

Is Iran Attempting to Thwart U.S. Naval Surveillance of Its Missile Tests?

by [Farzin Nadimi \(/experts/farzin-nadimi\)](#)

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ABOUT THE AUTHORS



[Farzin Nadimi \(/experts/farzin-nadimi\)](#)

Farzin Nadimi, an associate fellow with The Washington Institute, is a Washington-based analyst specializing in the security and defense affairs of Iran and the Persian Gulf region.



Brief Analysis

Tehran seems eager to extend the range and capabilities of its antiship missiles, and just as eager to prevent the West from monitoring its progress toward that end, even at the risk of escalating naval tensions.

In the latest episode of unsafe encounters between the Islamic Revolutionary Guard Corps and U.S. naval assets in the Persian Gulf, IRGC speedboats closed on and blocked the path of an unarmed American vessel under escort by British Royal Navy warships on March 4, forcing the vessel to change course. The IRGC claims that the ship was intercepted after it veered out of the "international corridor" in the narrow Strait of Hormuz, though it remains unclear whether the vessel ever entered Iranian waters. Whatever the case, the act was apparently intended to disrupt American snooping on Iran's recent missile tests in the area.

The harassed vessel was the USNS *Invincible* (T-AGM-24), a missile range instrumentation ship that was likely involved in a measurement and signature intelligence (MASINT) and foreign instrumentation signals intelligence (FISINT) mission near the Strait of Hormuz. In fact, the *Invincible* may have been monitoring Iranian missile test activities at the time of the incident. According to Fox News and UPI reports quoting unnamed but knowledgeable sources, the IRGC fired two "active-radar homing" ballistic missiles at a target barge in the Gulf of Oman that day. Further details suggest the first missile only managed to reach the "vicinity" of the target while the second scored a hit. Earlier today, IRGC Aerospace Force commander Amir Ali Hajizadeh confirmed that the "Hormuz-2 ballistic anti-ship missile" was successfully tested over the past week, destroying a target at 250 km range.

The *Invincible* has been monitoring Iranian theater ballistic missile tests since 2012, and the latest tests were probably no exception to this routine. According to the website MarineTraffic, the *Invincible* left Bahrain on January 23 and returned on March 6. During this period Iran also reportedly fired

<http://www.washingtoninstitute.org/policy-analysis/view/irans-latest-missile-test-scenarios-and-implications-for-the-new-administra>) a medium-range ballistic missile southward from its Semnan test range less than 1,000 km north of the Strait of Hormuz, within the tracking range of a vessel like the *Invincible*.

This week's missile test was reportedly conducted near Jask on Iran's Gulf of Oman coast, some 50 km southeast of the strait. In recent years, the national Iranian navy has been developing Jask into a forward base to monitor the strait's busy inlet. The IRGC also operates a number of launch areas near Jask where it can quickly position and deploy its mobile antiship cruise and ballistic missiles.

In February 2011, the IRGC unveiled its Khalij-e Fars electro-optically guided ballistic missile, developed from the Fateh-110 in order to target surface ships from a claimed range of 300 km. The missile has been tested on several occasions since then. Three years later, Iran introduced other guided derivatives of the Fateh: the Hormuz-1 with a passive radar emission seeker head, and the Hormuz-2, which reportedly sports an active radar seeker in its nose.

If General Hajizadeh's claim is true, this week's launch was the first known test of the radar-guided antiship Hormuz-2. From the Jask coastal test range, this missile can reach the entire Strait of Hormuz and Gulf of Oman. And if the system's combination of electro-optical and active and passive radar guidance performs as claimed, it could give Iran some flexibility to circumvent the countermeasures the U.S. Fifth Fleet typically employs when its strike groups transit the strait.

Using the powerful Cobra Gemini dual-band radar, the *Invincible* can track and plot the detailed trajectory and dynamics of tactical ballistic missiles from launch until they reach their target. Other listening equipment can record and decipher encrypted telemetry communications between a missile and its launching party. Among other things, the data collected can then be used to support regional missile defense assets such as Aegis, THAAD, and Patriot. Yet while the Cobra Gemini can detect a typical ballistic missile from 1,000 km over a 20-degree-wide horizon, full tracking and radar imaging reportedly requires the system to be closer than that, perhaps explaining the U.S. ship's relative proximity to this week's test.

Given the timing of the incident, the harassment of the *Invincible* does not seem like a random act by a hotshot IRGC boat crew. Rather, it was likely part of a concerted effort to hinder effective monitoring of Iran's more sensitive weapons technologies. On March 8, senior IRGC Navy commander Capt. Mehdi Hashemi blamed the slow American ship for initiating the maneuver and called on Western navies to leave the region permanently before their "unsafe" actions bring about "irreversible consequences." Similarly, on several occasions in recent months, Iran has warned off U.S. intelligence-gathering aircraft flying in the international airspace over the Persian Gulf.

Such warnings point to the possibility that Iran's most recent missile activities are part of an accelerated test and training program to create a viable deterrence and rapid-attack capability against strategic U.S. Navy assets, at ranges unattainable by most of its existing antiship missiles. The latest iterations of the Fateh family of missiles -- the composite-airframe Fateh-313 and Zolfagar -- have claimed ranges of 500 and 750 km, respectively. If those claims prove true, it is only a matter of time before other versions of the design (e.g., the Khalij-e Fars and Hormuz) also incorporate the added benefits of the lighter airframe and the resultant extended range.

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