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Isro's LVM-3 puts 36 satellites in orbit, OneWeb completes LEO constellation

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BENGALURU: Isro on Sunday successfully put into space 36 satellites of Bharti-backed OneWeb enabling the completion of the UK firm's first generation (Gen-1) Low Earth Orbit (LEO) constellation.

The GSLV-Mk3 or LVM3 took off smoothly at 9am as scheduled and completed the nearly 20-minute launch sequence before separation with textbook precision.
S Mohan Kumar, mission director, LVM3-M3, said: "...The orbital parameters were all achieved. The 36 satellites were deployed in a sequential manner — nine steps with four satellites each."

While the first two batches of satellites separated in the 19th minute, the next two happened 13 minutes later. The last 20 satellites separated out of visible range and final confirmation reached Isro after 10.10am.
Isro chairman S Somanath said: "I am very happy for consecutive launch success of GSLV-Mk3 or LVM3 and want to thank NSIL for bringing this opportunity to us and OneWeb for having the confidence. I congratulate Isro for making LVM3 reliable, rugged and demonstrating its capabilities of launching large, heavy payloads into the right orbit without any glitches. We look forward to greater engagement with commercial partners for making this rocket one of the best in its class."

Sunday's mission (LVM3-M3) was the second dedicated commercial satellite mission undertaken by Space PSU NewSpace India Limited (NSIL) for Network Access Associates Ltd (OneWeb).

NSIL CMD Radhakrishnan D said: “Having a repeat performance of any launcher is not an easy thing to do and today’s mission is extremely momentous for us. A special thing seen in this mission is using the cryogenic stage to do such a complex manoeuvre to meet OneWeb’s requirement to deploy 36 satellites. This is very challenging and Isro has repeated this for the second time. We are happy to be part of OneWeb’s big journey in the last three years and want to reassure them that NSIL will continue to engage to meet any other requirement.”

Clean Slate For LVM3

This also marked LVM3’s — Isro’s heaviest launch vehicle so far — sixth successful launch, a track record that will help India further commercialise the rocket in the coming years.

Mohan Kumar, said: “This time we’ve completed the launch campaign in a record 72 days and the LVM-3 has shown its might and ruggedness in taking the heaviest payload from our soil to the precise orbit. We did the assembly in the newly built second vehicle assembly building wherein from the nozzle trial actuation to the S200 stacking and the entire vehicle integration was carried out under one roof and the vehicle was moved to the pad using a newly built track.”

Sunday’s launch, OneWeb’s 18th to-date, has taken the total satellites of the firm in orbit to more than 618 and the firm will next launch a series of spare satellites to augment the constellation.

Moving Towards Gaganyaan

Somanath, while saying that the spaceport in Sriharikota will be very busy in the coming months, said that the space agency is looking at a PSLV commercial mission in April, another GSLV-Mk3 (for Chandrayaan-3) mission and a GSLV-Mk2 mission (for Nisar) in the coming months.

He thanked the PM and the government for making the launch vehicle available for commercial use and said all the approvals came in quickly to enable the mission when an opportunity came in at a short notice.

Stating that this has also given Isro more confidence about the rocket which will be used for Gaganyaan, Somanath said: “The S200 motors designed with increased margins and features suited for the Gaganyaan configuration were used in this mission and we are happy that it performed very well. There were many more improvements in the other stages and systems that are aimed towards making it human-rated and we’re happy that there’s incremental progress happening towards Gaganyaan mission.”

Lt Gen (retd) AK Bhatt, director-general, Indian Space Association, said: “The completion of the last leg of the first-generation LEO constellation of 600+ satellites by OneWeb has set a significant benchmark for the Indian space industry in downstream application of satellite communication in India. This launch is a significant milestone for India to move towards benefiting from remarkable capabilities of LEO connectivity and the spread of space-based internet. This will surely aid in addressing the issue of low fixed broadband penetration and bridge the digital divide in the country's most remote areas. We are excited about the potential it holds and the positive impact it will have on our nation's aspirations for digital transformation.”