

ISRO'S FIRST MISSION OF 2019 TO PUT MILITARY SATELLITE MICROSAT-R IN SPACE

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Google Maps image locates the Satish Dhawan Space Centre in Sriharikota.

Just before midnight on Thursday, Indian Space Research Organisation's first mission of 2019 will put into space a 130-kg military imaging satellite, Microsat-R.

ISRO readies for a busy 2019

ISRO has shied away from sharing details of the spacecraft or its uses as it does routinely each time during its missions; except to say the satellite would be placed within 15 minutes after take-off in a polar orbit 274 km away from Earth.

This is much lower than any of its civil Earth observation spacecraft, which fly pole to pole over the globe at between 400 km and 700 km.

According to information obtained from different sources Microsat-R and its payload come assembled from a handful of laboratories of the Defence Research and Development Organisation (DRDO) and is meant for military use. The satellite was "assembled outside and ISRO only interfaced it" with its own systems and the launch vehicle, just as it treats any customer satellite.

C-44 will be launched around 11.30 p.m. from the older First Launch Pad at the Satish Dhawan Space Centre, Sriharikota.

For its part, ISRO is experimenting on two aspects of the vehicle. One is to reuse a waste stage. "For us, the excitement is about reusing the spent fourth stage [PS4] of the rocket as an orbiting platform for future experiments," an official said. Kalamsat, a small student payload, will be the first to use PS4 as an orbital platform.

Amid the 28-hour countdown for the launch, ISRO Chairman K.Sivan said the PS4-Kalamsat experiment would be short-lived. It would start about 1.5 hours from take-off and last about 14 hours until Friday midday. Later experiments with PS4 will be improved gradually, he said.

For the third time in ISRO's recent history, the mission team is slated to cut off and restart the PS4 engine twice over a flight lasting around 100 minutes.

ISRO's pre-launch brochure said, "In PSLV-C44, the fourth stage (PS4) of the vehicle will be moved to higher circular orbit so as to establish an orbital platform for carrying out experiments."

The other experiment with the launcher PSLV-C44 vehicle will be a new third variant having two strap-on boosters. Called the PSLV-DL, D standing for demonstration, it ranges between the older two variants.

Researchers deduced this from a small fragmented tooth unearthed in Madhya Pradesh

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