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Isro eyes Feb launch for key INSAT-3DS satellites

Soumya Pillai

letters@hindustantimes.com

NEW DELHI: After a successful start to 2024, with two significant missions already completed, the Indian Space Research Organisation is now gearing up to launch INSAT-3DS satellites on-board the Geosynchronous Launch Vehicle (GSLV-F14), its more advanced rocket that uses liquid propellant. Senior officials from the space agency said the launch is likely to happen around the first week of February.

Isro officials said that the launch was previously planned for January, but it is now likely to happen in February.

They, however, said that the satellite is already in the process of being integrated with the launch vehicle and the agency is only waiting for a final launch date. "It is likely to happen by the first week of February itself," a senior official confirmed, asking not to be named.

The INSAT-3DS mission will carry satellites for the India Meteorological Organisation (IMD) as a part of its series of climate observatory satellites. This mission was initiated as a part of a collaboration between Isro and IMD to improve the network of climate services.

The multi-mission meteorological data receiving and propulsion system collaboration includes three dedicated Earth

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observation satellites —INSAT-3D and INSAT-3DR,— which are already in orbit, with the INSAT-3DS due next.

Crucially, this will be the first launch of the GSLV in around eight months.

The rocket has a higher capacity, and uses cryogenic liquid propellants for all its three stages — this use of liquid fuel makes for a more complicated engineering, but it allows for much higher lift-off weight capacity.

India's other rocket, the workhorse PSLV, uses solid fuel. Isro chairman S Somanath said during a media briefing earlier this month that the space agency was planning at least 12 launches in 2024.

The space agency is already on to a good start towards attaining that goal, as it has already successfully launched India's first polarimetry mission, X-ray Polarimetry Satellite or XPoSat, on January 1 and on

January 6 successfully placed the Aditya-L1 satellite—India's first solar observatory which was launched on September 2 last year—in the intended orbit to initiate its five-year mission.

The upcoming months will also see rounds of tests and technology demonstration for Gaganyaan, India's first human spaceflight project.

The Gaganyaan mission aims to demonstrate Isro's human spaceflight capability by launching a crew of three members to an orbit of 400km for a three-day mission and bringing them back safely.

Leading up to the actual manned mission, the space agency will be conducting several rounds of tests to ensure the systems are safe to carry and bring back astronauts safely to Earth.

After the TV-D1 test flight demonstration, which was carried out in October last year, the space agency will also be carrying out a test flight with a robot, "Vyomitra", a humanoid astronaut, and an unmanned flight before the manned mission, possibly scheduled for 2025, according to officials from the department of space.

Isro has also lined up the launch of India's collaboration with US's National Aeronautics and Space Administration (NASA), NASA-ISRO Synthetic Aperture Radar (NISAR), which is expected to take flight by March.