

Iran Missile Strikes Reveal Potential Military Weaknesses

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Brief Analysis

The retaliatory attacks against alleged Islamic State facilities in eastern Syria apparently failed to hit any of their intended targets, undermining Iranian deterrence and raising questions about the effectiveness of Iran's missile force.

On the evening of June 18, Iran's Islamic Revolutionary Guard Corps (IRGC) fired what were said to be six Zolfaghar medium-range ballistic missiles (MRBMs) some 600 kilometers from its western provinces across Iraqi territory at what were described as Islamic State (IS) command-and-control and logistics targets, along with a suicide car factory in the Deir al-Zour province, in eastern Syria. An IRGC communique identified the attack as a "clear message" to the *takfiri* terrorists as well as their regional and overseas supporters -- an unmistakable reference to Saudi Arabia and the United States. Iran called it a "proportional response" to the IS terrorist attacks in the center of Tehran and at Ayatollah Khomeini's mausoleum eleven days earlier, citing a potential for future escalation should such attacks persist. Therefore, from the beginning, deterrence was high on the minds of Iranian leaders when they authorized the strike.

This is not the first time since the end of the Iran-Iraq War that the Islamic Republic has used ballistic missiles to exact punishment. On at least six occasions between November 1994 and April 2001, Iran reportedly fired Scud missiles at bases in Iraq of the Iranian opposition group Mujahedin-e Khalq. This latest episode, however, *is* the first time Iran has tested one of its "more modern" indigenous missile designs in actual operational conditions -- and the result appears to have been mixed at best.

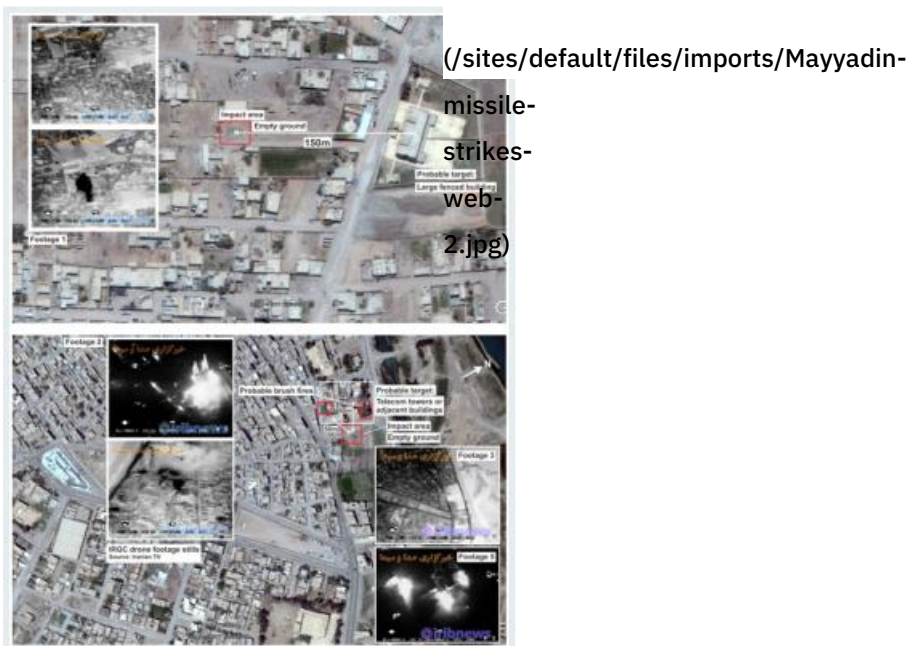
Details of the Attack

The Iranian media has so far released five video clips supposedly recorded by overflying IRGC drones and ostensibly live-fed to its commanders in Tehran. Shown are what appear to be two missile impacts -- actually

near misses as regards their targets -- in two different locations north and south of the town of Mayadin, 45 kilometers southeast of Deir al-Zour, a known IS stronghold. Four of the clips show only one target from different angles, and with only two actual missile rounds shown entering the frames in total, little evidence exists to support Iran's claims that all the missiles reached their intended targets and inflicted severe damage and casualties.

Targets appeared to be two telecommunications towers and associated buildings in the north, and an unidentified building surrounded by security walls 2 kilometers to the south. None evidently sustained direct hits, although impacts seem to have occurred 50 and 150 meters from their respective intended targets. In the second target area, one can also discern multiple brush fires but, again, no visible damage to the adjacent structures. According to a Syrian source quoted in the *Times of Israel*, the missile strikes caused no casualties.

According to Israeli military sources cited by Israeli analysts, several of a barrage of seven Iranian missiles (as compared to the six noted in other sources) actually landed in the Iraqi desert, with three other missiles missing their targets entirely and only one or two coming close. If these claims are accurate, they may indicate serious reliability problems with the Iranian missiles, which could only be exacerbated in future employment of Iran's longer-range and more complex missiles. All told, the latest Iranian strike should do little to enhance Iran's deterrence vis-à-vis its regional foes, which are being equipped with sophisticated antimissile systems. Even so, the ability of one or two missiles to hit within 50-150 meters of their targets, after having flown 600 kilometers, can be considered an achievement of sorts.



Assessing the Zolfaqar

The missile used in the Syria strikes is known, as noted, as the Zolfaqar, a nine-meter-long MRBM that represents a development of the Fateh-110, whose range it extends from about 300 to 700 kilometers. The Fateh family includes several versions of the inertial guided Fateh, as well as terminal guided Khalij-e Fars and Hormuz versions. They are generally considered the most versatile and accurate ballistic missiles in the Iranian arsenal, with the Fateh-110 and -313 claimed to have a circular error probable (CEP) of only 10 meters at their maximum range -- although, given the performance of the Zolfaqar, this seems highly unlikely.

The Zolfaqar is believed to share the Fateh guidance system, or to incorporate a slightly improved version. While having the same length and diameter as the Fateh, the Zolfaqar may attain its longer range from its lighter composite body material -- hence the Iranian claim that it is virtually undetectable by radar -- and an improved solid-fuel

motor. The high-explosive warhead might have been reduced from its reported 500 kilograms to save weight, thereby allowing it to travel such longer distances. A cluster warhead is also reported to have been deployed with these missiles, but is believed not to have been used in the latest attack.

Iranian media reports also suggested some of the missiles were actually of the liquid-fuel Qiam type, a local development of the Scud missile with a claimed 800-kilometer range and a 700-kilogram warhead. Televised footage of the launches, however, showed only the Zolfaqar.

Iran's Retaliatory Options

By using ballistic missiles, Iran appears to have chosen the least risky option to retaliate against the Islamic State - and a comparatively effective one in terms of the message it sends. It also offered an opportunity for the IRGC to show off its missile arsenal and restore its domestic image, thought to be tarnished following the Tehran attacks. Alternatively, to send an even more potent regional message -- not to mention cause more damage -- the IRGC could have used its more powerful, longer-range Shahab-3 or Ghadr missiles. But these might have been even less accurate than the Zolfaqar, bringing unforeseen embarrassment as well as civilian casualties. This does not mean, though, that such missiles will not be employed in future escalations. In addition, the IRGC chose to launch missiles from its own territory rather than use Fateh or other shorter-range missiles forward-deployed to the western Iraqi desert, assuming Iraq would allow such positioning. That option could have yielded better accuracy but probably lacked the desired deterrent and morale-boosting effects of using "homeland" bases.

Iran had other options as well. Given its significant military presence already in Syria, Iran could theoretically have used its IRGC special forces to raid high-value IS targets in eastern Syria, but such raids could also have proven too risky. Iran could instead have opted to use its air force's F-4 Phantom fighter-bombers, which have ample range to reach their targets in eastern Syria and return by refueling over Iraq. After all, on January 12, 2015, several Iranian Phantoms bombed IS positions in northern Iraq.

Depending on the numbers used, Phantoms could also deliver a deadlier payload more accurately -- in broad daylight, perhaps -- but this option would have entailed a high risk of possible encounters with the U.S.-led coalition air assets that have lately been very active over eastern and southeastern Syria. Indeed, reports have indicated intensified bombings of Mayadin by both U.S.-led coalition and Russian air forces as recently as June 17. Also, on June 18 a U.S. Navy F/A-18E shot down a Syrian air force Sukhoi Su-22, which had reportedly dropped munitions near U.S.-backed Syrian Democratic Forces units south of al-Tabqa, about 200 kilometers northwest of Mayadin. Iranian Shahed 129 drones have also been increasingly targeted over eastern Syria, with the latest downed June 20 by an American F-15E.

Conclusion

The recent Iranian missile strikes against the Islamic State stronghold of Mayadin were clearly intended to boost Iran's deterrence as well as achieve retaliatory results. However, preliminary independent assessments (supported by the graphic above) show four out of the six missiles Iran says it fired failed to reach their targets, and those that did were not as accurate as claimed by Islamic Republic officials.

By extension, the missile strike shows Iran is probably grappling with serious quality-control and reliability issues within its missile program. While this episode could prompt the Iranians to review and revise those manufacturing and quality-control procedures, further delaying their existing projects, Tehran might also seek solutions to these evident shortcomings in foreign technology sources.

Farzin Nadimi is a Washington-based analyst specializing in the security and defense affairs of Iran and the Persian Gulf region. ❖

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