

## Israel suspected of 'hacking' Syrian air defences

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Questions are mounting over how Israeli planes were able to sneak past Syria's defences and bomb a "strategic target" in the country last month.

By John Leyden, Published Thursday 4th October 2007 15:17 GMT

Questions are mounting over how Israeli planes were able to sneak past Syria's defences and bomb a "strategic target" in the country last month.

Israeli F-15s and F-16s bombed a military construction site on 6 September. Earlier reports of the attack were confirmed this week when Israeli Army radio said Israeli planes had attacked a military target "deep inside Syria", quoting the military censor.

Syrian President Bashar al-Assad said [http://news.bbc.co.uk/2/hi/middle\\_east/7026003.stm](http://news.bbc.co.uk/2/hi/middle_east/7026003.stm) it reserved the right to retaliate when he took the unusual step of offering interviews to Western media.

Syria and Israel have remained formally at war since the Arab-Israeli war of 1967, during which Israeli forces seized the Golan Heights.

The motives for the strike, much less what was hit and what damage was caused, remain unclear. One theory is that a fledgling nuclear research centre, the fruits of alleged collaboration between Syria and North Korea, may have been hit. Others speculate that a store of arms shipments bound for the Lebanese militant group Hezbollah might have been targeted. A test against Syria's air defences has also been suggested in some quarters. None of these theories appear to be much better than educated guesswork.

Bombers carrying out the raid are believed to have entered Syrian airspace from the Mediterranean Sea. Unmarked fuel drop tanks were later found on Turkish soil near the Syrian border, providing evidence of a possible escape route. Witnesses said the Israeli jets were engaged by Syrian air defences in Tall al-Abyad, near the border with Turkey.

This location is deep within Turkey, prompting questions about how the fighters avoided detection until so long into their mission. Neither F-15s nor F-16s used by the Israeli air force in the raids are fitted with stealth technology.

Flying under the radar is a dangerous tactic, no longer favoured since a number of British fighters went down during the first Gulf War over the liberation of Kuwait. That leaves the possibility that jamming techniques, or some even more sophisticated electronic warfare tactic, was brought into play.

Aviation Week reckons the success of the attack might be down to use of the "Suter" airborne network attack system. The technology [http://www.aviationnow.com/avnow/noys/noys\\_story.jsp?id=news/02145p04.xml](http://www.aviationnow.com/avnow/noys/noys_story.jsp?id=news/02145p04.xml) was developed by BAE Systems and integrated into US unmanned aircraft by L-3 Communications, according to unnamed US aerospace industry and retired military officials questioned by Aviation Week.

Instead of jamming radar signals, Suter uses a more sophisticated approach of "hacking" into enemy defences.

"The technology allows users to invade communications networks, see what enemy sensors see, and even take over as systems administrator so sensors can be manipulated into positions so that approaching aircraft can't be seen," Aviation Week explains. "The process involves locating enemy emitters with great precision and then directing data streams into them that can include false targets and misleading message algorithms."

Suter is said to have being "tested operationally" in Iraq and Afghanistan over the last year, according to Aviation Week. Syria reportedly recently bought two state-of-the art radar systems from Russia, reckoned to be Tor-M1 launchers that carry a payload of eight missiles, as well as two Pachora-2A systems. Iran recently bought 29 of these Tor launchers from Russia for \$750m in order to defend its nuclear sites.

The apparent failure of these systems in detecting and responding to the Israeli raid therefore poses questions for arms manufacturers and armies all the way from Damascus to Moscow and over to Tehran.

Aviation Week's story can be found [ [Here](#) ]

Original URL: [http://www.theregister.co.uk/2007/10/04/radar\\_hack\\_raid/](http://www.theregister.co.uk/2007/10/04/radar_hack_raid/)

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Report: Russia sent Syria experts to upgrade air defense

By Haaretz Service

The Times of London reported Tuesday that Russia has sent technicians to upgrade Syria's air defense system after Israeli electronic warfare systems allowed IAF warplanes to attack a target in Syria last month.

The Times account also said that the airborne electronic warfare system, which it said jammed the Russian-made radar and the Syrian army's communications, was "believed to have been designed in readiness for a possible attack on Iran's nuclear sites."

The Israel Defense Forces on Sunday lifted censorship on the fact that the air force carried out an air strike against a target deep in Syrian territory on September 6th. But censorship remained in effect on critical details of the mission, including the nature of the target.

According to foreign media reports, the air strike apparently targeted a North Korea-built nuclear facility in northeastern Syria. Syria and North Korea, however, have both vehemently denied any nuclear cooperation.

<http://www.haaretz.com/hasen/spages/909154.html>

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Report: Iran worried over Syrian air defense failure in IAF strike

By Yossi Melman, Haaretz Correspondent

Iran is concerned over the failure of Syria's air defense systems to detect the Israel Air Force non-stealth aircraft that reportedly carried out an attack inside Syria last month, the American weekly Aviation Week reported on its website on Wednesday.

According to the report, Israel was able to disrupt Syria's radar and air defense systems and render them ineffective during the IAF strike. The website reported that Israel used an electronic device, installed in a plane that circled the area, to disrupt Syria's defenses.

The weekly maintained that Iran is especially concerned over the failure of Syria's Russian-made radar systems. Iran has used similar systems in the past, and is slated to purchase more radar equipment in a future deal worth \$750 million. This equipment is apparently designated to protect Iran's nuclear facilities against attacks from the air.

According to the report, Israel used highly advanced equipment to jam Syria's defenses, similar to the equipment used in the U.S., which can completely black out a radar system, thus neutralizing the defense missile systems which rely on it.

The website added that since the IAF attack in Syria, many experts around the world have speculated on the reasons behind the fact that Syria's defenses failed to detect the Israeli planes and prevent the attack.

The publication also said that the technology used to disrupt the Syrian defenses had the capability to misinform the targeted radar system and create a false reading, thus diverting attention from the actual aircraft. The website did not name the kind of technology it was referring to, nor did it attest to the quality of its performance.

In 1982, during the war in Lebanon, Israel operated what was then considered the cutting edge of electronic equipment to disrupt and misinform Lebanese defenses. This equipment facilitated the Israeli attack on Syrian air defense batteries in Lebanon.

<http://www.haaretz.com/hasen/spages/909608.html>

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Report: Israel 'blinded' Syrian radar

After Israeli missile strike on Syria confirmed by both sides, the question remains &ndash; how did Israel's non-stealth jets infiltrate Syrian airspace undetected? US aerospace experts tell Aviation Week magazine that Israel used new US-

developed technology that lets users invade and manipulate enemy communication networks

Ynet Published: 10.05.07, 01:15 / Israel News

After Syrian President Bashar Assad admitted that Israeli planes carried out a missile strike in Syria and after the media blackout on the incident was lifted in Israel, many unanswered questions still remain regarding how IAF jets managed to infiltrate Syrian security.

An article published this week on the aerospace magazine Aviation Week & Space Technology's website offers the theory of experts in the field on how the Israeli F15 and F16 jets &ndash; which are not stealth fighters &ndash; managed to evade detection by Syrian air defense radar.

US aerospace industry and former US Air Force officials told Aviation Week's Senior Military Editor David A. Fulghum that Israel must have used "a technology like the US-developed 'Suter' airborne network attack system".

The cutting-edge technology allows users to invade enemy communication networks, to "see what enemy sensors see and even take over as systems administrator so sensors can be manipulated into positions so that approaching aircraft can't be seen", experts said.

In effect, the technology infiltrates and tricks enemy sensors by "directing data streams into them that can include false targets and misleading messages algorithms that allow a number of activities including control," the article explains.

The US system was recently tested successfully in operations in Afghanistan and Iraq, officials told Aviation Week.

Iran worried?

According to the article, a Kuwaiti newspaper recently reported that "Russian experts are studying why the two state-of-the art Russian-built radar systems in Syria did not detect the Israeli jets entering Syrian territory. Iran reportedly has asked the same question,

since it is buying the same systems and might have paid for the Syrian acquisitions."

The system is the new Tor-M1 launcher, and the Iranians bought 29 of them from Russia for \$750 million to guard their nuclear sites. The Tor launchers were delivered in January, according to Agency France-Press and ITAR-TASS.

It is not confirmed that the Tor system was in fact the system guarding the Syrian site.

<http://www.ynetnews.com/articles/0,7340,L-3456456,00.html>

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 Why Syria's Air Defenses Failed to Detect Israelis  
 Posted by David A. Fulghum at 10/3/2007 5:41 AM

Syrian President Bashar al-Assad said the Israelis struck a construction site at Tall al-Abyad just south of the Turkish border on Sept. 6. Press reports from the region say witnesses saw the Israeli aircraft approach from the Mediterranean Sea while others found unmarked drop tanks in Turkey near the border with Syria. Israeli defense officials admitted Oct. 2 that the Israeli Air Force made the raid.

The big mystery of the strike is how did the non-stealthy F-15s and F-16s get through the Syrian air defense radars without being detected? Some U.S. officials say they have the answer.

U.S. aerospace industry and retired military officials indicated today that a technology like the U.S.-developed "Suter" airborne network attack system developed by BAE Systems and integrated into U.S. unmanned aircraft by L-3 Communications was used by the Israelis. The system has been used or at least tested operationally in Iraq and Afghanistan over the last year.

The technology allows users to invade communications networks, see what enemy sensors see and even take over as systems administrator so sensors can be manipulated into positions so that approaching aircraft can't be seen, they say. The process involves locating enemy emitters with great precision and then directing data streams into them that can include false targets and misleading messages algorithms that allow a number of activities including control.

A Kuwaiti newspaper wrote that "Russian experts are studying why the two state-of-the art Russian-built radar systems in Syria did not detect the Israeli jets entering Syrian territory. Iran reportedly has asked the same question, since it is

buying the same systems and might have paid for the Syrian acquisitions."

The system in question is thought to be the new Tor-M1 launchers which carries eight missiles as well as two of the Pachora-2A system. Iran bought 29 of the Tor launchers from Russia for \$750 million to guard its nuclear sites, and they were delivered in Jan., according to Agency France-Press and ITAR-TASS. Syrian press reports they were tested in February. They also are expected to form a formidable system when used with the longer-range S-300/SA-10 which Iran has been trying to buy from Russia. Syria has operated SA-6s for years and more recently has been negotiating with Russians for the Tor-M1. What systems were actually guarding the Syrian site are not known.