

Israel Considers Foreign Launcher for Spy Satellite

Despite intense efforts to improve the lifting performance and reliability of its Shavit launcher, Tel Aviv may use a foreign rocket to loft its newest military satellite into orbit.

The Ministry of Defense (MoD) and Israel Aircraft Industries (IAI) have begun discussions with Russian, French and other launch providers on cost, schedule and technical aspects associated with IAI's TechSAR satellite, defense and industry sources said.

Slated for launch in 2006, TechSAR is the Israeli military's first synthetic aperture radar (SAR) satellite.

Government-owned IAI also is prime contractor for the Shavit, a solid-fueled, three-stage rocket that has been a source of national pride since it lofted Israel's first Ofeq spacecraft into low Earth orbit in 1988. But pragmatists within Israel's defense establishment note that Shavit has failed more than it has succeeded, and that the military cannot afford to lose another space-based intelligence asset.

The latest failure occurred Sept. 6, when an electronic triggering device failed to ignite the third-stage motor and Israel's Ofeq-6 spy satellite — which the military had been counting on to improve its overhead coverage of Iran and other high-threat areas — plummeted into the Mediterranean Sea.

Supporters of the Shavit say their confi-

dence was boosted by the July 12 test of an improved rocket at an Israel Air Force base south of Tel Aviv. All details were classified secret, preventing IAI and other industry executives from describing how the improvements would help Shavit.

"We don't plan to release any information from the test," Yair Ramati, managing director of IAI's Malam Division, which produces the Shavit, said July 13.

A terse MoD statement issued after the test noted, "A test was conducted within the framework of checking rocket ignition for the launch of satellites."

Tel Inbar, Israel Space Society vice president, noted that a ministry-sponsored committee that investigated the Sept. 6 failure called for nonpayload test launches.

"If yesterday's launch included successful separation of all the stages, which I believe it did, then this is certainly a positive step toward improved reliability," Inbar said July 13. "I also suspect that the test yielded needed data to enhance the lift capacity."

Keeping Shavit Viable

Inbar said the Shavit program requires at least one test launch every two years. "There is no assembly line for the Shavit, and there's no off-the-shelf inventory to speak of. Launchers are essentially made to order, and if you have a launch once every three or four years, you begin to



ISRAELI MINISTRY OF DEFENSE PHOTO

Shavit Takes Off: A July 12 test of an improved Israeli-made Shavit rocket was a success.

lose the industrial expertise."

Regarding the Shavit's track record, Inbar said, "Officially, the record is three failures and three successes. But there were more failures — possibly four more — that have never been acknowledged." He declined to elaborate on the unreported failures.

Inbar's assertion appeared to be supported by David Ivry, a former director-general of the MoD, who told a conference audience earlier this year, "We've had more satellites on the ground than in space. The failures of satellites over time were too frequent."

Shavit proponents note that all satellite launch programs experience failures.

"We simply cannot do without a national launch capability. We cannot depend on commercial services, which come with their own restrictions and limitations. If we do so, we risk privatization of our intelligence arms," said Uzi Rubin, a former director of Israel's Missile Defense Office.

Rubin, who would not comment on the July 12 test, said Israel's defense establishment would continue to upgrade the Shavit.

Industry sources said the interest in a foreign launch vehicle for the TechSAR might reflect changing orbital requirements more than a loss of confidence in the Shavit. They said the MoD intends to offer TechSAR imagery of areas outside the Middle East to key export customers, which may require a higher orbit than the Shavit can provide.

"If they want to export this imagery, they're going to need a very high inclination that provides more imaging areas," said one industry source.

The source said all Israeli-launched low-Earth-orbiting satellites travel lower than satellites on polar trajectories because they must launch westward over the Mediterranean. "We can't launch northward because of safety reasons and because we can't have our launchers and payloads ascending over neighboring enemy states," he said. "By the laws of nature, that means our satellites are at less than 40 degrees. So if [the MoD] is thinking about commercializing TechSAR, they're going to need a higher trajectory."

MoD spokeswoman Rachel Naidek-Ashkenazi and IAI spokesman Doron Suslik on July 13 declined to comment on the possible foreign launch of TechSAR. ■