ISRO TASTES FIRST SUCCESS OF 2019

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Blazing a trail:PSLV C-44 lifting off from the first launch pad of the Satish Dhawan Space Centre, Sriharikota, in Andhra Pradesh late on Thursday.B. Jothi Ramalingam

Under a starry night and a waning gibbous moon, ISRO's PSLV C-44 broke the silence over a brimming Pulicat lake as it lifted off from Satish Dhawan Space Centre, SHAR, to successfully place into orbit a military satellite, Microsat-R.

The mission with the modified PSLV with just two strap-on motors, dubbed the PSLV-DL (dual strap-ons), marked another first for ISRO as it provided an alternative to its normal six strap-on motors. This will enable it to carry slightly higher payloads than its Core-Alone version.

Towards the end of the first stage, the rocket's plumes were white with its tail end burning bright red even as a large flock of birds passed on the horizon. A second later, as the rocket soared further into the night sky, the second stage ignition burned a bright orange propelling the rocket ahead.

In low orbit

Microsat-R, placed into orbit 13 and a half minutes after lift-off, is a defence application satellite. It is the first time an Indian satellite was being placed by ISRO in a low orbit at an altitude of 274 km. ISRO also used this launch as an opportunity to demonstrate the usability of the fourth stage of the rocket after the satellites are ejected into orbit.

Till Thursday night, the fourth stage used to just become yet another piece of space debris. However, ISRO has found a way to make use of this stage with a student satellite, Kalamsat, made by Space Kidz India, weighing just 1.26kg, attached to it.

"The first mission of 2019 is a grand success," ISRO Chairman K. Sivan said from Mission Control. "Another innovation is the making the fourth stage, as an experimental platform to do technology demonstrations and carry out science experiments by students," he said.

For experiments

This would enable any agency that wants to conducts experiments in space to use the fourth stage till it disintegrates naturally. The fourth stage of the rocket may be orbiting in space for six months to a year. ISRO is aiming to use this time-frame to enable agencies to run short time experiments. Mr. Sivan asked students in India to develop such satellites and ISRO would take care of the launch.

He also said ISRO was developing a Small Satellite Launch Vehicle (SSLV), smaller than the PSLV. The first SSLV launch will take place this year, he said.

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