

PSLV-C39 / IRNSS-1H Mission

31 August, 2017

THE MISSION

PSLV-C39 carrying on-board IRNSS-1H Satellite lifted-off from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota at 07:00 PM (IST) on August 31, 2017. IRNSS-1H was planned to be launched by PSLV-C39 into a sub Geosynchronous Transfer Orbit (sub GTO) with a 284 km perigee and 20,650 km apogee with an inclination of 19.2° with respect to the Equatorial Plane. However, IRNSS-1H satellite could not be placed into the orbit as the mission was unsuccessful.

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THE LAUNCH VEHICLE

PSLV-C39 used the 'XL' variant of PSLV equipped with six strap-ons, each carrying 12 tons of propellant. It was the 41st flight of PSLV.

SPECIFICATIONS

Height	44.4 m
Lift-Off Mass	321 t
No of Stages	4
Payloads	IRNSS-1H
Inclination (deg)	19.2°
Apogee	20,650 km
Perigee	284 km
Launch Pad	Second Launch Pad (SDSC, SHAR)



IRNSS-1H

THE SATELLITE

IRNSS-1H, like its other predecessors carries two payloads – navigation payload and ranging payload. The navigation payload will transmit navigation service signals to the users. This payload will be operating in L5-band and S-band. Highly accurate Rubidium Atomic Clocks are part of the navigation payload of the satellite. The ranging payload of this satellite consists of a C-band transponder which facilitates accurate determination of the satellite. IRNSS-1H also carries Corner Cube Retro Reflectors for LASER ranging.

The services provided by this satellite are useful for Fisheries, Shipping, Transport, Railways, Resource Management, Location Based Services, Survey and Alignment and Time Synchronised Services.



SPECIFICATIONS

Weight	1425 kg
Power	1660 W, one Li-Ion battery of 90 Ampere-hour capacity
Type of Satellite	Navigation
Payloads	<ul style="list-style-type: none">• L5 and S-band Navigation with Rubidium Atomic Clocks• C-band Ranging Payload• Corner Cube Retro Reflectors for LASER Ranging
Mission Life	10 Years

