PSLV-C43 / HysIS Mission

29 November, 2018

THE MISSION

PSLV-C43 carrying on-board the Hyper Spectral Imaging Satellite (HysIS) and 30 International Co-passenger Satellites lifted-off from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota at 09:57 PM (IST) on November 29, 2018. About 17 minutes and 19 seconds after lift-off, HysIS was placed into the 645 km Sun-synchronous Polar Orbit with an inclination of 97.957^0. The 30 foreign satellites were injected into their intended orbit after restarting the vehicles fourth stage engines twice. The last satellite was injected into its designated orbit 1 hour and 49 minutes after the lift-off.

HysIS is an Earth Observation Satellite configured around ISRO's Mini Satellite-2 (IMS-2) bus. The primary goal of HysIS is to study the Earth's surface in the visible, near infrared and shortwave infrared regions of the electromagnetic spectrum.

PSLV-C43

THE LAUNCH VEHICLE

PSLV-C43 is the 45th flight of PSLV and its the 13th mission using PSLV 'Core-alone' variant without the six strap-ons, which is the lightest version of PSLV.

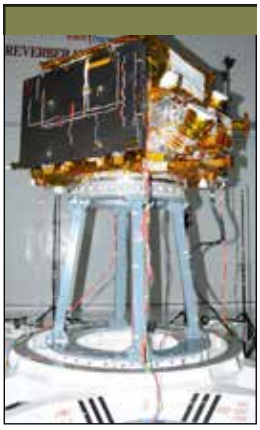
SPECIFICATIONS

Height	44 m	
Lift-Off Mass	230.4 t	
No of Stages	4	
Payloads	HysIS	**30 International Customer Satellites** Australia (1) Canada (1) Columbia (1) Finland (1) Malaysia (1) Netherlands (1) Spain (1) USA (23)
Orbit Height	636 km	504 km
Inclination (deg)	97.957^0	97.468^0
Launch Azimuth	140^0	
Launch Pad	First Launch Pad (SDSC, SHAR)	

HysIS

THE SATELLITE

HysIS is an Earth Observation Satellite configured around ISRO's Mini Satellite-2 (IMS-2) bus. The primary goal of HysIS is to study the Earth's surface in the visible, near infrared and shortwave infrared regions of the Electromagnetic Spectrum. It provides global coverage on repetitive basis to users and supplementing the data from the existing Multispectral Sensors. It also provides a wide range of applications in agriculture, forestry, geological environments, coastal zones and inland waters.



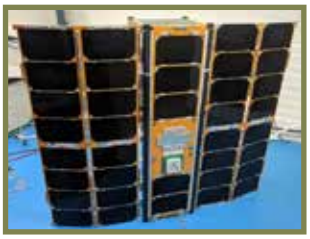
SPECIFICATIONS

Weight	380 kg
Power	730 W
Type of Satellite	Earth Observation
Payloads	Two spectrometers in VNIR & SWIR bands
Mission Life	5 Years

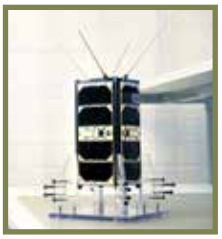
THE INTERNATIONAL CUSTOMER SATELLITES

The 30 Co-passenger Satellites of HysIS include 1 Microsatellite and 29 Nanosatellites from 8 different countries. The total weight of 30 Co-passenger Satellites is 261.5 kg. These satellites have been commercially contracted for launch through Antrix Corporation Limited, the commercial arm of ISRO.

Satellite	No. of Satellite	Country	Mission Objectives
Centauri	1	Australia	Remote Internet of Things Communication Services
Kepler (CASE)	1	Canada	Internet of Things (IoT)
FACSAT	1	Columbia	Earth Observation
Reaktor Hello World	1	Finland	Earth Observation
InnoSAT-2	1	Malaysia	Earth Observation
HIBER-1	1	Netherlands	Internet of Things (IoT)
3Cat-1	1	Spain	Scientific / Experimental
Flock 3R	23	USA	Earth Observation



Centauri

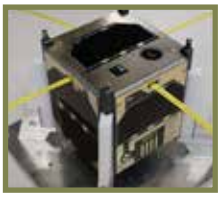


Reaktor

Kepler (CASE)

InnoSAT-2

Flock 3R



3Cat-1