

ISRO TO LAUNCH NEW IMAGING SATELLITE HYSIS ON THURSDAY

Relevant for: Science & Technology | Topic: Space Technology & related matters

Soaring success ISRO's PSLV-C42, carrying two foreign satellites, NovaSAR and S1-4, lifts off from the first launch pad of the Satish Dhawan Space Center in Sriharikota, on September 16, 2018. | Photo Credit: [AP](#)

HysIS, the country's first hyperspectral imaging satellite for advanced Earth observation, is slated for launch on Thursday from Sriharikota. About 30 small satellites of foreign customers will be its co-passengers on the PSLV launcher, numbered C-43, the Indian Space Research Organisation has announced.

The launch from the first launch pad is set for 9.57 a.m. on November 29, 2018, subject to final clearances.

A hyperspectral imaging camera in space can provide well-defined images that can help to identify objects on Earth far more clearly than regular optical or remote sensing cameras, ISRO Chairman K. Sivan said earlier.

The technology will be an added advantage of watching over India from space for a variety of purposes such as defence, agriculture, land use, minerals and so on. While the ISRO coyly puts it down as another variety in remote sensing, knowledgeable sources have earlier conceded that it can be highly useful in marking out a suspect object or person and separate it from the background. This could aid in detecting transborder or other stealthy movements.

"The primary goal of HysIS is to study the Earth's surface in visible, near-infrared and shortwave infrared regions of the electromagnetic spectrum," ISRO said.

HysIS will be ISRO's first full-scale working satellite with this capability. While the technology has been around, not many space agencies have working satellites with hyperspectral imaging cameras as yet.

The space agency tested hyperspectral imaging technology twice a decade ago. In April 2008, a small 83-kg demonstration microsatellite called IMS-1 (Indian Mini Satellite-1) was launched as a secondary passenger with Cartosat-2A. In October the same year, it put a HySI or Hyperspectral Imager on the first lunar mission Chandrayaan-1 and used it to scan Moon's surface for minerals.

The November 29 flight would last almost two hours. The satellites would be ejected in two orbits by restarting the rocket's fourth-stage engine twice. The PSLV, flying in its core-alone format, will first release HysIS to an orbit distant 636 km after 17 minutes from launch. later, two engines will restart after an hour from launch and again — 47 minutes later — all customer satellites would be put into a lower orbit at 504 km. This will be the third longest mission of PSLV.

The longest mission, C-40 in January this year, lasted two hours and 21 minutes and put 31 satellites to orbit. In September 2016, C-35 lifted eight satellites in a flight lasting two hours and 15 minutes.

HysIS, the country's first hyperspectral imaging satellite for advanced Earth observation, is slated for launch on Thursday from Sriharikota. About

Our existing notification subscribers need to choose this option to keep getting the alerts.

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

crackIAS.com