

## Security and Defense: Israel goes ballistic

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Yaakov Katz , THE JERUSALEM POST

On Sunday, the *USS Higgins* hauled up its anchor and sailed out of Haifa Port where it had docked for a short visit.

An Arleigh Burke class destroyer - one of the largest and most powerful naval vessels built in the United States - the *Higgins* is one of 18 American ships with an Aegis interceptor system, capable of destroying enemy ballistic missiles above the atmosphere.

In just a few weeks, additional Aegis vessels will arrive here to participate in the biennial Juniper Cobra missile defense exercise that the IDF has been holding with the US European Command (EUCOM) and Missile Defense Agency since 2001.

This year's drill, scheduled for mid-October, is being described as the largest joint exercise ever held by the countries. During it they will jointly test four ballistic missile defense systems.

In addition to the Aegis, the MDA and EUCOM are sending THAAD and Patriot 3 missile defense systems - America's most-advanced - for the first time.

While the *Higgins* has not yet needed to use its Aegis system to intercept missiles fired into Israel, its crew is intimately familiar with the country's various security issues, particularly along the northern border.

The ship is named for US Marine Col. William R. Higgins, who was kidnapped by Hizbullah in southern Lebanon in 1988, while serving as a commander of a UN peacekeeping mission. In August 1989, a cell linked to Hizbullah murdered him in response to the IDF kidnapping of Sheikh Abdul Karim Obeid, a senior cleric and leader of the guerrilla group who was involved in the kidnapping. His body was dumped, over a year later, on a Beirut side street.

Israel had planned to use Obeid to obtain information regarding the fate of IAF navigator Ron Arad. Obeid was released in 2004 in exchange for the bodies of three soldiers - kidnapped in October 2000 - as well as shady businessman Elhanan Tannenbaum, in a large prisoner swap with Hizbullah.

The cooperation between Israel and the US on missile defense dates back to the mid-1980s when they began to jointly develop the Arrow missile defense system. Since then, the US government has spent close to \$3 billion on the Arrow, which is manufactured by Israel Aerospace Industries and Boeing. Earlier this year, Congress approved additional funding for the development of the Arrow 3, a larger version with greater range and the capability of intercepting missiles at higher altitudes.

The cooperation peaked ahead of the 1991 Gulf War when the first Bush administration sent Patriot missile batteries to help defend the country against Saddam Hussein's Scud missile attacks.

Last October, the Bush administration gave Israel a farewell gift in the form of the X-Band radar, which is deployed in the Negev and is capable of detecting targets thousands of miles away, providing five to seven

minutes of warning before an Iranian missile strikes. This is in contrast to the 10 seconds the residents of Sderot have when a Kassam rocket is launched from the Gaza Strip.

Juniper Cobra, senior defense officials said this week, is aimed at creating infrastructure in case Israel is attacked and the US decides to send the Aegis or THAAD to bolster the Arrow. The exercise spans several days and involves hundreds of Israeli and American soldiers, mostly from the air force.

The primary focus of the Juniper Cobra exercise held in 2007, for example, was integrating the lower-altitude US Patriot missile systems with the higher-altitude Arrow-2. This year, the integration will focus on improving the interoperability between the Arrow, THAAD and Aegis.

Officials said that the exercise may include live fire by the systems - most likely the Patriot - but the teams will mainly conduct computerized simulations of various threat scenarios launched from fictitious countries. The threats are then tracked and engaged by the various systems and the teams jointly write doctrine and staff procedures.

For Israel, the exercise could not have come at a more important time. Since the beginning of the year, Iran has made some impressive leaps with its ballistic missile development, culminating with the February launch of its first homemade satellite - called Omid - as well as the successful launch in May of a new missile, the Sajil, that has a range of more than 2,000 kilometers, easily reaching most of Eastern Europe.

This is impressive considering that just 10 years ago, the Iranians only had Scud B and C missiles. Today, they have their own production line of Shihabs and Sajils, for which they are building underground silos. In addition, Israeli assessments are that the Iranians will soon be capable of independently manufacturing their own version of the BM25 missile which they received from North Korea and has a range of more than 3,000 km.

According to the assessments, the launch of the Omid demonstrates that Iranian scientists have also made breakthroughs in guidance technology which has also likely been applied to its ballistic missiles.

According to Uzi Rubin, founder of the Arrow missile and a former head of the Homa Missile Defense Agency, Iran can also take unguided rockets like the Zelzal - which are also in Hizbullah's hands - and turn them into guided rockets with ranges topping 220 km.

"This is an original Iranian project; we don't see it anywhere else," Rubin noted in a recent briefing at the Jerusalem Center for Public Affairs.

The second major breakthrough is in the propulsion systems, which Iran has succeeded in upgrading from liquid to solid fuel. The main difference is that a missile that operates on liquid fuel needs to be fueled very close to launch, making it easier to discover with surveillance satellites or hovering aircraft. Solid-fuel missiles have a significantly longer shelf life and can be stored in underground silos for a long time, allowing the Iranians to just lift their cover and launch.

It is not an easy task though to assess Iran's progress in missile development.

On May 19, the EastWest Institute, a New York-based think tank that monitors global security, issued a report claiming that there was "no reliable information" on Iran's success in developing a solid fuel rocket. The next day, on May 20, Iran test fired the Sajil, proving without a doubt that it had independently mastered the capability.

These developments indicate as possible reversal in roles between Iran and North Korea. If Teheran bought technology from Pyongyang two decades ago, today the flow of technology is believed to have reversed.

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