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Isro to build launch vehicle for heavier payloads

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NEW DELHI: The Indian Space Research Organisation (Isro) is making progress in developing the next generation launch vehicle (NGLV), which will be able to carry heavier payloads by 2035, including the Bharat Antariksh space station, an official said on Sunday.

Rocket scientists are working to complete the design for the NGLV before 2035, when the space agency plans to launch the final version of its space station, an official of the department of space said.

"We will require a bigger launch vehicle for the completed space station and with that aim, we are planning to complete work on NGLV by 2034-35," the official said, declining to be named. "The initial version of the space station can be launched using our exist-

ing rockets as well."

Before launching the space station in 2035, the space agency will prepare a preliminary version by 2028. The Bharatiya Antariksh station will have a crew command module, habitat module, propulsion module and docking ports. The space station is estimated to have a mass of around 25 tonnes, which will be increased in the future depending on the expansion of the station.

In a review meeting with the department of space in October, Prime Minister Narendra Modi had set ambitious targets for India's space missions, announcing that Isro will be establishing a space station by 2035 and will be sending the first Indian astronaut to the moon by 2040.

"Building on the success of the Indian space initiatives, including the recent Chandrayan-3 and Aditya-L1 missions, the



Isro launched rocket carrying 'Chandrayaan-3' on July 14, 2023. PTI

Prime Minister directed that India should now aim for new and ambitious goals, including setting up 'Bharatiya Antariksha Station' (Indian Space Station) by 2035 and sending first Indian to the Moon by 2040," an official statement said.

Modi also set deadlines for

return lunar missions, which can be launched using the NGLV.

Currently, there is an international space station in orbit, which brings together international flight crews, multiple launch vehicles, globally distributed launch and flight oper-

ations, training, engineering and development facilities, communications networks, and the international scientific research community.

The station was designed between 1984 and 1993 and elements of it were constructed in the US, Canada, Japan and Europe.

The current space station is the largest human-made object ever to orbit Earth, having a pressurised volume of approximately 900 cubic metres and a mass over 400 tonnes, according to the National Aeronautics and Space Administration. It orbits at an altitude of between 370km and 460km.

The Indian space agency will eventually have two versions of NGLV, latest documents show. The first version will be used to launch payloads in low earth orbits and the second version will launch payloads into a geostationary transfer orbit.