IRNSS-1I up in space, completes first phase of Indian regional navigation constellation

The Indian Space Research Organisation's (ISRO) navigation satellite IRNSS-1I, on board the Polar Satellite Launch Vehicle (PSLV-C41), lifts off at the Satish Dawan Space Centre in Sriharikota on Thursday. | Photo Credit: AFP

Navigation satellite IRNSS-1I was put in orbit by the Indian Space Research Organisation's (ISRO) PSLV-C41 rocket early on Thursday morning.

Eighth in the series, the 1425- kg satellite completes the first phase of the Indian regional navigation constellation, ISRO Chairman K. Sivan said.

The PSLV-C41 lifted off at 4.04 a.m., as planned, from the First Launch Pad of the Satish Dhawan Space Centre at Sriharikota in coastal Andhra Pradesh, and after a flight lasting about 19 minutes, the satellite separated from it.

The navigation satellites, dubbed India's own GPS (Global Positioning System), are meant for giving precise information of position, navigation and time of objects or people. They were built by a consortium of six Indian companies led by Alpha Design Technologies Ltd., Bengaluru.

They have a civilian and a restricted military/security application.

Built for a 10-year job in space, 1I is expected to be ready for work in about a month after routine orbit manoeuvres and tests.

All you need to know about ISRO’s IRNSS-1I satellite scheduled to be launched on Thursday

Now orbiting in a temporary sub-geosynchronous oval path about 281.5 km x 20,730 km from the Earth and inclined 19.2 degrees to the Equator, it will be gradually pushed in the coming days into a geosynchronous circular orbit 36,000 km away, at an inclination of 29° over 55° East longitude, ISRO said.

Although 1I is the ninth to be launched in the NavIC navigation fleet, it counts as the eighth, as the previous one, 1H, was lost in a faulty launch last August.

ISRO says it has lost contact with GSAT-6A

They were planned as backups but became necessary after the three imported rubidium atomic clocks on 1A failed while in orbit.

Both 1I and 1H extensively involved the consortium in the assembly, integration and testing in Bengaluru — an exercise that ISRO would replicate in coming missions, Dr. Sivan said.

"The NavIC constellation is going to create history and make innovative applications to the entire community in ocean-based services, especially for the underserved and unserved,” Dr. Sivan said in his post-launch address.

“Very recently we created a NavIC-based application that will be released soon. I request industry and institutions to take these applications to the user community.”

In a hint about the loss of the newest GSAT-6A communication satellite in March, he said ISRO engineers had braved setbacks and would continue to rise to new challenges.

ISRO teams returned to launch activities from home ground in record 14 days after sending up GSAT-6A on March 29. However the two missions used different launch pads.

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