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{ CHANDRAYAAN-3 } GETTING CLOSER

Lander 'on track' after orbital adjustments

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the scheduled second de-boosting operation of the spacecraft on August 20. The spacecraft's current position is "as intended", the agency said.

"The health of the lander is good, and we are monitoring it's progress closely. Every stage till

this point has gone as we had intended," an Isro official said.

While the initial plan was to put the lander, Vikram, in an orbit of 30kmX100km, it attained an orbit of 113kmX157km after the first de-boosting operation on Friday, Isro said on Friday. Officials

on Saturday said that this was not particularly a cause for concern.

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Isro: Chandrayaan-3 is healthy, completing stages as planned

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Officials on Saturday said that this was not particularly a cause for concern. "The 30kmX100km orbit was under nominal conditions. Moreover, these were just estimates because the actual plan has not been revealed due to security reasons. The current position and movement of the spacecraft is being monitored continuously by our teams and everything is going as per the plan," the top official cited above said requesting anonymity.

The official explained that initially the lander was supposed to



Chandrayaan-3 was launched from Sriharikota on July 14 [▶](#)

reach an orbit where the perilune (the point at which a spacecraft in the lunar orbit is closest to the moon) would be around 30km, and the apolune (the point at which the spacecraft is furthest from the moon) would be around 100km. The space agency conducts de-boosting or deceleration operation to gradually reduce the velocity of the spacecraft so that it attains a specified controlled speed before landing on the surface of the moon.

The next de-boosting maneuver is planned for Monday, which will be followed by the last round of braking procedures, before the spacecraft attempts to land on the surface of the moon on August 23 between 5:30pm and 6pm.

On Monday or Tuesday, the spacecraft will also be flipped from a horizontal orientation to a vertical orientation, Isro said.

A follow-up mission to the 2019 Chandrayaan-2, the latest programme has three objectives – to demonstrate safe and soft landing on the lunar surface, which could not be achieved during Chandrayaan-2, to demonstrate rover abilities on the surface of the moon and to conduct in-situ scientific experiments.

Chandrayaan-3 consists of an indigenous lander module (LM), propulsion module (PM) and a rover, with an objective of developing and demonstrating new technologies required for interplanetary missions. The lander has the capability to soft land at a specified lunar site and deploy the rover, which will carry out in-situ chemical analysis of the lunar surface during the course of its mobility.

After the lander module was separated from the propulsion module, the latter will now continue its journey along the lunar orbit for at least six months.

The propulsion module has Spectro-polarimetry of Habitable Planet Earth payload to study the spectral and Polarimetric measurements of earth from the lunar orbit. In simpler terms, the propulsion module has started performing a spectroscopic study of the earth's atmosphere and measure the variations in polarisation from the clouds on earth, to accumulate signatures of exoplanets that would qualify for habitability.