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IRAN'S SPACE PROGRAMME: BACK FROM DORMANCY

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Iran inaugurated its new Imam Khomeini National Space Center on July 27, 2017 by successfully launching its two-stage 'Simorgh' rocket into space. Though Iranian state television showed footage of the rocket's liftoff, details of the mission profile or of the Simorgh's payload were not available in the media. Iran previously has put several small satellites into orbit using a different rocket, but the 'Simorgh' is designed to carry a satellite weighing up to 250 kilograms into an orbital altitude of up to 500 kilometers. Whether the launch was a suborbital test, and what payload, if any, the rocket might have been carrying, awaits confirmation.¹ There was no indication if Iran was able to put the satellite into orbit. The US Joint Space Operations Centre did not detect any additional objects in space, according to a spokesperson at U.S. Strategic Command, making it unlikely that Iran put a satellite into orbit. Iran's official media claimed the launch was successful.² Details of Iran's space programme are scarce and rhetoric seldom

matches reality. Iran frequently announces technological breakthroughs that are difficult to independently verify. It has carried out multiple tests of short and medium-range ballistic missiles as well as other domestically produced weapons over the years.

Iran's successful test of a satellite-carrying rocket is a symbol of the country's maturing space program, but many believe that the launch violates the spirit of a 2015 nuclear agreement. Iran's space programme is marred with funding issues and US sanctions. The Islamic state's tryst with space exploration dates back to 2004 when the Iranian Space Agency was established. Iran became an orbital launch capable nation in 2009, when it launched its first locally-built satellite, 'Omid'. Since then, it has launched four satellites (Omid, Rasad-1, Navid and Fajr) into orbit. Prior to these launches, Iran had developed two satellites which were launched with international assistance using Russian and Chinese rockets. Iran's satellite launch vehicles

(SLV) are mainly the 'Safir' rocket, which was developed from the 'Shahab' Intermediate Range Ballistic Missile IRBM project, and the 'Simorgh' rocket developed in 2010. The country also sent its first bio-capsule containing living creatures into space in February 2010.³ On the future satellite launches, Head of the Iranian Space Agency (ISA) Mohsen Bahrami stated that the country is planning to send three home-made satellites into space. Speaking to reporters on the occasion of World Space Week in October 2016, Bahrami said 'Sharif Sat' would be put into orbit by the end of the Iranian calendar year, and 'Amirkabir' and 'Nahid-I' satellites would be put into space during 2018. While the 'Sharif Sat' is touted to be a remote-sensing satellite and 'Nahid-I' a communications satellite, 'Amirkabir' is an experimental microsatellite with remote sensing and communication applications.⁴ The recent launch of July 27, 2017 is thought to be of the 'Sharif Sat'.

The Iranian space programme appears to have three major shortcomings. Firstly, funding is an issue since the ISA has delayed many proposed launches and satellites like the Mesbah (an Italian made satellite for Iran) are already available. Secondly, funding aside, Iran's self-touted space launch capability is obviously incapable of putting heavier satellites into orbit. Instead, Iran is reliant upon foreign launch providers, in particular Russia and China for launch facilities. However, the affordability factor is holding them back. Thirdly, Iranian Space

Agency is politically controlled and there is incoherence and poor implementation when it comes to space policy, decision-making, strategic planning, and coordination.⁵

The US has long been concerned as much about Iran's Space Programme, as it's Nuclear Programme. Though its official purpose is to launch satellites, the space program allows the Iranians to gain experience in dual technologies that could be used to develop long-range ballistic missiles. The 'Simorgh' rocket could potentially lead towards the production of an Iranian Intercontinental Ballistic Missile. The Trump administration in US, though critical of the Iranian Missile tests, has nonetheless reluctantly certified to the US Congress that Iran is complying with the 2015 nuclear deal, the provisions of which legally require the US administration to report on the status of Iran's nuclear program every 90 days. However, the provisions do not prohibit Iran's missile tests outright.⁶ It will be interesting to see whether Iran clears the next round of compliance inspections. Many experts fear that Iran's space program could be concealing the nation's efforts to develop an intercontinental ballistic missile (ICBM). Interestingly, Iran was one of the 24 founding members of the UN Committee on the Peaceful Uses of Outer Space (UNCOPUOS), which was set up in 1959.⁷

Impressions

With this latest launch, Iran's space program has emerged from a three-year dormancy initiated by President Rouhani which also indicates a re-emergence from technical and budgetary constraints. Though there is no certainty of a satellite being put into orbit successfully, further launches can be expected in the near future, renewing concerns over the nature of Iran's missile and SLV programs. The scenario is especially worrisome when considering assessments that a ballistic-missile derivative of the 'Simorgh' could potentially achieve intercontinental range. Iran insists its inherently military-run space program is for peaceful purposes only and that its ballistic missiles are for conventional deterrence at a range no greater than 2,000 kilometers. Such rhetoric and Iran's technical limitations notwithstanding, the mere possibility of diverted know-how from an SLV to an ICBM program will unsettle many in the western world. Previous close cooperation between Iran and North Korea could be a pointer in this direction.

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])

Notes

¹ "Iran: Space Program Claims a Successful Launch Into Orbit", at <https://worldview.stratfor.com/article/iran-space-program-claims-successful-launch-orbit>, accessed on August 03,2017

² Lucas Tomlinson, "Iran launched rocket carrying satellite", July 27, 2017, at <http://www.foxnews.com/world/2017/07/27/iran-launched-rocket-carrying-satellite-official-says.html>, accessed on August 13, 2017

³ "Space: The Iranian Space Program" on February 24, 2015, at <https://www.strategypage.com/htmw/htspace/articles/20150224.aspx>, accessed on Aug 06,2017.

⁴ "Iran plans to launch three satellites into space", October 04, 2016, at <http://www.presstv.ir/Detail/2016/10/04/487619/Iran-Space-Agency-Mohsen-Bahrani-Sharif-Sat-Amirkabir-Nahid-I-satellite>, accessed on August 10, 2017.

⁵ "Iran's Space Programme: A Political Football Amidst Economic Decrepitude", at <https://spacewatchme.com/2017/07/irans-space-programme-political-football-amidst-economic-decrepitude/>, accessed on August 05, 2017.

⁶ *ibid*, n-1.

⁷ *ibid*, n-4.