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Aim for Indian on the Moon by 2040: Modi

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NEW DELHI: A space station by 2035, and a manned mission to the Moon by 2040 — these were the objectives listed by Prime Minister Narendra Modi for the Indian Space Research Organisation (ISRO) on Tuesday during a review of India's first manned space mission, a crucial test flight for which is scheduled on October 21.

"Building on the success of the Indian space initiatives, including the recent Chandrayaan-3 and Aditya-L1 missions, Prime Minister directed that India



PM Modi, Union minister Jitendra Singh and ISRO chief Somanath in Delhi on Tuesday. ANI

should now aim for new and ambitious goals, including setting up 'Bharatya Antariksha Station' (Indian Space Station) by 2035 and sending first Indian to

the Moon by 2040," an official statement from the PMO said.

The department of space, which oversees the operations of [continued on > 12](#)

INDIAN ON MOON

ISRO, has also been directed to develop a roadmap for India's future Moon missions, the development of a Next Generation Launch Vehicle (NGLV), which would be equipped to undertake return missions, the construction of a new launch pad, and the setting up of human-centric laboratories and associated technologies.

In the meeting, PM also called upon Indian scientists to work towards interplanetary missions including a Venus orbiter mission and a Mars lander.

"The department of space presented a comprehensive overview of the Gaganyaan Mission including various technologies developed so far such as human-rated launch vehicles and system qualification. It was noted that around 20 major tests, including three uncrewed missions of the Human Rated Launch Vehicle (HRLV3) are planned," the statement added.

In the review meeting, the date for ISRO's test vehicle development flight (TV-D1), a crucial test for India's first human spaceflight Gaganyaan, on October 21, was also reiterated. ISRO announced in a separate statement on Tuesday that the test flight is scheduled to take-off at 8am on October 21 from the Satish Dhawan Space Centre in Sriharikota.

"...It will be a short duration mission and the visibility from the launch view gallery will be limited," the ISRO statement read.

The Gaganyaan project is a demonstration of India's ability to send manned space missions and involves the launch of a crew of three in an orbit of 400km for a three-day mission.

The prerequisites for Gaganyaan mission include development of many critical technologies including human rated

launch vehicle for carrying crew safely to space, life support system to provide an earth like environment to crew in space, crew emergency escape provision and evolving crew management aspects for training, recovery and rehabilitation of crew," ISRO said in its mission document.

The space agency said that the mission also plans to demonstrate its technology preparedness levels before carrying out the final human space flight mission. These demonstrator missions include integrated air drop test (IADT), pad abort test (PAT) and test vehicle (TV) flights.

The TV-D1 test vehicle is a single-stage liquid rocket developed for this abort mission. The payloads consist of the Crew Module (CM) and Crew Escape Systems (CES) with their fast-acting solid motors, along with CM fitting (CMF) and Interface Adapters.

"This flight will simulate the abort condition during the ascent trajectory corresponding to a Mach number of 1.2 encountered in the Gaganyaan mission. CES with CM will be separated from the test vehicle at an altitude of about 17 km. Subsequently, the abort sequence will be executed autonomously commencing with the separation of CES and deployment of the series of parachutes, finally culminating in the safe touchdown of CM in the sea, about 10 km from the coast of Sriharikota," the space agency said.