells a Congressional panel that "my understanding is that Egypt has terminated its cooperation" with Iraq and Argentina on the Condor II. [Note: See 5 October 1989.]

— David B. Ottaway, "Egypt drops out of missile project; State Department official offers no details on Iraqi program," *The Washington Post*, 20 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

20 September 1989

The *Jerusalem Post* reports that Otto Skorzeny, the notorious Nazi commando leader, was hired by Mossad agents in 1963 to persuade former Nazis to abandon work on Egyptian missiles.

— "Ex-SS man worked for Mossad against Egyptian rocket project," *Jerusalem Post*, 20 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

19 September 1989

Assistant Secretary of State John H. Kelly tells a US House of Representatives panel that Egypt has terminated its cooperation with Iraq on the Condor II, but does not comment on why Egypt withdrew from the project.

— David B. Ottaway, "Egypt Drops Out of Missile Project; State Department Official Offers No Details on Iraqi Program," *Washington Post*, 20 September 1989, p. A32.

19 September 1989

A classified Defense Intelligence Agency document says US Customs has been investigating for more than a year an Egyptian-Iraqi plot to get restricted technology "to support the production of a ballistic missile."

— "Canadians helped supply weapons to Saddam Hussein; Federal officials seemed unaware of deals while other Western intelligence agencies increased surveillance," *Ottawa Citizen*, 26 November 1992; in Lexis-Nexis, www.lexis-nexis.com.

18 September 1989

MidEast Markets reports that the big explosion in Iraq in mid-August occurred at Latifiya, near Isfandiya. Iraq is building a facility there to make the Condor II rocket motor but there is also a munitions factory nearby, and the explosion was not directly related to the Condor II. [Note: See 17 August and 6-8 September 1989.]

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— "Big explosion in Iraq, but was it important?" *MidEast Markets*, 18 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

16 September 1989

The Times (London) reports that Egypt may be working with North Korea on a secret missile project.

— Christopher Walker, "Reports of missile launch heighten arms race fears," *The Times* (London), 16 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

9 September 1989

Major General Khamis Ibn-Hamed bin Salim al-Kalbani, the commander of Oman's ground forces, along with the technicians accompanying him on a visit to Cairo, are briefed on a wide range of weapons systems produced by Egypt, such as the surface-to-surface missile Sakr-80, its launch system, and the Swingfire anti-tank missiles.

— "Oman Looks at Egyptian Weapons," *Middle East Defense News*, 16 October 1989.

8 September 1989

In response to reports of a huge explosion at a possible Iraqi missile production plant in mid-August, the Iraqi embassy in London says that an explosion at a petroleum products depot killed 19. The statement says, "We would like to confirm that there is no missile technology for Condore [*sic*] version being developed between Iraq and any other country including Argentina. The motives behind mentioning a link with Argentina in the report published by the *Independent* could be the paper's intention to create an anti-Iraq public opinion at a time when relations between Britain and Argentina remain so tense." [Note: See 17 August; 6 and 7 September 1989.]

— Harvey Morris, "Baghdad admits to blast at 'oil depot'," *The Independent*, 8 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

7 September 1989

An Egyptian military spokesman denies that Egyptians are working in Iraq on military projects. [Note: See 17 August; 6 and 8 September 1989.]

— Carol Berger, "Blast reveals joint military projects continue after Gulf War," *The Independent*, 7 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

6 September 1989

The Independent reports that Egyptian experts have been in Iraq for two years to help improve the range of Iraqi missiles, including the Scud-B missile, by adding a North Korean fuel tank and reducing the warhead. Egyptians in Iraq have also helped to increase the range of the Condor II beyond 500 miles but it has been very inaccurate, as much as 20 miles off target. An explosion at a possible Iraqi missile facility in mid-August may have been the result of an accident involving technique developed by Egyptian and North Korean experts to take apart the warhead of the Condor II to adjust the explosive. [Note: See 17 August; 7, 8 and 18 September 1989.]

— Harvey Morris, Adel Darwish, Tim Kelsey, "Huge explosion at secret Iraqi missile plant: Egyptian technicians among about 700 killed in disaster near Baghdad," *The Independent*, 6 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

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4 September 1989

The Independent reports that the United States has provided the Egyptian-made Sakr-30 missile to the Afghan mujaheddin guerrillas. The Sakr-30, according to the report, is 122mm, has a range of 18 miles, and has a cluster warhead of 35 bomblets.

— Ahmed Rashid, "Mujahedin expands killing zone," *The Independent*, 4 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

September 1989

The Egyptian government terminates the Badr-2000 missile project and ends its involvement with the Condor.

— Daniel Santoro, *Operación Cóndor II: la historia secreta del misil que desmanteló Menem* (Buenos Aires: Ediciones Letra Buena, 1992), p. 42.

28 August 1989

According to the 1988 annual report of the US Arms Control and Disarmament Agency report, Egypt has Soviet Frog-7 solid-fueled missiles with a range of 40 miles, a payload of 1,000 pounds, and a CEP (circular error probable) of 440 yards. Egypt also has standard Scud-B missiles. Egypt is developing enhanced Scud-B missiles, possibly with North Korea, with a payload of 2,200 pounds and storable liquid fuel. Egypt is developing the two-stage solid-fueled Sakr-80 missile, possibly with North Korea and Iraq, with a range of 50 miles and a payload of 450 pounds. Egypt is developing the Vector solid-fuel missile with Argentina, with a range of 500 to 600 miles and an unknown CEP. [Note: The attributes reported for the Vector missile match those listed for the Iraqi Condor II missile, which is being developed jointly with Egypt and Argentina.]

— "World weapons sales top \$1 trillion, paced by South Asia market," *Aviation Week & Space Technology*, 28 August 1989; in Lexis-Nexis, www.lexis-nexis.com.

17 August 1989

An explosion at a possible Iraqi missile facility at Al Hillah, 40 miles south of Baghdad, kills 700. The casualties include Egyptian engineers who may have been working on Iraqi missile projects, including an enhanced Scud-B and the Badr-2000. The explosion may have been the result of an accident involving a technique developed by Egyptian and North Korean experts to take apart the warhead of the Condor II to adjust the explosive. [Note: See 6, 7, 8 and 18 September 1989.]

— Harvey Morris, Adel Darwish, Tim Kelsey, "Huge explosion at secret Iraqi missile plant: Egyptian technicians among about 700 killed in disaster near Baghdad," *The Independent*, 6 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

14 August 1989

The Italian government brings charges against the nine former employees of the National Industrial Applications Company (SNIA), BPD (Defense Division), for the sale of medium-range ballistic missile components to Argentina, Egypt, and Iraq. Other individuals are charged as a result of the investigation, but not taken into custody.

— "Charges Filed in Missile Parts Sales to Argentina," *L'Unita* (Milan), 30 June 1989, p. 6; cited in *Nuclear Developments*, 14 August 1989, p. 41.

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8 August 1989

At a press conference with US Defense Secretary Richard B. Cheney, Egyptian Yusuf abu Talib is asked about the Condor II missile. He replies, "We are against all mass destruction weapons— nuclear, chemical, long-range missiles. We are ready to discuss anything in the coming months."

— "U.S.-Egypt Coproduction programs on schedule," *Aerospace Daily*, 8 August 1989; in Lexis-Nexis, www.lexis-nexis.com.

31 July 1989

The *Financial Times* reports that nine former employees of Fiat subsidiary SNIA-BPD (National Industrial Applications Company-Defense Division) are under investigation by Italian authorities for possibly working on the Condor II missile.

— John Wyles, "Fiat link suspected in Condor missile probe," *Financial Times*, 31 July 1989; in Lexis-Nexis, www.lexis-nexis.com.

27 July 1989

US Representative Howard Berman says technology from the US Pershing missile was transferred to the Condor II project by scientists who worked on both missiles.

— Melissa Healy, "Bill proposed to curb missile technology spread," *Los Angeles Times*, 27 July 1989; in Lexis-Nexis, www.lexis-nexis.com.

July 1989

According to the CIA, international pressures, the Missile Technology Control Regime (MTCR), and technical difficulties bring the Condor II program virtually to a halt in Argentina and Egypt. In particular, technical setbacks in guidance and control have prevented Argentina from conducting an initial flight test of the missile. [Note: See September 1989.]

— US Central Intelligence Agency, *Iraqi Ballistic Missile Developments: An Intelligence Assessment* (Washington, DC: Directorate of Intelligence, 30 June 1990), classified "Top Secret," declassified excerpts released 5 March 1998, www.foia.ucia.gov, 23 August 2002. p. 9; Eduardo Barcelona and Julio Villalonga, *Relaciones carnales: la verdadera historia de la construcción y destrucción del misil Cóndor II* (Buenos Aires: Planeta, 1992), p. 130.

27 June 1989

The *Washington Post* reports that the United States has supplied Egyptian-made Sakr missiles to the Afghan mujaheddin guerillas. [Note: See 4 September 1989]

— James Rupert, "Kabul residents blame U.S. for deaths from mujaheddin missiles," *Washington Post*, 27 June 1989; in Lexis-Nexis, www.lexis-nexis.com.

23 June 1989

James Huffman pleads guilty to conspiring to illegally export restricted munitions. The plea agreement does not require Huffman to cooperate with investigators, as did the plea agreement for Abdelkader Helmy. Helmy gave Huffman the specifications for material to be shipped to Maryland. Huffman admits to shipping 430 pounds of ablative carbon phenolic fabric, 35,500 pounds of military-grade hydroxyl-terminated polybutadiene, which is used

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in rocket fuel, and two UHF-band parabolic antennas. [Note: See 24 June 1988 and 9 June 1989.]

— Ken Hoover, "Second defendant pleads guilty in Egyptian missile case," United Press International, 23 June 1989; in Lexis-Nexis, www.lexis-nexis.com.

12 June 1989

According to Western officials, a secret military agreement known as Badr-2000 has collapsed because of disagreements over the Condor II missile. Badr-2000 is the codename for the military cooperation agreement between Iraq and Egypt, and is not the name for the Egyptian version of the Condor II missile, which is called Vector or Delta. Iraq was unhappy with financing the Egyptian project and felt it was paying twice for development of the missile. According to an engineer who worked at the Condor facilities in Iraq and Egypt, Iraq felt the Egyptian work and safety standards were much lower than Iraq's, leading to the danger of missile fuel exploding. Egypt is reexamining its long-range missile project, which is now under the oversight of General Mustafa, along with Dr. Toufik and Col. Essam Ayoub. The report adds that Western officials do not know what projects, besides the Condor II, come under the Badr-2000 agreement.

— "Secret Egypt-Iraq accord collapses," *MidEast Markets*, 12 June 1989; in Lexis-Nexis, www.lexis-nexis.com.

9 June 1989

In a plea bargain, Abdelkader Helmy pleads guilty to exporting restricted munitions in exchange for cooperating with the investigation of Egypt's alleged attempt to smuggle restricted missile technology from the United States. According to a court document, Helmy's smuggling ring exported missile nose cones made by Nucermat and Greenleaf Technical Ceramics, microwave antennas from Vega Precision Products Inc., and carbon-carbon from Kaiser Aerotech. According to charges, Helmy had James Huffman buy ablative carbon phenolic, which is used to make missile nozzles, nosecones, and reentry vehicles, from Fiberite Corp. of Winona, MN, then send it to Harmon, MD, where it was loaded onto an Egyptian plane before US customs agents intervened. [Note: See 24 June 1988.]

— Ken Hoover, "Scientist pleads guilty in Egyptian missile plot," United Press International, 9 June 1989; in Lexis-Nexis, www.lexis-nexis.com.

27 May 1989

The *Economist* reports that Egypt has Frog-7 missiles, 70km range; Sakr-80 missiles, 80km range; Scud-B, 300km range; and Badr-2000, 800km range.

— "Third-world missiles; look what I found in my backyard," *The Economist*, 27 May 1989; in Lexis-Nexis, www.lexis-nexis.com.

18 May 1989

US Undersecretary of State Reginald Bartholomew tells a Senate panel that the Condor II is behind schedule because of implementation of the Missile Technology Control Regime.

— David B. Ottaway, "Egypt drops out of missile project; State Department official offers no details on Iraqi program," *Washington Post*, 20 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

15 May 1989

According to a report by *MidEast Markets*, Egypt's Condor II project is led by Dr. Toufik of the Ministry of Defense.

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Col. Essam Ayoub runs the program, which suffers from "bad workmanship and skimping on materials." The fuel is stored at Abu Zabaal, northeast of Cairo, which will also be the testing area. The missile will be produced at Helwan, south of Cairo. The defense minister was fired in April because of problems with the program.

— "Iraq goes it alone on Condor II," *MidEast Markets*, 15 May 1989; in Lexis-Nexis, www.lexis-nexis.com.

2 May 1989

Allen Holmes, US assistant secretary of state, tells a Senate hearing that the Condor II is "far behind schedule and we believe this can be traced to problems in acquiring technology." Another US official says the Condor II is several years from testing.

— Carl Hartman, "Increased threat from Third World missiles," Associated Press, 2 May 1989; in Lexis-Nexis, www.lexis-nexis.com.

1 May 1989

MidEast Markets reports that Israeli pressure on the United States to halt Egypt's weapons programs, including the Condor II, led to the removal of Egypt's defense minister, Field Marshal Abdel Halim Abu Ghazala. [Note: See 15 April 1989.]

— "Uncertainty in Egypt after removal of Abu Ghazala," *MidEast Markets*, 1 May 1989; in Lexis-Nexis, www.lexis-nexis.com.

1 May 1989

MidEast Markets reports that representatives of a Swiss company working on the Condor II recently visited China.

— "Sa'ad 16: Iraq's military 'business park,'" *MidEast Markets*, 1 May 1989; in Lexis-Nexis, www.lexis-nexis.com.

1 May 1989

MidEast Markets reports that Egypt is working on a sub-munition warhead for its version of the Condor II.

— "Sa'ad 16: Iraq's military 'business park,'" *MidEast Markets*, 1 May 1989; in Lexis-Nexis, www.lexis-nexis.com.

28 April 1989

Husayn Kamil Hasan, Iraqi minister of industry and military industrialization, denies Iraq is cooperating with Egypt and Argentina to make missiles.

— "Development of Iraq's military industries minister's news conferences," *Al-Thawrah* (Baghdad), 28 April 1989; in BBC Summary of World Broadcasts, 3 May 1989; in Lexis-Nexis, www.lexis-nexis.com.

23 April 1989

NBC reports that, according to US intelligence sources, Egypt got money from Iraq to fund the Condor II. Iraqi Lt. Gen. Amer Saadi, undersecretary of the ministry of industry and military industrialization, denies that Iraq, Egypt, and Argentina are cooperating on a surface-to-surface missile.

— "Iraq denies working on missile able to hit targets in Israel," Reuters, 23 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

21 April 1989

Latin American Markets reports that work began on the Condor II in 1984; and it will have a range of 1000km and a

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700kg payload. The report says that, according to an April 1984 letter of intent between Consen Group company Desintec and a US company, the Argentine Air Force was to receive rocket nozzles for the Condor II. US authorities intervened to stop the contract, the report says.

— "Argentina: Will Condor II fly?" *Latin American Markets*, 21 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

21 April 1989

Latin American Markets reports that the Condor II was to be tested in Argentina last year but has still not flown. [Note: A 3 March 1989 report says the missile was tested.]

— "Argentina: Will Condor II fly?" *Latin American Markets*, 21 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

17 April 1989

MidEast Markets reports that Egypt is readying production facilities for the Condor II at Military Factory 90 in Abu Zabaal, near where Egypt reportedly makes chemical weapons.

— "Condor II: an issue to test US-Egypt ties," *MidEast Markets*, 17 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

17 April 1989

MidEast Markets reports that Abdel Kader Helmy, the Egyptian-born US citizen awaiting trial for involvement in the alleged scheme to smuggle US missile technology to Egypt, is a childhood friend of former Egyptian Defense Minister Abdel Halim Abu Ghazala. [Note: See 24 June and 20 August 1988.]

— "Condor II: an issue to test US-Egypt ties," *MidEast Markets*, 17 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

17 April 1989

MidEast Markets reports that IFAT Corporation, a company in the Consen Group, financed an attempt to buy restricted US missile technology in 1988 [Note: See 24 June 1988.] Desintec, another Consen company, tried in 1984 to buy rocket nozzles from a California company to be used for the Condor II. Consen has used West German rocket scientists to help with the project.

— "Condor II: an issue to test US-Egypt ties," *MidEast Markets*, 17 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

17 April 1989

MidEast Markets reports that the Condor II missile has two stages, a range of 1000km and payload of 700kg. [Note: See 2 April 1989.]

— "Condor II: an issue to test US-Egypt ties," *MidEast Markets*, 17 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

15 April 1989

Egyptian President Hosni Mubarak removes and replaces Defense Minister Abdul-Halim Abu Ghazala amid allegations that he was involved in an alleged scheme to transfer restricted missile technology from the United States. [Note: See 20 August 1988 for the first allegations of his involvement. See 24 June 1988 for the first report of the alleged scheme.]

— Patrick E. Tyler, "Mubarak reassigns key depute; move said face-off with defense chief," *Washington Post*, 16 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

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14 April 1989

Brigadier General Ernesto Crespo, Argentine Air Force chief of staff, denies that Argentina has agreed to forgo its missile cooperation with Egypt and Iraq in exchange for military equipment from Israel. [Note: See 6 and 7 April 1989.]

— "Other Argentine news," Facts on File World News Digest, 23 June 1989; in Lexis-Nexis, www.lexis-nexis.com.

13 April 1989

Aerospace Daily reports that the West German firm Transtechnica of Munich, which is under investigation for its involvement in the Condor II project, is part of the Consen Group, a group of 16 companies working on the Condor II. Transtechnica is a subsidiary of Messerschmitt-Boelkow-Blohm. MBB has said it is not involved with Condor II but was involved with Condor I. [Note: Note: *Stern* magazine previously reported that Consen may have been overseeing the Condor II project on behalf of MBB. See 25 August 1988. See also 8-9 April 1989.]

— "MBB subsidiary under investigation for possible export violation," *Aerospace Daily*, 13 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

12 April 1989

West German Defense Minister Rupert Scholz promises an investigation of the alleged involvement of Messerschmitt-Boelkow-Blohm (MBB) in the Condor II project. But he says the government "lacks sufficient information." An Israeli foreign ministry official says some German officials must have known about the involvement of Germany's largest aerospace firm.

— Menachem Shalev, "Minister: Bonn doesn't know 'enough' about Condor missile," *The Jerusalem Post*, 12 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

10 April 1989

The Condor II project was developed in Argentina with Iraqi money that was transferred through Egypt. In return, Egypt and Iraq may produce the missile after it is developed.

— Mark Urban, "German firm accused over 'missile risk' to Falklands," *The Independent*, 10 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

8-9 April 1989

West German investigators raid the offices of Transtechnica, a subsidiary of Messerschmitt-Boelkow-Blohm (MBB), in connection with its involvement with the Condor II project. Major General Ehud Barak, deputy chief of staff of the Israeli armed forces, says MBB was in charge of directing the project, while others suggest that a division of MBB may have controlled the project without MBB's knowledge. [Note: *Stern* magazine previously reported that Consen (Group) may have been overseeing the project on behalf of MBB. See 25 August 1988. See 13 April 1989 for more explanation on Consen. See also 8 February 1989 for a report on MBB's involvement.]

— Mark Urban, "German firm accused over 'missile risk' to Falklands," *The Independent*, 10 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

7 April 1989

Argentine military sources confirm that Israel pressed Argentine Defense Minister Horacio Jaunarena to end

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Argentina's collaboration with Egypt and Iraq on the Condor II missile. But one official said the Condor deal is "too difficult to get out of at this stage."

— "Argentina: Looking to Pretoria," *Latin American Markets*, 7 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

6 April 1989

Noticias Argentinas reports that Argentine Defense Minister Horacio Jaunarena, who is in Israel, says Argentina will end its cooperation with Egypt on the Condor II in exchange for Israel delivering to the Argentine Navy 12 A-4Q planes that have been on hold since the Falklands War. The newspaper also reports that breaking the deal with Egypt will allow Israel to join the Condor II project. In return for the agreement, countries may lift their objections to Argentina receiving the A-4Q planes, the newspaper reports.

— "Argentina newspaper says Condor project with Egypt cancelled for sake of Israel deal," BBC Summary of World Broadcasts, 6 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

4 April 1989

Experts say the range of the "Condor-3" is 800km and that it should be in service by next year. [Note: The report may refer to the Condor II missile.]

— Kenneth Kaplan, "Argentina still wants to purchase Kfirs," *The Jerusalem Post*, 4 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

2 April 1989

Maj. Gen Ehud Barak, deputy chief of staff for the Israeli armed forces, says Iraq is involved in the Condor II missile project. The range of the Condor II missile is between 500 and 620 miles (between 800 and 1000km).

— "Israeli general says Iraq may be rebuilding nuclear plant," Associated Press, 2 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

1 April 1989

The Independent reports that the range of the Condor II missile is 500 miles.

— Peter Pringle, "Israel accuses Iraq of developing nuclear warheads," *The Independent*, 1 April; in Lexis-Nexis, www.lexis-nexis.com.

1 April 1989

The Associated Press reports that the range of the Badr-2000 missile is 620 miles and it can deliver nuclear or chemical weapons.

— Ed Blanche, "Alarm over missile buildup in Mideast," Associated Press, 1 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

31 March 1989

At the White House press briefing concerning the upcoming visit of Egyptian President Hosni Mubarak, a reporter asks if the United States is asking Egypt to withdraw from the Condor II program. A "senior administration official" responds that "the Condor is an old story," and that "I think the Egyptians are aware of our position."

— "White House briefing on the visit to the United States of Egyptian President Mubarak by a senior administration official," Federal News Service, 31 March 1989; in Lexis-Nexis, www.lexis-nexis.com.

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31 March 1989

Israeli military sources say that Iraq, Egypt, and Argentina have been developing the Condor II missile for five years.
— Ruth Sinai, "Bush won't give Iraq missile report credibility, State Department expresses 'grave concern'," Associated Press, 31 March 1989; in Lexis-Nexis, www.lexis-nexis.com.

30 March 1989

In a symposium, W. Seth Carus of the Washington Institute addresses concerns about the Condor II being used for delivering chemical weapons: "The small size of the payload of the missile lends some credence to this particular possibility."

— "The danger of chemical and biological weapons in the Middle East," Federal News Service, 30 March 1989; in Lexis-Nexis, www.lexis-nexis.com.

30 March 1989

According to "well-placed Israeli sources," the Condor II missile's high cost— \$8 million— and payload of 1,100 pounds signify that it is probably intended to deliver non-conventional weapons. The missile is almost finished and Iraq has a crash program to make nuclear warheads to be used with the Condor II, according to the sources.

— Glenn Frankel, "Iraq said developing A-weapons; missile project also under way, Israelis say," *Washington Post*, 31 March 1989; in Lexis-Nexis, www.lexis-nexis.com.

30 March 1989

The *Jerusalem Post* reports that the Badr-2000 missile, under construction by Iraq and Egypt and based on the Condor II missile, will have a range of 1000km and a payload of 1500kg.

— David Horowitz, "Jane's: Arab Missiles Threaten Israel," *Jerusalem Post*, 30 March 1989; in Lexis-Nexis, www.lexis-nexis.com.

13 March 1989

According to Israeli experts, Egypt has the capability of putting chemical warheads on surface-to-surface missiles.

— Menachem Shalev and Kenneth Kaplan, "Foreign Ministry mum on Egyptian chemical weapons," *Jerusalem Post*, 13 March 1989; in Lexis-Nexis, www.lexis-nexis.com.

9 March 1989

The Times of London reports that APV Chemical Machinery Inc. of Saginaw, Michigan, a subsidiary of British company APV, sold parts that were used in the Condor I rocket. According to the report, APV sold vertical mixers for propellant compounds to SNIA-BPD (National Industrial Applications Company-Defense Division), a subsidiary of Italian firm Fiat. SNIA then sold the equipment to Argentina between 1981 and 1985. The technology is now being used in development of the Condor II.

— Nicholas Beeston, "Argentine rocket aided by UK firm's equipment; Missile threat to the Falklands," *The Times* (London), 9 March 1989; in Lexis-Nexis, www.lexis-nexis.com.

3 March 1989

Argentina successfully test launches the Condor II rocket, sending it 504km in Patagonia, according to a *Pagina 12* newspaper report.

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— "Argentina newspaper says Condor project with Egypt cancelled for sake of Israel deal," BBC Summary of World Broadcasts, 6 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

10 February 1989

A spokesman for Fiat subsidiary SNIA-BPD (National Industrial Applications Company-Defense Division) says the company has not given missile technology to Egypt, Libya, nor Iraq. The spokesman says Fiat has not had anything to do with the Condor II missile and ended its cooperation with Argentina's rocket program in 1985. Some analysts expect the Condor II missile to have its first test launch within two to three months.

— Robert Gillette, "CIA chief cites firms' weapons aid to 3rd world," *Los Angeles Times*, 10 February 1989; in Lexis-Nexis, www.lexis-nexis.com.

8 February 1989

US officials say the West German aerospace firm Messerschmidt-Boelkow-Blohm (MBB) has assisted the Argentine-Egyptian-Iraqi missile program since the early 1980s. Officials also say that the subsidiary of the giant Italian firm Fiat, SNIA-BPD (National Industrial Applications Company-Defense Division) has assisted the missile program. Officials have said that there are indications that West German and Italian assistance continues for the Condor II/Badr-2000 missile project.

— Robert Gillette, "3rd world missiles linked to German, Italian firms," *Los Angeles Times*, 8 February 1989; in Lexis-Nexis, www.lexis-nexis.com.

1989

Egypt turns to North Korea for assistance in upgrading its arsenal of Soviet-supplied Scud missiles, according to retired Israeli Brigadier General Aharon Levran, now an independent military analyst. The nature of the assistance is not known but may consist of providing spare parts or installing improved components, as well as providing guidance. Levran also says that North Korea is helping Iran develop ballistic missiles. [Note: It has been five years since the Egypt-North Korea deals of the early 1980s. It is unclear what brought on the five-year lapse in the relationship].

— *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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1988-1985

28 December 1988

US officials confirm a 27 December report in the *New York Times* that the United States wants to hold talks with Israel and Egypt to curb proliferation of missiles in the Middle East. [Note: See 27 December 1988.]

— "US presses Mideast missile talks; separate meetings with 2 allies eyed," *Washington Post*, 28 December 1988; in Lexis-Nexis, www.lexis-nexis.com.

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27 December 1988

The *New York Times* reports that US officials will propose in January separate talks with Israel and Egypt to discuss limiting the proliferation and use of missiles in the Middle East. [Note: See 28 December 1988.]

— Michael R. Gordon, "US urges talks on missiles in Mideast," *The New York Times*, 27 December 1988; in Lexis-Nexis, www.lexis-nexis.com.

20 December 1988

In an interview with the Oman News Agency, Lieutenant General Ibrahim Abd al-Ghafur al-Urabi, chairman of the Arab Industrialization Organization (AMIO), says one of the organization's recent accomplishments is increasing the Sakr missile's range by 6km. He says Egypt and Iraq could together produce a two- or three-stage rocket capable of launching satellites.

— "Egyptian arms industry chief on achievements in manufacturing weapons," BBC Summary of World Broadcasts, 23 December 1988; in Lexis-Nexis, www.lexis-nexis.com.

15 November 1988

Kuwaiti newspaper *Al-Qabas* reports that, according to Egyptian sources, the United States wants to restrict US aid to Egypt from being used to develop medium-range missiles, such as the Condor II.

— "US to set new restrictions on military aid for Egypt," Xinhua News Agency, 15 November 1988; in Lexis-Nexis, www.lexis-nexis.com.

25 October 1988

Laywers for Abdelkader Helmy, the Egyptian-born aerospace engineer, assert in court papers that he was recruited by Egyptian Defense Minister Lieutenant General Abd al-Halim Abu Ghazala to smuggle missile technology to Egypt. [Note: See also 24 June 1988. Abu Ghazala is removed from his post on 15 April 1989.]

— Richard W. Stevenson, "Egyptian minister named in missile-parts scheme," *New York Times*, 25 October 1988; in Lexis-Nexis, www.lexis-nexis.com.

13 October 1988

Responding to a *Washington Post* story of 19 September, Argentine defense sources say the Condor II is a scientific project, not a military project. The Argentine daily newspaper *Clarín* reports that the project does not include Iraq, only Egypt and Kuwait.

— "Controversy over Condor II," *Latin America Regional Reports: Southern Cone*, 13 October 1988; in Lexis-Nexis, www.lexis-nexis.com.

Late 1988

A bomb explodes near a truck that was to transport German and Italian technicians to the Egyptian missile production plant, Factory 17.

— Daniel Santoro, *Operación Cóndor II: la historia secreta del misil que desmanteló Menem* (Buenos Aires: Ediciones Letra Buena, 1992), p. 28.

2 October 1988

UAE newspaper *Al-Ittihad* reports that the United Kingdom and the Mossad are secretly tracking the development

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of the Condor joint missile project.

— *Al-Ittihad* (Abu Dhabi), 2 October 1988; in *Gulf 2000*, <<http://www1.columbia.edu>>.

24 September 1988

The Independent reports that Western officials have said that a recent bomb explosion outside the homes of technicians working on the Condor II missile was the work of the Israeli Mossad.

— Michael Sheridan, "Fiat denies missile aid to Egypt and Argentina," *The Independent*, 24 September 1988; in Lexis-Nexis, www.lexis-nexis.com.

24 September 1988

Italian company Fiat denies that it sold secret technology for the Condor II missile. Allegations about Fiat's dealings are made in a book, *Agnelli and the Network of Italian Power*, by Alan Friedman, which will be published on 26 September. The book alleges that Fiat subsidiary, SNIA-BPD, sold guidance and propulsion systems to Argentina between 1984 and 1986. The book also claims that SNIA was temporarily barred from receiving missile technology from US joint venture partners as a result of having sold this technology to Argentina. Responding to these allegations, a Fiat spokesman says SNIA and German company Messerschmitt-Bolkow-Blohm (MBB) advised Argentina on a civilian rocket with a range of 70km in the 1970s, but "the project never got beyond the planning stage. We absolutely deny having anything to do with the Condor project."

— Michael Sheridan, "Fiat denies missile aid to Egypt and Argentina," *The Independent*, 24 September 1988; in Lexis-Nexis, www.lexis-nexis.com; Andrew Gowers, "Fears on third world missiles," *Financial Times*, 24 September 1988, in Lexis-Nexis, www.lexis-nexis.com.

20 September 1988

An Argentine military source says the Air Force is working on the Condor II medium-range rocket for sending payloads into space. The rocket has been developed for two years, the source says, and is being worked on at the experimental center at Falda del Carmen, near Alta Gracia in Cordoba province. The source says Argentina does not plan to sell medium-range missiles to other nations, especially those in conflict areas. The source says the rocket does not possess the proper guidance or control systems to make it a missile.

— *Telam*, 20 September 1988; in "Argentina: Military source says Condor II project intended for peaceful purposes," BBC Summary of World Broadcasts, 22 September 1988; in Lexis-Nexis, www.lexis-nexis.com.

20 September 1988

Argentine Brigadier Roberto Engroba, the material area chief in the air force, says the Condor I and II missiles have nothing to do with the Fabrica Argentina de Material Aerospacial, of which Engroba is vice president.

— Noticias Argentinas, 20 September 1988; in "Argentina: Military source says Condor II project intended for peaceful purposes," BBC Summary of World Broadcasts, 22 September 1988; in Lexis-Nexis, www.lexis-nexis.com.

19 September 1988

The *Washington Post* reports that the Condor II missile has run into problems during testing, according to sources. The missile is probably a two-stage rocket with a range of 500 to 600 miles and a payload of 770 pounds.

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— Don Oberdorfer, "U.S. seeks to curb Argentine missile project," *Washington Post*, 19 September 1988; in Lexis-Nexis, www.lexis-nexis.com.

8-9 September 1988

At a meeting in Rome, the United States, Britain, France, West Germany, Italy, Canada, and Japan agree to block the Condor II missile development, labeling it a "project of concern."

— Don Oberdorfer, "U.S. seeks to curb Argentine missile project," *Washington Post*, 19 September 1988; in Lexis-Nexis, www.lexis-nexis.com.

5 September 1988

MidEast Market reports that Egypt's Defense Minister, Field Marshal Abd al-Halim Abu Ghazala, may be implicated in the attempted smuggling of carbon-carbon fiber from the United States. [Note: See 24 June 1988.]

— "Egyptian Indifference to Missile Technology Scandal," *MidEast Market*, 5 September 1988; in Lexis-Nexis, www.lexis-nexis.com.

5 September 1988

Egyptian security sources deny an Italian newspaper's report that the Israeli Mossad detonated a booby-trapped car in Cairo to warn Egypt to halt its surface-to-surface missile program.

— Manama WAKH, 5 September 1988; in "Israeli Effort to 'Obstruct' Missiles Protested," FBIS Document FBIS-NES-88-172, 6 September 1988.

5 September 1988

Egyptian sources state that Israel is attempting to convince the United States to bargain with Egypt over the closure of the smuggling case involving Egyptian officials and missile technology in exchange for an Egyptian guarantee to stop development and production of surface-to-surface missiles. [Note: See 24 June and 5 September 1988.]

— Manama WAKH, 5 September 1988; in "Israeli Effort to 'Obstruct' Missiles Protested," FBIS Document FBIS-NES-88-172, 6 September 1988.

4 September 1988

The *New York Times* reports that the Egyptian defense minister has been linked to the alleged smuggling of missile technology through wiretapped conversations that refer to the "minister." [Note: See 20 August 1988.]

— Richard W. Stevenson, "U.S. Studying Cairo links to smuggling plot," *New York Times*, 4 September 1988; in Lexis-Nexis, www.lexis-nexis.com.

25 August 1988

West Germany's *Stern* magazine reports that Messerschmidt-Boelkow-Blohm (MBB) has earned more than \$250 million from its participation in the Condor missile project and the related development of solid-fuel rocket motors. [Note: The source is not clear whether this refers to the Condor or Condor II or both.] The *Stern* report also asserts that, according to US analysts, the smaller Consen Group firm has provided 200 workers to oversee the project, and uses MBB offices and facilities in an attempt to nominally separate MBB from direct oversight of the project. [Note: See 9 April 1989.]

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— Robert Gillette, "3rd world missiles linked to German, Italian firms," *Los Angeles Times*, 8 February 1989; in Lexis-Nexis, www.lexis-nexis.com.

20 August 1988

The *Washington Post* reports that the attempt by Egyptian agents to smuggle missile technology from the United States may be linked to Egypt's Defense Minister, Field Marshal Abd al-Halim Abu Ghazala. [Note: See 24 June 1988 and 28 October 1988. Abu Ghazala is removed from his post 15 April 1989 amidst these allegations.]

— "High link seen in Cairo spy case; references heard to defense minister," *Washington Post*, 20 August 1988; in Lexis-Nexis, www.lexis-nexis.com.

10 August 1988

The *Washington Post* reports the Israeli Mossad was spurred by Egyptian and Iraqi missile cooperation to attempt to stop their efforts to purchase missile technology in the United States and Europe.

— Patrick E. Tyler, "Truce in Gulf seen fortifying Arab axis now assisting Iraq," *Washington Post*, 10 August 1988; in Lexis-Nexis, www.lexis-nexis.com.

29 July 1988

The Argentine government admits that it is collaborating with Egypt in the production of a missile dubbed Condor with a range of 600 to 800km. Argentina has collaborated with Egypt for five years in the production of solid fuels. The Condor is the first phase of a larger project. The second phase is the Alacran. The two will form a two-stage missile called Alcon.

— "Egyptian Missile," *Latin American Markets*, 29 July 1988; in Lexis-Nexis, www.lexis-nexis.com.

28 July 1988

During an interview, Egyptian President Hosni Mubarak says of the Egyptian smuggling case, "We have not stolen the technology of the Americans. We have not been spying on their establishments, and we have not stolen their documents....The issue is very simple. The whole matter applies to not more than 20 carbon plates that are used in several industries. However, the American press has created an extreme uproar... It seems, however, that such material cannot be exported out of America. This is the whole issue."

— "Mubarak: U.S. Willing to Meet PLO," *Washington Post*, 28 July 1988; in Lexis-Nexis, www.lexis-nexis.com.

27 July 1988

Argentina tests the MQ-2 Bigua remote-control missile from a Pucaro counter-insurgency aircraft. Argentina has developed the missile in collaboration with Egypt and Iraq and based on the Italian Mirach 100 made by Meteor.

— "Argentina New Missile," *Latin American Markets*, 12 August 1988; in Lexis-Nexis, www.lexis-nexis.com.

25 July 1988

US News & World Report publishes a report on the development of the Condor II missile. The report says the project, which includes Egypt, Iraq and Argentina, is worth \$3.2 billion, and, according to intelligence sources, seeks to provide Egypt and Iraq with 200 missiles each along with an indigenous capability to build more. The two-stage missile has an advanced French inertial-guidance system, a range of 600 miles and a 1,000-pound payload. It is designed for a mobile launch capability and an ability to carry nuclear warheads. Argentina began the Condor II

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project, the report says, in the wake of the 1982 Falklands war. Egypt, also allegedly representing Iraq, signed an agreement with Argentina in October 1984 for the development of the missile, with Iraq providing much of the funding. European missile engineers and designers are now in Iraq preparing the infrastructure to build the missiles.

— Mel Elfin, "Behind the Condor carbon-carbon smuggling scam," *US News & World Report*, 25 July 1988; in Lexis-Nexis, www.lexis-nexis.com.

20 July 1988

An Argentine Ministry of Defense spokesperson, responding to a recent *U.S. News & World Report* article, denies that Argentina is supplying Iraq with any "aerospace technology...for fabrication of missiles." The spokesperson admits that Argentina and Egypt have had an agreement for two years to cooperate on satellite launch vehicles for meteorological and communication satellites, but denies any agreements with Iraq.

— "Defensa desmintió la venta de misiles a Irak y Egipto," *La Nación* (Buenos Aires), 20 July 1988, p. 19.

19 July 1988

The *Christian Science Monitor* reports that analysts believe Egypt attempted to smuggle carbon-carbon from the United States in order to extend the range of the Condor II missile.

— Jane Friedman, "In Egypt, US charges meet official silence and public ire," *Christian Science Monitor*, 19 July 1988; in Lexis-Nexis, www.lexis-nexis.com.

13 July 1988

The *Washington Post* reports that Egypt has refused to waive diplomatic immunity for two military officers, Assistant Military Attaché Abd al-Rahin Elgohary and Lieutenant Colonel Mohamed A. Mohamed, who were implicated in the attempt to smuggle restricted missile technology out of the United States. [Note: See 24 June 1988.]

— "Egypt refuses to relinquish pair in smuggling scheme," *The Washington Post*, 13 July 1988; in Lexis-Nexis, www.lexis-nexis.com.

11 July 1988

MidEast Markets reports that, based on evidence from wiretaps and seized documents, the US government believes Egypt was trying to smuggle carbon-carbon to increase the range and accuracy of its Scud-B missiles.

— "Israel's push for an anti-missile missile," *MidEast Markets*, 11 July 1988; in Lexis-Nexis, www.lexis-nexis.com.

4 July 1988

Aviation Week & Space Technology quotes a customs agent regarding the case of Egyptian agents allegedly smuggling missile technology out of the United States. The agent said defendant Abdelkader Helmy ordered two cone-shaped devices from a subsidiary of the Greenleaf Corporation. The agent said he was told by Greenleaf Corporation officials that Helmy specified that the cones should withstand "thermal shock of up to 1,400 degrees Celsius for one minute," and that the only reason for such a specification would be for cones to withstand the "heat of reentry into the atmosphere." [Note: See 24 June 1988.]

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



— Richard G. O'Lone, "Four charged in bid to ship missile material to Egypt," *Aviation Week & Space Technology*, 4 July 1988; in Lexis-Nexis, www.lexis-nexis.com.

July 1988

US News & World Report reports that Argentina is a primary supplier of ballistic missiles to Iraq and Egypt. A US intelligence source states that the ultimate objective of the Condor project is to provide Egypt and Iraq each with 200 Condor II missiles and to enable the two countries to produce such missiles indigenously. The two-stage Condor II is to incorporate an advanced, French-built, inertial guidance system.

— Mel Elfin, "Behind the Condor Carbon-Carbon Smuggling Scam," *U.S. News & World Report*, 25 July 1988, p. 38.

July 1988

La Nación quotes the Israeli newspaper *Davar* as reporting that Argentina intends to produce 1,000km-range Condor missiles in Egypt. The project will receive funds from Iraq and technology from Europe, particularly West Germany.

— Anabella Busso, *Relaciones Argentina-Estados Unidos en los noventa: el caso Cóndor II* (Buenos Aires: Edición CERIR, 1999), p. 41; "La Argentina produciría un misil de alcance medio con Egipto," *La Nación* (Buenos Aires), 4 July 1988, p. 5.

29 June 1988

A federal grand jury indicts Abdelkader Helmy, James Huffman, and Egyptian Colonel Hussam Yossef on charges related to attempting to export missile technology to Egypt. They are charged with conspiring to illegally export munitions, obstructing and making false statements to customs agents, and exporting 430 pounds of carbon fiber, which can help improve the range and payload of missiles and make them less visible to radar. Egyptian Assistant Military Attaché Abd al-Rahin Elgohary and Lieutenant Colonel Mohamed A. Mohamed are named as un-indicted co-conspirators in the case, but they have already left the United States under diplomatic immunity accord. [Note: See 24 June 1998.]

— Ken Hoover, "Three men indicted in missile export scheme," *United Press International*, 29 June 1988; in Lexis-Nexis, www.lexis-nexis.com.

28 June 1988

A military analyst quoted in *The Times* of London says he believes Egypt was attempting to smuggle missile technology from the United States to upgrade or build a missile that would have a range of 700 miles.

— Nicholas Beeston, "Cairo race for Islamic missile; Third World arms race," *The Times* (London), 28 June 1988; in Lexis-Nexis, www.lexis-nexis.com.

28 June 1988

The Associated Press reports that Egyptian Lieutenant Colonel Mohamed A. Mohamed, who was allegedly involved in the attempt to smuggle missile technology from the United States to Egypt, has returned to Egypt. He was not detained or charged in the United States because of his diplomatic immunity. A US State Department spokesman says the United States wants Mohamed to cooperate with the smuggling investigation but has not yet received an answer from Egypt.

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



— "Egyptian Colonel charged in smuggling case sent home," Associated Press, 28 June 1988; in Lexis-Nexis, www.lexis-nexis.com.

25 June 1988

An Egyptian military spokesman refuses to comment on the arrest of two Egyptian colonels in the United States for attempting to smuggle missile technology.

— "Military Refuses Comment on U.S. Smuggling Charges," Associated Press, 25 June 1988; in Lexis-Nexis, www.lexis-nexis.com.

24 June 1988

Of the five people who are accused of attempting to smuggle high-technology materials to Egypt that could be used to manufacture an advanced missile system, four are arrested. The arrests take place as a box is about to be loaded onto an Egyptian C-130 military transport airplane at a US airport. The box contains 430 pounds of carbon fiber, which is a heat-resistant, lightweight material derived from petroleum, and used in manufacturing rocket nozzles and missile nose cones. According to the US Justice Department, Abdelkader Helmy, an Egyptian-born rocket propulsion specialist with US citizenship, directed the US side of the operation, and was aided by his wife and an Egyptian colonel, Hussam Yossef, who directed the operation from Salzburg, Austria. Helmy reportedly arranged for James Huffman, a US citizen from Lexington, Ohio, to purchase the supplies. He then sent them to Baltimore, while Mohamed A. Mohamed, an Egyptian air force lieutenant colonel, arranged for the shipments to go to Egypt. US officials arrest Helmy, his wife, Huffman, and Yossef; Mohamed could not be detained or charged due to his diplomatic immunity. The United States charges that Egypt planned to use the smuggled material for its surface-to-surface missile projects known as Condor II and Condor III. [Note: See 5 September 1988 and 19 January 1990.]

— Ruth Marcus and David B. Ottaway, "Egyptian Officer Tied to Smuggling Effort; 5 Accused of Plot to Export Missile Material," *Washington Post*, 25 June 1988, p. A1, in Lexis-Nexis, www.lexis-nexis.com; "Israel push for an anti-missile missile," *MidEast Markets*, 11 July 1988.

17 May 1988

The *St. Petersburg Times* reports that Egypt is cooperating with Iraq to extend the range of the Scud-B from 200 miles to 310 miles so it will be able to hit Tehran from Iraq. Iraq has hired retired Egyptian military officers and missile experts, according to the report. "It is working out fine for both sides," says an unnamed source in the report. "Iraq is getting what it needs, and Egyptian missile experts are getting hands-on experience."

— Peyman Pejman, "Egyptian expertise boosts Iraqi war effort," *St. Petersburg Times*, 17 May 1998; in Lexis-Nexis, www.lexis-nexis.com.

May 1988

A car bombing in France disrupts Egyptian attempts to procure advanced missile technology from the United States. Egyptian agents believe Israel is responsible for the car-bombing, according to US sources. [Note: See 24 June 1988.]

— Patrick E. Tyler, "High link seen in Cairo spy case; references heard to defense minister," *Washington Post*, 20 August 1988; in Lexis-Nexis, www.lexis-nexis.com.

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11 April 1988

Newsweek reports that Egypt is producing the Sakr 80 missile, which has a range of 50 miles and a payload of 450 pounds. It is an improved version of the Soviet Frog-7 missile.

— Russel Watson, John Barry, Robert B. Cullen, Theodore Stanger, "Another Arms Race," *Newsweek*, 11 April 1988; in Lexis-Nexis, www.lexis-nexis.com.

4 April 1988

US News & World Report reports that Egypt has 15 Scud-B missiles.

— "Surrounded by Enemies: The battlefield equation," *US News & World Report*, 4 April 1988; in Lexis-Nexis, www.lexis-nexis.com.

April 1988

The US administration lifts sanctions on Fiat subsidiary SNIA-BPD (National Industrial Applications Company-Defense Division) that were established in response to the company's collaboration on the Condor II project. The administration now views the company as a potential partner in space defense.

— Robert Gillette, "3rd world missiles linked to German, Italian firms," *Los Angeles Times*, 8 February 1989; in Lexis-Nexis, www.lexis-nexis.com.

5 January 1988

The *Financial Times* reports that, according to interviews with Egyptian officials, foreign defense attachés and foreign companies seeking to do business with Egypt, Egypt's six main defense-industrial goals include building an intermediate-range battlefield missile.

— Tony Walker, "Gulf War Puts Egyptian Arms Industry on Alert," *Financial Times*, 5 January 1988; in Lexis-Nexis, www.lexis-nexis.com.

1988

According to the 1988 annual report of the US Arms Control and Disarmament Agency, Egypt has Soviet Frog-7 solid-fueled missiles with a range of 40 miles, a payload of 1,000 pounds, and a circular error probable (CEP) of 440 yards. Egypt also possesses standard Scud-B missiles and is developing enhanced Scud-B missiles, possibly aided by North Korea, with a payload of 2,200 pounds and storable liquid fuel. Egypt is developing the two-stage solid-fueled Sakr 80 missile, possibly in collaboration with North Korea and Iraq, with a range of 50 miles and a payload of 450 pounds. Egypt is developing the Vector solid-fueled missile with Argentina, with a range of 500 to 600 miles and an unknown CEP. [Note: The reported attributes for the Vector missile match those listed for the Iraqi Condor II missile, which the report says is being developed jointly with Egypt and Argentina.]

— "World weapons sales top \$1 trillion, paced by South Asia market," *Aviation Week & Space Technology*, 28 August 1989; in Lexis-Nexis, www.lexis-nexis.com.

1988

Egypt requests North Korea's assistance to enhance its aging arsenal of Scud missiles, according to military analyst Aharon Levrant.

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



— Nicolas B. Tatro, "North Korean missile help sought by Syria, Egypt," Associated Press, 29 December 1989; in Lexis-Nexis, www.lexis-nexis.com.

1988

Egypt drops out of the Condor II project, which Egyptian President Hosni Mubarak confirms in 1989. [Note: See 20 September and 5 October 1989 entries.]

— "Mubarak poses mystery over status of Argentina's Condor II missile," *Latin American Weekly Report*, 5 October 1989; in Lexis-Nexis, www.lexis-nexis.com.

1988

Egypt and the Consen Group discontinue ties related to the Condor II project. Egypt no longer is able to provide funding for the project, and Consen discontinues providing technical information.

— Eduardo Barcelona and Julio Villalonga, *Relaciones carnales: la verdadera historia de la construcción y destrucción del misil Cóndor II* (Buenos Aires: Planeta, 1992), p. 51.

1988

Egypt threatens to cut funding after the Consen Group falls behind in project development.

— Anabella Busso, *Relaciones Argentina-Estados Unidos en los noventa: el caso Cóndor II* (Buenos Aires: Edición CERIR, 1999), p. 40.

23 December 1987

The *New York Times* reports that a military pact between Egypt and Kuwait includes the sale of Egyptian-made surface-to-air missiles.

— Youssef M. Ibrahim, "Egypt, challenging the Iranians, is expanding military role in Gulf," *The New York Times*, 24 December 1987; in Lexis-Nexis, www.lexis-nexis.com.

21 December 1987

Financial Times reports that Egypt may be building improved Scud-B missiles with the help of North Korea.

— Tony Walker, Andrew Gowers, David Buchan, "Egypt and Argentina in long-range missile plan," *Financial Times*, 21 December 1987; in Lexis-Nexis, www.lexis-nexis.com.

21 December 1987

Financial Times reports that Egypt and Argentina are collaborating on the Condor II solid-fueled rocket with a 800km range capability. According to the report, the two countries have collaborated for approximately five years, and it is believed Iraq has financed the project. Israel allegedly notified the British government of the collaboration earlier this year. The Argentine defense ministry has acknowledged the collaboration but specified it to be for the development of a rocket for launching satellites. Egypt reportedly wants the missile in response to Israel's deployment of 750km-range Jericho II missiles. It is also noted that some experts believe Egypt has tested the missile at least once.

— Tony Walker, Andrew Gowers, and David Buchan, "Egypt and Argentina in long-range missile plan," *Financial Times*, 21 December 1987; in Lexis-Nexis, www.lexis-nexis.com.

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Late 1987

The United States increases political pressure on Egyptian President Hosni Mubarak to stem Egypt's missile development. Mindful of this, the Argentine air force renegotiates its deal with Egypt.

— Daniel Santoro, *Operación Cóndor II: la historia secreta del misil que desmanteló Menem* (Buenos Aires: Ediciones Letra Buena, 1992), p. 41.

August 1987

Israeli agents photograph shipments of the Condor II missile from Egypt to Iraq. This information is given to Western intelligence services.

— Harvey Morris, Adel Darwish, Tim Kelsey, "Huge explosion at secret Iraqi missile plant: Egyptian technicians among about 700 killed in disaster near Baghdad," *The Independent*, 6 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

2 February 1987

Gamal Al Sayyed, Egypt's minister of state for military production, says Egypt is capable of manufacturing "field" surface-to-surface missiles using the "reversion" technique.

— "Egypt manufactures field surface-to-surface missiles," Xinhua News Agency, 3 February 1987; in Lexis-Nexis, www.lexis-nexis.com.

1987

Egypt attempts to buy 200 MSD 80 missile guidance systems from French electronics maker Sagem. They are to be transferred to Iraq for the Condor II missile. France denies Egypt's request and offers the less precise MSL 800 system instead, which Egypt declines.

— "French SDGN acknowledges Sagem sales", *Middle East Defense News*, 18 February 1991; in Lexis-Nexis, www.lexis-nexis.com.

1987

Argentina transfers the Condor II technology to Egypt, as per a secret agreement between the two countries.

— Harvey Morris, Adel Darwish, Tim Kelsey, "Huge explosion at secret Iraqi missile plant: Egyptian technicians among about 700 killed in disaster near Baghdad," *The Independent*, 6 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

1987

The first stage of the Condor II, with a range of 500km, is revealed at the Buenos Aires aerospace exposition.

— "Condor II Rocket Headline Again; Mid East Link Highlighted; Confusion on Actual Size," Latin American Newsletters, Ltd., *Latin American Weekly Report*, 6 October 1988.

1987

North Korea provides assistance to establish a Scud-B production plant in Egypt.

— Lee Chae Hak, "Kkorimunŭn Pukhan Scud Such'ul/Shimsangch'anh'ŭn Taechungdong P'anmaesŏl," *Joongang Ilbo*, 13 July 1991, KINDS, www.kinds.or.kr.

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October 1986

The first stage of the Condor II, with a range of 500km, is tested.

— "Condor II Rocket Headline Again; Mid East Link Highlighted; Confusion on Actual Size," Latin American Newsletters, Ltd., *Latin American Weekly Report*, 6 October 1988.

July 1986

Defense & Foreign Affairs reports that Egypt has donated 250 Swingfire anti-tank missiles to Sudan. The missiles are a product of Arab-British Dynamics, a joint venture of the Arab Organization for Industrialization and British Aerospace Dynamics.

— "Arms to Sudan Training for Iraq," *Defense & Foreign Affairs*, July 1986; in Lexis-Nexis, www.lexis-nexis.com.

Mid-1986

Messerschmitt-Bölkow-Blohm's (MBB) subsidiary MBB-Transtechnica ceases deliveries for the Condor II project. MBB and the Consen Group get involved in a project to develop a missile with a 120-mile range for Egypt.

— "Profil Views Involvement In Iraq Arms Plant," *Profil* (Vienna), 24 April 1989, pp. 38-42; cited in *Nuclear Developments*, 5 May 1989, pp. 34-36.

27 April 1986

A Congressional Research Service report lists Egypt as one of 12 third world countries capable of building ballistic missiles. The report says that Egypt would most likely proceed with ballistic missile production by modifying Soviet-made missiles.

— Tim Ahern, "Report says Third World missiles are growing problem," Associated Press; in Lexis-Nexis, www.lexis-nexis.com.

9 April 1985

President Alfonsín signs Secret Decree 604 to conclude the deal with Egypt, which officially authorizes the contracts that were signed on 14 December 1984. Juan Sourrouille, Minister of Economy, Dante Caputo, Minister of External Relations, and Raúl Borrás, Minister of Defense, also sign the decree. By signing this agreement, Argentina agrees to deliver 44 motors plus four "test motors" to Egypt. The decree approves both the Condor I and Condor II as part of the Air Force's "Satellite Plan."

— Anabella Busso, *Relaciones Argentina-Estados Unidos en los noventa: el caso Cóndor II* (Buenos Aires: Edición CERIR, 1999), p. 33; Mario Baizan, "Iraq's Involvement in Condor II Project Viewed," *Somos*, 28 January 1991, 1-4, cited in FBIS JPRS-TND-91-003, 25 February 1991, 13-15; Daniel Santoro, *Operación Cóndor II: la historia secreta del misil que desmanteló Menem* (Buenos Aires: Ediciones Letra Buena, 1992), p. 24; Eduardo Barcelona and Julio Villalonga, *Relaciones carnales: la verdadera historia de la construcción y destrucción del misil Cóndor II* (Buenos Aires: Planeta, 1992), p. 28; Martin Granovsky, *Misión cumplida: La presión norteamericana sobre la Argentina, de Braden a Todman* (Buenos Aires: Planeta, 1992), p. 194.

1985-1988

During this period, Argentina ships 12 solid-fueled rocket motors to Egypt.

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— Eduardo Barcelona and Julio Villalonga, *Relaciones carnales: la verdadera historia de la construcción y destrucción del misil Cóndor II* (Buenos Aires: Planeta, 1992), p. 119.

1985-1988

MBB works with Egypt on production of a 120km missile. MBB ships "laboratory equipment" to Egypt.

— Ilona Henry, "Austrians helping build Iraqi missile," *Jerusalem Post*, 24 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

1985

Technicians from the West German company Messerschmitt-Bölkow-Blohm (MBB) establish the firm named the Consen Group in Switzerland to carry out work on the Condor II missile.

— John Eisenhammer, "Crisis in the Gulf War: The merchants of death will be brought to book; Reports of Germany's prominent role in building Iraq's chemical arsenal have prompted Bonn to pass tougher laws," *The Independent*, 31 January 1991; in Lexis-Nexis, www.lexis-nexis.com.

1985

Honeywell's British subsidiary Honeywell Control Systems completes a study for the Egyptian defense ministry on the subject of developing fuel-air explosives (FAEs) for ballistic missiles. The contract for the study was made by Honeywell and the Institute for Advanced Technology (IFAT) of Switzerland.

— "Honeywell implicated in FAE work," *Flight International*, 12 December 1990; in Lexis-Nexis, www.lexis-nexis.com.

1985

Egypt and Argentina begin cooperative efforts to produce the Condor II missile, which reportedly will have a range of 1,000km and a 700kg payload capacity.

— "Argentina: Will Condor II fly?" *Latin American Markets*, 21 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

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1984-1980

14 December 1984

Egyptian and Argentine officials sign contracts that advance the Condor project. [Note: Argentine President Alfonsín officially authorizes this deal in April 1985. See 9 April 1985 entry.]

— Anabella Busso, *Relaciones Argentina-Estados Unidos en los noventa: el caso Cóndor II* (Buenos Aires: Edición CERIR, 1999), p. 33; Mario Baizan, "Iraq's Involvement in Condor II Project Viewed," *Somos*, 28 January 1991, 1-4, cited in FBIS JPRS-TND-91-003, 25 February 1991, 13-15; Daniel Santoro, *Operación Cóndor II: la historia secreta del misil que desmanteló Menem* (Buenos Aires: Ediciones Letra Buena, 1992), p. 24; Eduardo Barcelona and Julio Villalonga, *Relaciones carnales: la verdadera historia de la construcción y destrucción del misil Cóndor II* (Buenos Aires: Planeta, 1992), p. 28; Martin Granovsky, *Misión cumplida: La presión norteamericana sobre la Argentina, de Braden a Todman* (Buenos Aires: Planeta, 1992), p. 194.

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20 November 1984

Egypt demonstrates the Saqr-30 missile capability at 30km ranges.

— "Egyptian Defence Minister at Demonstration of Weapons," BBC Summary of World Broadcasts, 20 November 1984; in Lexis-Nexis, www.lexis-nexis.com.

5 November 1984

Muhammad Abd al-Halim Abu Ghazala, the Egyptian minister of defense and war production, says production will begin on the Egyptian-made Ayn al-Saqr (Hawkeye) missile in March 1985. The Ayn al-Saqr is the Egyptian variant of the Soviet SA-7 shoulder-launched SAM.

— "Egyptian military production," BBC Summary of World Broadcasts, 7 November 1984; in Lexis-Nexis, www.lexis-nexis.com.

4 November 1984

A memo from J.D. Beckmann of Minneapolis-Honeywell reveals that the Egyptians are developing a ballistic missile designed to have an accuracy of 0.1 percent of its range, and that the technical efforts are being funded by Saudi Arabia.

— "A Bigger Blast," *Middle East*, January 1991, pp. 15- 16.

25 October 1984

Vice Admiral Ali Tawfiq Jad, head of the Egyptian Navy, announces that Egypt has received its first shipment of Harpoon missiles.

— "Arrival of New Naval Units," BBC Summary of World Broadcasts, 27 October 1984; in Lexis-Nexis, www.lexis-nexis.com.

October 1984

According to *US News & World Report*, an Egyptian delegation representing Iraq signs an agreement in Buenos Aires to begin development of the \$3.2 billion Condor II project. Iraq funds much of the project, which is dubbed the Badr-2000 by Iraq and Egypt. The German firm Messerschmitt-Bölkow-Blohm (MBB) is the most prominent supplier for the project, providing design and planning assistance, as well as laboratory simulation and missile-control equipment. Egypt and Iraq are each to receive 200 missiles as well as missile production facilities in which they will be able to produce further units. Egypt's interest is reportedly spurred by Israel's deployment of the Jericho-II ballistic missile, which has a range of at least 750km.

— Mel Elfin, "Behind the Condor Carbon-Carbon Smuggling Scam," *US News & World Report*, 25 July 1988, p. 38, in Lexis-Nexis, www.lexis-nexis.com; Tony Walker, Andrew Gowers and David Buchan, "Egypt and Argentina in Long-Range Missile Plan," *Financial Times*, 21 December 1987, p. 28, in Lexis-Nexis, www.lexis-nexis.com.

24 April 1984

The Middle East News Agency reports that Egyptian military factories have produced the Hawkeye missile and are beginning to produce long-range missiles.

— "Egyptian Defence Minister on Sinai Handover Anniversary," BBC Summary of World Broadcasts, 26 April 1984; in Lexis-Nexis, www.lexis-nexis.com.

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4 April 1984

A Honeywell internal memo outlines the company's discussion with Kevin Smith, a consultant to the Swiss IFAT and the British Honeywell Control Systems, regarding obtaining a FAE study for Egypt. The memo includes notations that "[t]he Egyptians are developing a ballistic missile with the technical efforts being funded by the Saudi Arabians." It is also stated in the memo that Egypt is developing the missile "to attack high value, fixed targets such as cities, ports, oil refineries, and air bases." Further notations assert that the missile is "to have an accuracy of 0.1% of its range" and "would probably never be fired in anger." In addition, Smith reports the Saudis have provided \$1 billion to IFAT, and this money is "currently being deposited in Swiss banks." Smith assures Honeywell that by the time the report is passed from IFAT to the Egyptians, all Honeywell logos and corporate symbols would be removed.

— "A Bigger Blast," *Middle East*, January 1991, pp. 15-16; "Honeywell implicated in FAE work," *Flight International*, 12 December 1990, in Lexis-Nexis, www.lexis-nexis.com.

April 1984

Latin American Markets reports that it obtained a letter of intent in regards to missile nozzle production that was exchanged between a US company and Desintec, a Consen Group company. According to the letter dated April 1984, the nozzles are intended for the Argentine air force and the Condor II missile project. [Note: According to this source, the United States intervenes to stop the contract.]

— "Argentina: Will Condor II fly?" *Latin American Markets*, 21 April 1989; in Lexis-Nexis, www.lexis-nexis.com.

March 1984

Honeywell Control Systems signs a \$200,000 contract [Note: Burrows and Windrem report a \$100,000 contract] with IFAT to conduct a study of FAEs for Egypt's defense ministry. Ken Smith, a British aerospace consultant to both IFAT and Honeywell Control Systems, negotiates the deal and supplies specifications to Honeywell on 9 October 1985 and 4 November 1984. The specifications state that the weapon should weigh 400kg and have a volume of 0.5 cubic meters. Egypt originally attempts to obtain FAEs from the US State Department under the guise of using such munitions to clear mines in the Egyptian desert, but the request is rejected.

— "A Bigger Blast," *Middle East*, January 1991, pp. 15-16; "Honeywell Implicated in FAE Work," *Flight International*, 12 December 1990, in Lexis-Nexis, www.lexis-nexis.com; *United States v. Abdelkader Helmy, et al.*, S 88 201 RAR (1989), p. 4; William E. Burrows and Robert Windrem, *Critical Mass: The Dangerous Race for Superweapons in a Fragmenting World* (New York: Simon & Schuster, 1994), p. 200.

15 February 1984

The Egyptian Ministry of Defense signs a contract with Switzerland's Consen Group that involves the planning and delivery of a projection plant for the manufacture of rocket engines, as well as for the design and development of a conventional missile system.

— *United States v. Abdelkader Helmy, et al.*, S 88 201 RAR (1989), p. 4; William E. Burrows and Robert Windrem, *Critical Mass: The Dangerous Race for Superweapons in a Fragmenting World* (New York: Simon & Schuster, 1994), p. 468.

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1984

The Egyptian Ministry of Defense attempts to buy 9,000 FAEs from the United States, according to court records. The Egyptians say they want the bombs to clear minefields, but, according to a Justice Department report, they are intended for Condor II production. The Egyptian procurement request is denied. [Note: See October 1989 and 3 September 1990 entries for more on FAEs.]

— Douglas Frantz, "Honeywell factor in Iraq bomb," *Los Angeles Times*, 26 December 1990; in Lexis-Nexis, www.lexis-nexis.com.

1984

Honeywell's British subsidiary, Honeywell Control Systems, contracts the Swiss Institute for Advanced Technology (IFAT) to produce a study for the Egyptian Ministry of Defense concerning the development of fuel-air explosives (FAEs) for ballistic missiles. It is reported that IFAT is already involved with Egypt in the Condor II project when contracted to undertake this study. [Note: See October 1989 and 3 September 1990 entries for more on FAEs.]

— "Honeywell implicated in FAE work," *Flight International*, 12 December 1990; in Lexis-Nexis, www.lexis-nexis.com.

1984

Iraq agrees to participate in the Condor II project, provided that the resulting missile product is able to travel at least five times farther than the Condor I's 150km-range capability. In this pursuit, it is calculated that the Condor I may be transformed into the second stage of a larger rocket with a liquid-fueled booster to extend the range, but doing so will require technology that will attract the attention of the United States and Great Britain. To avoid this scrutiny, the Iraqis suggest using Egypt as a go-between. In turn, Iraq agrees to transmit its funding for the Argentine Condor II program through Egypt, probably in exchange for some portion of the eventual Argentine production stockpile and attainment of a domestic missile production capability. Saudi Arabia, while appearing to be ambivalent about the project, secretly deposits \$1 billion for the project into Swiss bank accounts. The Saudis are eager to support a missile capable of reaching Israel and/or "revivalists" in Iran. Consequently, the German firm Messerschmitt-Bölkow-Blohm (MBB) makes lavish expenditures using the Arab money, giving its employees extravagant bonuses and paying well above market value for missile elements. [Note: Although some characterize spending on the project as excessive, the notably high prices paid for many items may have instead reflected a desire to maintain good relations with companies that supplied missile parts. This appears especially true of MBB, which allegedly allowed Consen Group representatives to operate out of its offices for weeks at a time.]

— Kenneth Timmerman, *The Death Lobby: How the West Armed Iraq*, (New York: Houghton Mifflin, 1991), pp. 154-155; US Central Intelligence Agency, *Iraqi Ballistic Missile Developments: An Intelligence Assessment* (Washington, DC: Directorate of Intelligence, 30 June 1990), classified "Top Secret," declassified excerpts released 5 March 1998, www.foia.ucia.gov, p. 9; William E. Burrows and Robert Windrem, *Critical Mass: The Dangerous Race for Superweapons in a Fragmenting World* (New York: Simon & Schuster, 1994), pp. 469-470; "Waffengeschaefte – Geheim-projekt Condor," *Stern*, 25 August 1988, translated by US Defense Intelligence Agency, 15 September 1988.

1984

Iraqi financial backing enables Egypt to join the Argentine Condor II missile project.

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— Michael G. Wilson, "America's stake in Argentina," Heritage Foundation Reports, 6 December 1989; in Lexis-Nexis, www.lexis-nexis.com.

December 1983

Defense & Foreign Affairs reports that in the last quarter the United States has sold 16 Harpoon missiles to Egypt for \$40 million.

— "Significant International Transfers of Arms and Related Military Equipment in the Past Quarter," *Defense & Foreign Affairs*, December 1983; in Lexis-Nexis, www.lexis-nexis.com.

5 October 1983

Egypt test-fires its domestically produced SA-7 missiles and two types of Sakr surface-to-surface missiles.

— "1973 October War marked in Egypt," Xinhua News Agency, 5 October 1983; in Lexis-Nexis, www.lexis-nexis.com.

15 September 1983

The US Department of Defense tells Congress of its plans to sell 16 Harpoon missiles, two training missiles and parts, to Egypt for \$40 million.

— "Arms Sale to Egypt," Reuters, 14 September 1983; in Lexis-Nexis, www.lexis-nexis.com.

6 September 1983

Muhammad Abd al-Halim Abu Ghazala, the Egyptian minister of defense and war production, arrives in Pyongyang with a military delegation.

— Korean Central News Agency, 6 September 1983, in "Egyptian Military Delegation Arrives for Visit," FBIS-APA-83-174, 7 September 1983, p. D11; KCNA (Pyongyang), 7 September 1983, in "Further Reportage on Visit of Egyptian Defense Minister," FBIS-APA-83-175, 8 September 1983, pp. D11-D15.

17 August 1983

Muhammad Abd al-Halim Abu Ghazala, the Egyptian minister of defense and war production, says Egypt has made its own SA-7 missiles and will begin producing them in the coming year. He says this is the first step towards making guided missiles in Egypt.

— "Egyptian Defense Minister's Speech: Tank and Missile Production," BBC Summary of World Broadcasts, 19 August 1983; in Lexis-Nexis, www.lexis-nexis.com.

5 April 1983

In Pyongyang, Egyptian President Hosni Mubarak discusses arms purchases and signs an agreement to extend the 1981 technological exchange agreement between Egypt and North Korea. The agreement contains several references to "other fields as to be agreed upon by the governments of the two countries."

— Korean Central News Agency, 5 April 1983; in "Text of General Agreement," FBIS-APA-83-067, 6 April 1983, pp. D11-D13.

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April 1983

Defense & Foreign Affairs reports that Egypt is supplying Egyptian-made Swingfire anti-tank missiles to Iraq.
— "The Rumor Mill," *Defense & Foreign Affairs*, April 1983; in Lexis-Nexis, www.lexis-nexis.com.

1983-1988

Several Western countries, including Germany, France, and Italy, transfer missile technology to Argentina. These sales bolster Argentina's cooperative development of the Condor II missile project with Egypt and Iraq.
— *Guoji Wenti Yanjiu* (Beijing), 13 July 1990, No. 3, pp. 29-36; in "Journal Discusses Spread Of Missile Technology," *Nuclear Developments*, 25 October 1990, pp. 4-11.

8 March 1982

Aviation Week & Space Technology reports that the US TOW anti-tank missile may be produced under license in Egypt.
— Robert R. Ropelewski, "U.S. Tactical Weapons Receive System Updates," *Aviation Week & Space Technology*, 8 March 1982; in Lexis-Nexis, www.lexis-nexis.com.

24 January 1982

The *New York Times* reports that there are a total of 220 surface-to-surface missile launchers in Israel, Egypt, Syria, Iraq, Saudi Arabia, Libya, and Jordan. This is an increase from 65 in 1977 and 30 in 1973.
— Leslie H. Gelb, "The Mideast Arms Race: New Weapons, Old Fears," *New York Times*, 24 January 1982; in Lexis-Nexis, www.lexis-nexis.com.

4 January 1982

Aviation Week & Space Technology reports that Egypt's Abo-Zaabal Factory 18 produces propellants, explosives and rocket motors.
— Clarence A. Robinson., "Nation Seeks Larger Production Base," *Aviation Week & Space Technology*, 4 January 1982; in Lexis-Nexis, www.lexis-nexis.com.

1982-83

North Korean engineers continue to reverse-engineer the Soviet-made R17Es (Scud-Bs) received from Egypt.
— Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Proliferation Studies, November 1999, p. 10.

3 October 1981

Lt. Gen. Muhammad Abd al-Halim Abu Ghazala, chief of staff of the Egyptian armed forces, says Egypt makes anti-tank missiles in cooperation with Britain (probably referring to the Swingfire missile) and TOW anti-tank missiles in cooperation with the United States.
— "Egyptian Defence Minister on Sudan and on Military Strategy," BBC Summary of World Broadcasts, 3 October 1981; in Lexis-Nexis, www.lexis-nexis.com.

21 August 1981

Egypt and North Korea sign an agreement that provides for technological cooperation and exchange through 1983.

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Some of the technology covered by this agreement may be missile-related.

— Korean Central News Agency, 21 August 1981, in "Other Reports, N. Korean Scientific Agreement with Egypt," BBC Summary of World Broadcasts, 26 August 1981, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>;
"International Relations, Egypt— Scientific Technical Co-operation," BBC Summary of World Broadcasts, 2 September 1981, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>; Joseph S. Bermudez, Jr., "Ballistic Missile Development in Egypt," *Jane's Intelligence Review*, 1 October 1992, pp. 452-458.

6 May 1981

The Arab Organization for Industrialization launches surface-to-surface missiles that were produced in its factories as part of a demonstration exercise.

— "Missile launching exercise held in Egypt," Xinhua News Agency, 6 May 1981; in Lexis-Nexis, www.lexis-nexis.com.

2 April 1981

Egyptian President Anwar Sadat says during a speech, "When the Soviet Union imposed a total arms embargo on us, including one of the most powerful weapons on which we depended, namely, the surface-to-surface Luna missile, I found it in Iraq. Iraq sent us these missiles free of charge."

— "Sadat's Journalists Day Speech," BBC Summary of World Broadcasts, 2 April 1981; in Lexis-Nexis, www.lexis-nexis.com.

1981

North Korea and Egypt agree to cooperate in the development of ballistic missiles. Egypt transfers two Soviet-built Scud-B missiles and MAZ 543 transporter-erector launchers (TEs) to North Korea.

— Joseph S. Bermudez, Jr., "Ballistic Ambitions Ascendant," *Jane's Defence Weekly*, 10 April 1993, pp. 20, 22; Chang Chun Ik, *Pukhan Haek-Missile Chŏnjaeng* (Seoul: Sömundang, May 1999), pp. 249-250, 257, 266; Lee Jöng Hun, "FROGesö Taepodong Kkaji: Pukhan Missile Game," *Shindonga*, August 1999, p. 202; Hajime Ozu, *Missile 2000: Reference Guide to World Missile Systems* (Tokyo: Shinkigensha, 2000), p. 95; "Ballistic Missile Threat Evolves," *International Defense Review*, Vol. 33, No. 10, 1 October 2000; in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

18 August 1980

Egyptian Foreign Minister Kamal Hasan Ali denies the presence of US Pershing missiles in Egypt.

— "Egyptian denial of presence of US Pershing missiles," 18 August 1980; in Lexis-Nexis, www.lexis-nexis.com.

Early 1980s

Citing a "CIA report that was leaked to the press in 1996," the *Joongang Ilbo* reports that China, Egypt, and North Korea begin their cooperative efforts to produce ballistic missiles. The report claims that Egypt acquires advanced US technology and components, transfers them to China, which then transfers them to North Korea. It is reported that North Korea in turn produces Scud missiles at armament factories in Chagang Province near the Chinese border then ships the missiles to Egypt. This report suggests that the North Koreans are merely a subcontractor for the Chinese.

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— Ch'oe Wŏn Ki, "Shilche Tŭronaen Pukhan Missile Connection," *Joongang Ilbo*, 24 June 1996, p. 4; in KINDS, www.kinds.or.kr.

1980

North Korea and Egypt sign an agreement to jointly develop missiles. The agreement stipulates that Egypt will supply North Korea with Soviet-made Scud-B missiles and MAZ-543 transporter-erector launchers (TELs). According to Lee Jŏng Hun, a South Korean journalist, North Korea and Egypt finalize this bilateral agreement following Vice President Hosni Mubarak's meeting with the North Korean leader Kim Il Sung in January 1980 in Pyongyang. According to Chang Chun Ik, a retired lieutenant general and former National Assembly member, by signing this agreement North Korea commits both to expanding its missile development facilities in the Pyongyang area and to establishing missile testing facilities at Hwadae-kun in North Hamgyŏng Province. Egypt's willingness to provide the missiles to North Korea violates an Egyptian agreement with the USSR.

— Chang Chun Ik, *Pukhan Haek-Missile Chŏnjaeng* (Seoul: Sŏmundang, May 1999), pp. 249, 266; Lee Jŏng Hun, "FROGesŏ Taepodong Kkaji: Pukhan Missile Game," *Shindonga*, August 1999, p. 202.

1980s

Egypt signs a licensing agreement with North Korea to produce Scud-C missiles with a range of approximately 310 miles. Missiles with this range fired from Egypt are capable of striking all points in Israel.

— Bill Gertz, "Defector Eyed for Missile Data," *Washington Times*, 27 August 1997.

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1979-1975

22 June 1979

General Kamal Hasan Ali, the Egyptian minister of defense and war production, says the Egyptian factories that had participated in the now-defunct AMIO will continue operations. [Note: See the 16 May 1979 entry.]

— "Egypt's Military Industries: Defense Minister's News Conference," BBC Summary of World Broadcasts, 22 June 1979; in Lexis-Nexis, www.lexis-nexis.com.

16 May 1979

It is announced that the Arab Industrialization Organization (AMIO) will be dissolved. Its factories produced a variety of weapons, including surface-to-surface missiles. [Note: See the 22 June 1979 entry.]

— "Qasimi's call for an alternative to the AMIO," BBC Summary of World Broadcasts; in Lexis-Nexis, www.lexis-nexis.com.

1979-1985

The German company Messerschmitt-Bölkow-Blohm (MBB) is part of the Condor missile project and assists Iraq, Egypt, Argentina and Romania in developing the missile with a 600-mile (approximately 965km) range. After 1985, MBB technicians establish a firm named the Consen Group to carry on the work in Switzerland.

— John Eisenhammer, "Crisis in the Gulf War: The merchants of death 'will be brought to book'; Reports of

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Germany's prominent role in building Iraq's chemical arsenal have prompted Bonn to pass tougher laws," *The Independent*, 31 January 1991; in Lexis-Nexis, www.lexis-nexis.com.

1979-80

North Korea receives a small number of Soviet-made R-17E (Scud-B) missiles, MAZ-543 transporter-erector launchers (TELs) and other equipment from Egypt. [Note: There is still a debate over the exact delivery date of the equipment.]

— Joseph S. Bermudez Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Nonproliferation Studies, November 1999, p. 10.

13 November 1978

Aviation Week & Space Technology reports that of the four Egyptian factories currently under the control of the AMIO, the Sakr factory is the most active. Founded in 1953, the Sakr factory has produced various unguided rockets and attempted to develop guided surface-to-surface missiles. The factory, with its 5,000 employees, makes Soviet-designed artillery rockets with ranges of 8 to 20km, including 122mm and 132mm rockets. Efforts are underway at the factory to extend the range on both of these rockets.

— Robert R. Ropelewski, "Improvisation Key to Egyptian Growth," *Aviation Week & Space Technology*, 13 November 1978; in Lexis-Nexis, www.lexis-nexis.com.

9 September 1978

The *Washington Post* reports that under contracts with the French firms Thomson-CcsSff and Matra, the Arab Industrialization Organization (AMIO) will make surface-to-surface missiles at a military complex being built near Riyadh, Saudi Arabia.

— Thomas W. Lippman, "Arab Weapons Consortium Believed Nearing Production," *The Washington Post*, 9 September 1978; in Lexis-Nexis, www.lexis-nexis.com.

15 May 1978

Aviation Week & Space Technology reports that the first British Aerospace Swingfire anti-tank missiles will be completed at the Egyptian factories of the Arab Organization for Industrialization in September 1979.

— "Arabs seek arms sufficiency," *Aviation Week & Space Technology*, 15 May 1978; in Lexis-Nexis, www.lexis-nexis.com.

13 February 1978

US News and World Report reports that Egypt's tanks, missiles, and airplanes have become either obsolete or in a state of disrepair as a result of the Soviet Union's termination of weapons deliveries to Egypt.

— "Sadat brings Mideast impasse back to Carter," *US News & World Report*, 13 February 1978; in Lexis-Nexis, www.lexis-nexis.com.

Late 1970s

North Korea deploys indigenously produced AT-3 Sagger ATGMs and SA-7 Grail SAMs. These weapons systems were reverse-engineered after having been acquired from Egypt in 1974.

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— Joseph S. Bermudez Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Nonproliferation Studies, November 1999, p. 8.

Late-1970s

The German firm Messerschmitt-Bölkow-Blohm (MBB) designs the "Techniks" missile based on the design of the US-built Pershing 1. The Condor II design bears a striking resemblance to the German missile. According to former US Deputy Undersecretary of Defense Dr. Stephen Bryen, the Techniks is designed by MBB purely for export.

[Note: A knowledgeable source contacted by the Center for Nonproliferation Studies (CNS) refutes this claim and states that Techniks was a "forerunner" and a modification of the Pershing 2 first stage with terminal guidance.]

The principal markets for the missile are believed to be Argentina and Egypt.

— "UN Inspectors Destroy Condor II Equipment," *Middle East Defense News*, 30 March 1992, in Lexis-Nexis, <<http://www.lexis-nexis.com/universe>>; CNS interview with missile engineer familiar with technical dimensions of Argentine missile program. Source wishes to remain anonymous.

12 December 1977

British Aerospace signs a deal with Egypt, Saudi Arabia, Qatar, and the United Arab Emirates (the members of the AMIO) to produce Swingfire anti-tank missiles. The missiles will be first made in Britain, but will later be built in factories outside of Cairo. Seventy percent of the project will be funded by the Arab countries.

— "British-Arab Project for manufacturing anti-tank missiles," Xinhua News Agency, 12 December 1977; in Lexis-Nexis, www.lexis-nexis.com.

31 October 1977

Ashraf Marwan, chairman of the Cairo-based Arab Industrialization Organization (AMIO), says a contract will be signed within the next six months to build Swingfire anti-tank missiles for British Aircraft Corporation.

— "The Arabs diversify into the arms business," *Business Week*, 31 October 1977; in Lexis-Nexis, www.lexis-nexis.com.

6 October 1977

Egypt displays the SS-1C Scud-B missile during a parade commemorating the fourth anniversary of the 1973 Yom Kippur War.

— "Soviet Missiles Paraded Outside USSR," 17 October 1977; in Lexis-Nexis, www.lexis-nexis.com.

18 May 1977

The Arab Military Industrialization Authority announces that it will manufacture anti-tank missiles, helicopters, and jeeps. The authority was formed in 1975 by Egypt, Saudi Arabia, Qatar, and the United Arab Emirates. The arms production plants are expected to be built in Egypt.

— Associated Press, 18 May 1977; in Lexis-Nexis, www.lexis-nexis.com.

14 March 1977

Columnists Jack Cloherty and Bob Owens, quoting unnamed sources, write that the Soviet Union sent nuclear weapons to the Egyptian port of Alexandria on 24 October 1973, during the 1973 Yom Kippur War. The columnists report that US and Israeli intelligence believed the weapons were nuclear warheads for Scud missiles. Reports of

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the arrival of these weapons in October 1973 led the United States to trigger a worldwide alert, but the weapons were never unloaded after discussions between Soviet and US officials.

— Associated Press, 14 March 1977; in Lexis-Nexis, www.lexis-nexis.com.

10 January 1977

French Defense Minister Yvon Bourges ends a visit to Egypt, during which he participated in discussions with representatives of the Arab Military Industrialization Authority — a partnership that includes Egypt, Saudi Arabia, Qatar, and the United Arab Emirates— regarding the possibility of gaining French technical assistance for the creation of an Arab arms industry. Bourges discussed establishing an industry that could produce Crotale surface-to-air missiles, as well as other weapons, such as Mirage jet fighters.

— "Information Bank Abstracts," *New York Times*, 10 January 1977; in Lexis-Nexis, www.lexis-nexis.com.

1977-1978

As military attaché in the Argentine embassy in Spain, Argentine Air Force officer Ernesto Crespo makes eight visits to Egypt, Lebanon and Libya as part of the ambassadorial entourage. Crespo maintains that he does so solely on behalf of the ambassador and that he makes no contacts regarding the Condor program being launched at this time. [Note: Crespo becomes one of the most important officials in the Condor program, especially as chief of the Argentine Air Force in the mid-1980s.]

— "El brigadier Crespo admitió que hizo ocho viajes al Líbano," *Clarín*, 6 June 1998, www.clarin.com.ar, 23 August 2002.

7 October 1976

Egypt displays four Soviet-made Scud missiles for the first time during a military parade commemorating the third anniversary of the 1973 war with Israel.

— "Information Bank Abstracts," *New York Times*, 7 October 1976; in Lexis-Nexis, www.lexis-nexis.com.

17 April 1976

The Economist reports that Egypt wants to create a domestic arms industry that includes missiles. France is willing to help, but Egypt lacks the necessary financial resources.

— "Sadat Shops," *The Economist*, 17 April 1976; in Lexis-Nexis, www.lexis-nexis.com.

1976

One of Egypt's nine key military facilities in Egypt is the Sakr factory, which produces rockets and missiles. The facilities are run by the Arab Organization for Industrialization (AOI), established by Egypt, Saudi Arabia, Qatar and the United Arab Emirates in 1976. The Sakr factory produces multiple-rocket launchers and the 325mm Sakr-80 artillery rocket, which replaces the FROG-7 and has a range of 80km.

— "Egypt's Winning Formula," *Jane's Defense Weekly*, 14 December 1991, pp. 1181-1182.

1976

Egypt gives North Korea several Scud-B missiles as a "gesture of appreciation" for supplying arms prior to the 1973 war, thus beginning North Korea's Scud-B program.

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— "North Korean corners ME missile market," *Middle East Defense News*, 18 May 1992; in Lexis-Nexis, www.lexis-nexis.com.

1976

North Korea purchases two Scud-B missiles from Egypt. [Note: There is conflicting information as to whether North Korea received its first Scud-Bs from Egypt in 1976 or later, possibly in 1979, 1980 or 1981. One North Korean defector claims that North Korea received its first Scud missiles from the USSR in 1972.]

— Yonhap News Agency (Seoul), 24 June 1993, in "Defense Ministry Says Nodong-1 Test in May Successful," JPRS-TND-93-020, 28 June 1993, p. 1; ROK Ministry of Unification, Information Analysis Bureau, "Pukhan Missile Munjae Kwallyön Ch'amgojaryo," press release, 3 November 2000, p. 1; "Pukhan, Sajong 1 Ch'ön Kilometer Isang Missile Kaebalchung," *Joongang Ilbo*, 8 November 1991, www.joins.com.

14 July 1975

Aviation Week & Space Technology publishes an interview with Egyptian General Mohamed Ali Fahmy, chief of staff of the Egyptian armed forces. He says that surface-to-surface missiles are becoming more important for both tactical and strategic roles. He says both Egypt and Syria used FROG missiles during the 1973 Yom Kippur War, but these were inaccurate even against such large targets as bridges and airfields. He says that when Syria and Egypt get Soviet Scud missiles in response to Israel's acquisition of Lance missiles, the region's missile capability will improve greatly.

— "Battlefield Equation Changes Seen," *Aviation Week & Space Technology*, 14 July 1975; in Lexis-Nexis, www.lexis-nexis.com.

June 1975

Egyptian Vice President Hosni Mubarak meets with French officials in Paris regarding development of an aircraft and missile industry in Egypt.

— "Egyptian Arms Complex," *Aviation Week & Space Technology*, 16 June 1975; in Lexis-Nexis, www.lexis-nexis.com.

5 April 1975

Egyptian President Anwar Sadat says Egypt would fire missiles at Israel's cities only if Israel attacked Egyptian cities.

— "Information Bank Abstracts," *New York Times*, 5 April 1975; in Lexis-Nexis, www.lexis-nexis.com.

20 February 1975

The *New York Times* reports that, according to Eastern European and Lebanese sources, the Soviet Union will replace most of the weapons Egypt lost during the 1973 Yom Kippur War, including surface-to-surface missiles.

— "Information Bank Abstracts," *New York Times*, 20 February 1975; in Lexis-Nexis, www.lexis-nexis.com.

1975

The Arab Military Industrialization Authority is formed by Egypt, Saudi Arabia, Qatar, and United Arab Emirates.

— Associated Press, 18 May 1997; in Lexis-Nexis, www.lexis-nexis.com.

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1975-1976

North Korea acquires "approximately 24 to 56" FROG-7B (9M21E Luna-M) artillery rockets from Egypt. Syria may have been involved in this transfer or may have separately transferred a small number of FROG-7Bs.

— Joseph S. Bermudez, Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Nonproliferation Studies, November 1999, p. 6.

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1974-1950

16 November 1974

The *New York Times* reports that Israeli sources say a major factor in a new Middle East war will be Israel's ability to destroy Egyptian and Syrian Scud missiles, which they expect to be used against Israeli cities.

— "Information Bank Abstracts," *New York Times*, 16 November 1974; in Lexis-Nexis, www.lexis-nexis.com.

6 October 1974

During a military parade marking the anniversary of the 1973 Yom Kippur War, Egypt displays the Soviet-made FROG-7 surface-to-surface missile.

— "Information Bank Abstracts," *New York Times*, 7 October 1974; in Lexis-Nexis, www.lexis-nexis.com.

5 October 1974

Israeli Foreign Minister Yigal Allon says recent Soviet arms shipments to Egypt and Syria cannot be defensive because they include medium-range missiles capable of hitting every Israeli city.

— "Information Bank Abstracts," *New York Times*, 5 October 1974; in Lexis-Nexis, www.lexis-nexis.com.

16 April 1974

Ali Amin, editor of *Al Ahrām*, says Egypt will use missiles against Israel if Israel increases its military action against Syria and Lebanon. He says surface-to-surface missiles "were among several other modern weapons we did not use during the October war."

— "Information Bank Abstracts," *New York Times*, 17 April 1974; in Lexis-Nexis, www.lexis-nexis.com.

1974

It is believed that Egypt transfers samples of the Soviet PUR-64 Malyutka (AT-3 Sagger) ATGM and 9K32 Strela-2 (SA-7 Grail) SAM to North Korea. [Note: These systems were subsequently reverse-engineered by the DPRK and placed into service in North Korea in the late 1970s.]

— Joseph S. Bermudez Jr., "A History of Ballistic Missile Development in the DPRK," Occasional Paper No. 2, Center for Nonproliferation Studies, November 1999, p. 8.

1974

The Soviet Union transfers 24 SS-1C surface-to-surface missiles to Egypt.

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— "Congress Takes Aim At Mideast Arms Sales," *Business Week*, 3 March 1975; Lexis-Nexis, in www.lexis-nexis.com.

21 November 1973

US defense officials reveal intelligence that suggests the Soviet Union may have moved nuclear warheads into Egypt during the Yom Kippur War in October. Some administration officials including US Secretary of State Henry Kissinger say the evidence is not conclusive. On 2 November, US defense officials confirmed the Soviets sent Scud missiles to Egypt, which can carry nuclear or conventional warheads.

— "Information Bank Abstracts," *New York Times*, 22 November 1973; in Lexis-Nexis, www.lexis-nexis.com.

5 November 1973

Aviation Week and Space Technology reports that the Soviet Union has nuclear-armed Scud missiles in Egypt that are capable of hitting Israel.

— "Information Bank Abstracts," *New York Times*, 20 November 1973; in Lexis-Nexis, www.lexis-nexis.com.

2 November 1973

Senior US defense officials confirm the Soviet Union has sent Scud missiles to Egypt, which are capable of carrying both nuclear and conventional warheads. [Note: See 5 November and 21 November 1973 entries.]

— "Information Bank Abstracts," *New York Times*, 22 November 1973; in Lexis-Nexis, www.lexis-nexis.com.

24 October 1973

Columnists Jack Cloherty and Bob Owens, quoting unnamed sources, report that a Soviet ship arrives in the Egyptian port of Alexandria carrying nuclear weapons. According to the columnists writing in 1977, US and Israeli intelligence believe the weapons are nuclear warheads for Scud missiles. Reports of their arrival leads the United States to trigger a worldwide alert, but the weapons are never unloaded after discussions between US and Soviet officials.

— Associated Press, 14 March 1977; in Lexis-Nexis, www.lexis-nexis.com.

8 October 1973

Since the onset of the 1973 Yom Kippur War on 6 October 1973, Egypt has used all of its al-Tin and al-Zeitoun rockets and 60 to 70 FROG-7 missiles. [Note: See 6 October 1973.]

— "Ballistic Missile in the Third World: Egypt and the 1973 Arab-Israeli War," *Jane's Intelligence Review*, December 1991, pp. 531-537.

6 October 1973

At the start of the 1973 Yom Kippur War, Egypt has a brigade of 12 FROG-7 TELs, a brigade of nine Scud-B TELs, and two batteries of two al-Tin and two al-Zeitoun launchers, comprising a total of 100 missiles. [Note: See 8 October 1973.]

— "Ballistic Missile in the Third World: Egypt and the 1973 Arab-Israeli War," *Jane's Intelligence Review* December 1991, pp. 531-537.

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October 1973

During the Yom Kippur War, Egypt fires Frog-7 missiles at the Israeli base at Big Gafgafka on the Sinai Peninsula.

— Drew Middleton, "Influx of arms caused by war worries Israel," *New York Times*, 2 November 1980; in Lexis-Nexis, www.lexis-nexis.com.

October 1973

Egyptian President Anwar Sadat decides to go to war against Israel, in part based on Egypt's receipt of Soviet Scud-B missiles.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

July-August 1973

Soviet advisers continue to arrive in Egypt to help form Egypt's 65th Artillery Brigade of Scud-Bs. In August, the brigade participates in army-wide exercises.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

April 1973

Soviet-supplied Scud-Bs arrive in Egypt, accompanied by a large contingent of Soviet advisors. The Soviet Union had agreed to provide training and equipment for two Scud-B brigades of 12 TELs each.

— "Ballistic Missile in the Third World: Egypt and the 1973 Arab-Israeli War," *Jane's Intelligence Review*, December 1991, pp. 531-537.

March 1973

Following the visit of a high-level Soviet delegation to Cairo, the Soviet Union agrees to provide Egypt with an additional 150 Frog-7A missiles as well as the support needed to deploy two Scud-B brigades composed of 12 transporter-erector launchers (TELs) each.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1973

Iraq delivers Scud missiles to Egypt, according to Saddam Hussein.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1973

A US intelligence official recounts in 1994 that "the Egyptian chief of staff told me after the 1973 war that Egypt not only needs nuclear weapons but ballistic missiles, because Israel has both."

— Steve Rodan, "The battle for parity," *Jerusalem Post*, 11 March 1994; in Lexis-Nexis, www.lexis-nexis.com.

September 1972-September 1973

The Soviet Union delivers 150 FROG-7 missiles to Egypt.

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— "Ballistic Missile in the Third World: Egypt and the 1973 Arab-Israeli War," *Jane's Intelligence Review* December 1991, pp. 531-537.

29 September 1972

The *New York Times* reports that US analysts believe Egypt expelled Soviet advisors because the Soviet Union refused to provide Egypt with advanced offensive weapons, such as the 450-mile-range Scaleboard surface-to-surface missile.

— "Information Bank Abstracts," *New York Times*, 29 September 1972; in Lexis-Nexis, www.lexis-nexis.com.

13 June 1972

The Stockholm International Peace Research Institute reports that Egypt is the largest recipient of Soviet weapons. Egypt received \$250 million worth of weapons in 1970 and \$420 million worth in 1972, mostly in aircraft and missiles.

— "Information Bank Abstracts," *New York Times*, 14 June 1972; in Lexis-Nexis, www.lexis-nexis.com.

May 1972

In preparation for war with Israel, Egyptian Lt. Gen. Shazli goes to Iraq to ask for aircraft and Scud missiles. Iraqi President Saddam Hussein agrees to deliver the planes and missiles, and later claims the Scuds were delivered in 1973. Whether or not the Scuds were delivered by Iraq, Hussein's approval convinces the Soviet Union to give Scuds to Egypt.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

21 March 1972

The Soviet Union agrees to assist Egypt with the guidance system problems of its medium-range missiles.

— "Information Bank Abstracts," *New York Times*, 21 March 1972; in Lexis-Nexis, www.lexis-nexis.com.

7 March 1972

Due to Egypt's lack of funds, Libya agrees to buy Soviet weapons, including surface-to-surface missiles, and deliver them to Egypt.

— "Information Bank Abstracts," *The New York Times*, 7 March 1972; in Lexis-Nexis, www.lexis-nexis.com.

1972

Egypt test-fires the al-Zeitoun and al-Tin missiles with disappointing results.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

5 October 1971

The *New York Times* reports that US officials fear the Soviet Union will feel compelled to deploy a comparable missile in Egypt, perhaps the Scaleboard missile, in response to Israel's manufacture of the new Jericho missile.

— "Information Bank Abstracts," *New York Times*, 5 October 1971; in Lexis-Nexis, www.lexis-nexis.com.

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23 September 1971

Egypt takes out of storage and test fires al-Zafir and al-Qahir missiles in preparation for plans to recapture the Sinai Peninsula. The tests show that the al-Qahir's range and direction can be controlled only by the angle of the launching rail, with a maximum range of 8km instead of 600km. Its CEP is shown to be 1,600 meters at 8km. Lt. Gen Saad el-Shazli, the Egyptian chief of staff, later calls the missile "medieval." The al-Zafir proves to have a range less than the al-Qahir, instead of 370km, and is only slightly more accurate. Shazli concludes that "anything is better than nothing," and orders the missiles deployed. He changes their names from al-Zafir to al-Zeitoun (Olive) and al-Qahir to al-Tin (Fig).

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1971

Egypt receives \$420 million worth of Soviet arms, mostly in aircraft and missiles, according to the Stockholm International Peace Research Institute

— "Information Bank Abstracts," *New York Times*, 14 June 1972; in Lexis-Nexis; www.lexis-nexis.com.

Early 1970s

In preparation for renewed attacks against Israel in the early 1970s, Egypt brings the al-Zafir and al-Qahir missiles out of storage and tests them. The al-Qahir's range is only 8km with a Circular Error Probable (CEP) of 1,600 meters; the al-Zafir has an even shorter range. The names of the missiles are changed: al-Zafir becomes al-Zeitoun and al-Qahir becomes al-Tin.

— "Ballistic Missile in the Third World: Egypt and the 1973 Arab-Israeli War," *Jane's Intelligence Review*, December 1991, pp. 531-537.

1970

Egypt receives \$250 million worth of Soviet weapons, mostly aircraft and missiles, according to the Stockholm International Peace Research Institute.

— "Information Bank Abstracts," *New York Times*, 14 June 1972; in Lexis-Nexis, www.lexis-nexis.com.

1970

The Soviet Union delivers a brigade of 36 Luna M (Frog-7A) missiles with TELs to Egypt.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1 February 1969

A US intelligence estimate of Egypt's indigenous surface-to-surface missile program says it is "at a standstill."

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

April 1968

Egyptian President Nasser goes to the Soviet Union and renegotiates the 1965 deal for Frog-2 missiles. Instead, the Soviet Union agrees to deliver a brigade of 36 Luna M (Frog-7A) missiles with TELs. The missiles are delivered in

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1970.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

Late 1960s through late 1970s

Egypt purchases approximately 1,000 70km-range FROG-7 and 280km-range Scud-B missiles from the Soviet Union. [Note: See "Post-1967" and "September 1972 to September 1973" entries.]

— "Journal Discusses Spread of Missile Technology," *Guoji Wenti Yanjiu* (Beijing), No. 3, 13 July 1990, pp. 29-36.

1967-1970

During the "War of Attrition" [1967-1970], the Israeli Air Force attacks Egyptian missile manufacturing facilities at Heliopolis.

— "Ballistic Missile in the Third World: Egypt and the 1973 Arab-Israeli War," *Jane's Intelligence Review*, December 1991, pp. 531-537.

21 October 1967

The Egyptian Navy sinks the Israeli destroyer Eilat near Port Said with Soviet-made Styx surface-to-surface missiles.

— Frank H. Winter and F. Robert van der Linden, "25 years ago— October 1967," *Aerospace America*, October 1992; in Lexis-Nexis, www.lexis-nexis.com.

June 1967

After the June 1967 Six-Day War, Egypt halts the al-Qahir and al-Zafir missile programs to focus on rebuilding its conventional forces. The Sakr Factory has built approximately 100 of these two types of missiles. The program's personnel are reassigned and its equipment placed in storage at the Egyptian Armed Forces Technical Institute.

— "A Dangerous race in a multi-axial world: The missiles club in the Middle East: The century of mass destruction," *Al-Wasat* (London), 30 August 1999, in FBIS, Document FTS19990903000290, 30 August 1999; Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

June 1967

Egypt's missiles are not used during the June 1967 Six-Day War with Israel, according to most accounts, and Israel does not bomb Egypt's missile facilities, judging them to be no threat based on Israel's accurate intelligence picture of Egypt's missile program.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1 January 1967

A US Defense Intelligence Agency report on Egypt's missile program states that none of Egypt's three surface-to-surface missiles will be operational before 1970. The report estimates that Egypt has 10 al-Qahir and 10 al-Zafir missiles, and an unknown number of launchers and warheads. The report says both systems have "problems in guidance system [that] affect stability."

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

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1966

Egyptian scientists claim they have made a working missile guidance system.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1965-66

German scientist Wolfgang Pilz leaves Egypt for the People's Republic of China (PRC) to work on their ballistic missile program. The PRC launches a ballistic missile in 1966, and the Soviets believe Egypt helped with this because of Pilz's involvement. Egypt denies complicity.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

Late 1965

The chief of the Egyptian armed forces, Field Marshal Mohammed Abdel Hakim Amer, travels to Moscow and secures Soviet agreement to provide three brigades of Frog-2 missiles in mid-1967. Egyptian personnel go to the Soviet Union to train for the missiles.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1965

Egypt's recognition of East Germany causes many German scientists to leave Egypt's missile program.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1964

Israeli efforts to disrupt Egypt's missile program using assassinations, bombings, and kidnappings lead to a mass exodus of German scientists from Egypt.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

July 1963

Egypt displays four two-stage al-Raid (Pioneer) missiles in a military parade. Egypt describes the missiles as space research rockets. The al-Raid is reportedly able to carry either a 1,800kg high-explosive warhead or a 900kg payload into low earth orbit. The range is about 1,000km. It is liquid fueled, probably with kerosene or nitric acid. Egypt announces that using the al-Raid or a three-stage variant of the al-Raid, it will launch into orbit a satellite named the al-Najm (Star) by July 1964.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

April 1963

Egypt tests two missiles, probably the al-Zafir and probably using specially designed transporter-erector launchers (TEs), which raise the perceived threat of the missiles to Israel.

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— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

February 1963

Israel sends a squad to assassinate Dr. Hans Kleinwachter, a Germany scientist believed to be working for Egypt's missile program. The squad is unsuccessful despite two attempts.

— "Report: Shamir headed Mossad assassination squad," Associated Press, 3 July 1992; in Lexis-Nexis, www.lexis-nexis.com.

1963

The Mossad hires Otto Skorzeny, the notorious Nazi commando leader, to persuade former Nazis to abandon work on Egyptian missiles.

— "Ex-SS man worked for Mossad against Egyptian rocket project," *The Jerusalem Post*, 20 September 1989; in Lexis-Nexis, www.lexis-nexis.com.

1963

Two Mossad agents are arrested in Bern for "intimidating a female member of the family of a German scientist who had been offered a job in Egypt's missile development program."

— "Daily says the Swiss Should Clarify their View on Mossad Spy Affair," *Kayhan International*, 28 February 1998, British Broadcasting Corporation, 5 March 1998.

September 1962

Dr. Heinz Krug, a German scientist believed to be working for Egypt, disappears and may have been killed by Mossad agents.

— "Report: Shamir headed Mossad assassination squad," Associated Press, 3 July 1992; in Lexis-Nexis, www.lexis-nexis.com.

Early 1962

Egypt's first two missiles reach test phase.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

Late 1961

Eugen Saenger resigns as head of Factory 333 and returns to Germany under pressure from West Germany. This slows work, but two missiles are already complete. Wolfgang Pilz takes over the factory.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

5 July 1961

Israel launches the Shavit II (Comet II) solid-fueled sounding rocket to 77,000 meters. The launch reinforces Egypt's determination to develop missiles. Immediately after the launch, Egypt announces that it is negotiating to buy sounding rockets from the Zimney Corporation of California. Few, if any, of these rockets ever arrive in Egypt.

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— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1961

Israel learns the details of Factory 333 and uses political and covert means to prevent the German experts from providing further assistance.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1960s

Egypt develops the al-Zafir missile with a 350km range, the al-Qahir ballistic missile with a 600km range, and the al-Raid, a two-stage commercial rocket with a 1,500km range. The al-Qahir and al-Zafir are successfully test-launched. They are believed to be ready for production by 1965 or 1966, but this is not confirmed. After the June 1967 war, Egypt halts the al-Qahir and al-Zafir programs to focus on rebuilding its conventional forces.

— "A Dangerous race in a multi-axial world: The missiles club in the Middle East: The century of mass destruction," *Al-Wasat* (London), 30 August 1999; in FBIS Document FTS19990903000290, 30 August 1999.

1960s

A missile project involving West German aerospace company Messerschmitt-Bölkow-Blohm (MBB) is stopped by technical difficulty and Israeli letter bombs. Israeli superspy Rafi Eitan plays a role in eliminating German scientists making surface-to-surface missiles for Egypt.

— "Overhead," *MidEast Market*, 13 November 1989; "Israel's former master spy is taking his lumps quietly," 14 June 1987; in Lexis-Nexis, www.lexis-nexis.com.

1960-1961

Approximately 1,000 people work at Factory 333, and of them, roughly 250 are German scientists and technicians.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1960

The Egyptian General Aero Organization is established. Al din Mahmoud Khalil is in charge and reports directly to Egyptian President Nasser. The organization controls five factories. The five factories include Factory 333 (the Sakr factory) in Heliopolis, headed by Eugen Saenger, which designs and builds ballistic missiles. The Krader Factory, founded in 1950 in Heliopolis, develops missile guidance systems. One of the other three factories probably makes rocket fuels and warhead explosives. This factory may be Factory 81 (the Heliopolis Company for Chemical Industries) or Factory 270 (the Kaha Company for Chemical Industries). Egypt also builds a 200km test range about 100km from Cairo.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

April 1959

In response to constant pressure from Egyptian President Nasser on the Soviet Union to provide Egypt with

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artillery rockets, Premier Krushchev responds in a letter:

"Probably, Mr. President, you will also remember well that when you approached me with the proposal that we supply you with medium-range bombers and intermediate-range rockets, I remarked that the territory of your country was so small that you would find it difficult to use these weapons. I then asked you what in your opinion were intermediate-range rockets. You replied that you needed rockets with a range of fifty to seventy kilometers. I told you that our intermediate-range rockets were designed for a distance of 2,000 to 4,000 kilometers and that they certainly would not suit you. If the need to use these rockets should arise, I said it would evidently be best to launch them from our territory. Therefore you have no need for such rockets, but you can count on us rendering you assistance with these rockets from our territory if the aggressors unleash war against you. I do not want to conceal from you the fact that when we did not agree with your proposal that we supply you with bombers and intermediate-range rockets, we had in mind that in a state of excitement largely caused by the prevailing situation you might have undertaken some undesirable action leading to war." Nasser responds: "I asked you for some medium-range artillery rockets and you said in your letter — and this is true— that I asked for rockets with a range of 57 kilometers, and we were surprised by your comment on this request saying that you told me that the medium-range rockets that the Soviet Union possesses are for a range between 2,000 to 4,000 kilometers. I defined what I asked for and defined its range. Perhaps the translation and the ambiguity between the word "rockets," the thing which I asked for, and the word "missiles," the thing which I did not ask for, are responsible for this mistake, though it is difficult to believe that this is the explanation in the light of the series of differences between the facts as they were and your version of them." The rocket that Egypt was asking for was the Luna 1 (Frog-2), which the Soviet Union had only recently deployed, making it unlikely the Soviets would provide it to Egypt.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1958

Egyptian President Nasser launches a program of military industrialization to include the development of ballistic missiles.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1958

Nearly all German advisors and technicians that were in Egypt to work on the rocket program have left the country.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1957

Following the financial losses and political upheaval of the 1956 Suez War, Egypt abandons the goal of equipping its army with tactical rockets, cancels the program and disbands CERVA. Rolf Engel leaves Egypt. The main problems for the program were acquisition of high-quality steel, propellants and fuses.

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— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1956

Following the 1956 Suez War, Egyptian President Gamal Abdel Nasser asks the Soviet Union for help in obtaining artillery rockets with ranges of 50 to 70km. The Soviet Union refuses this request.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1956

Wilhem Voss leaves Egypt and its rocket program.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1954

Paul Goercke leaves Egypt's rocket program and returns to Europe amid declining support for CERVA.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

8 September 1953

The Egyptian Astronautical Society is founded to support CERVA.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1953

Egypt establishes the Sakr factory to develop and produce rockets and missiles.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

March 1952

Having achieved some progress in the design of a tactical rocket, Egypt begins considering production of a longer-range guided missile. However, problems with development of the tactical rocket, including difficulty in acquiring high-quality steel, propellants and fuses, cause the delay of the guided rocket program and the eventual cancellation of the tactical rocket program.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1952

Tests of the rocket developed for Egypt by Herr Fuellner's firm are unsatisfactory, and Egypt proposes that the firm be put under government control. Herr Fuellner refuses and is forced to leave the country along with some of the German experts. The rocket project is incorporated into the Compagnie des Engines a Reaction pour Vol Accelere (CERVA), a government-controlled enterprise in the Heliopolis section of Cairo. CERVA is a joint military and civilian

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enterprise headed by Count de Lavison. Its research and production facilities are probably at al-Mazar airfield outside Cairo. The Helwan munitions factory may also help CERVA with research and production. General Muhammad Naguib, who seized power from King Farouk in July, appoints Wilhem Voss as director of the Central Planning Board and chief advisor to the Ministry of War. Voss hires Dr. Rolf Engel as the senior German expert within CERVA, and he becomes a dominant force. Wolfgang Pilz and Paul Goercke, a German electronics expert, also join CERVA.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1951

As part of the program to modernize Egypt's military in the wake of defeat in the 1947-49 war with Israel, Egyptian Premier Mustafa Nahas initiates a program to build military rockets in Egypt. Egypt contracts German armaments expert Dr. Wilhelm Voss to oversee the program and hires a firm owned by Herr Fuellner that employs several German rocket experts. The experts begin developing a small rocket, probably solid fueled, with a range of several kilometers.

— Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

1950s -1960s

The Soviet Union sends short-range Frog-4 and Frog-5 missiles to Egypt.

— "Journal Discusses Spread of Missile Technology," *Guoji Wenti Yanjiu* (Beijing), No. 3, 13 July 1990, pp. 29-36.

1950s

Egypt develops rockets with the assistance of German scientists. Egypt begins three missile programs based on the German V-2 missile with plans to build 900 missiles of the three models by 1970.

— "Tactical missiles: survey of a dynamic year," *Defense & Foreign Affairs*, March 1985; in Lexis-Nexis, www.lexis-nexis.com; Anthony H. Cordesman, "Weapons of mass destruction in the Middle East: Regional trends, national forces, warfighting capabilities, delivery options, and weapons effects," Center for Strategic and International Studies, 31 January 2002, p. 12; Joseph S. Bermudez, Jr., "Ballistic missile development in Egypt," *Jane's Intelligence Review*, October 1992, pp. 452-458.

Early 1950s

Aided by European technicians, Egypt successfully develops missiles with ranges of several hundred miles.

— Maurice Eisenstein, "Third World Missiles and Nuclear Proliferation," *The Washington Quarterly*, Summer 1982; in Lexis-Nexis, www.lexis-nexis.com.

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