

PSLV-C35 / SCATSAT-1 Mission

26 September, 2016

THE MISSION

PSLV-C35 carrying on-board the SCATSAT-1 Satellite lifted-off from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota at 9:12 AM (IST) on September 26, 2016. After a flight of 16 minutes 56 seconds, the launch vehicle achieved a polar Sun-synchronous Orbit of 724 km inclined at an angle of 98.1° to the Equator (very close to the intended orbit) and 37 seconds later the primary satellite SCATSAT-1 was separated from the PSLV fourth stage. SCATSAT-1 is a continuity mission for Oceansat-2 Scatterometer to provide wind vector data products for weather forecasting, cyclone detection and tracking services to the users.

The seven other co-passenger satellites were inserted into a 670 km Polar Orbit. They are ALSAT-1B, ALSAT-2B, ALSAT-1N from Algeria, NLS-19 from Canada and Pathfinder-1 from USA as well as two satellites PRATHAM from IIT Bombay and PISAT from PES University, Bengaluru. This is the first mission of PSLV in which payloads were launched into two different orbits.



PSLV - C 3 5

THE LAUNCH VEHICLE



PSLV - C 3 5

in its 37th flight was the longest of the PSLV missions conducted till date and was completed in 2 hours 15 minutes and 33 seconds after lift-off.

After the successful separation of SCATSAT-1, the PSLV-C35 mission continued. Still carrying the seven co-passenger satellites, the fourth stage of PSLV coasted over the South Polar region and then started ascending towards the Northern Hemisphere. A safe distance between the orbiting SCATSAT-1 and PSLV-C35 fourth stage was maintained by suitably manoeuvring the stage.

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orbit measuring 725 km on one side of the Earth and 670 km on the other.

And 50 minutes later, as the PSLV fourth stage was again coasting near the South Pole, its engines were fired for another 20 seconds. This second firing made the fourth stage to enter into a circular orbit of 669 km height inclined at an angle of 98.2° to the Equator.

Thirty seven seconds later, the Dual Launch Adapter was successfully separated from the PSLV-C35 fourth stage. Thirty seconds after this event, ALSAT-1N was the first co-passenger satellite to be separated successfully. Following this, the rest of the satellites were separated from the PSLV fourth stage in a predetermined sequence thereby successfully completing PSLV-C35 mission.

SPECIFICATIONS

Height	44.4 m	
Lift-Off Mass	320 t	
No of Stages	4	
Payloads	<ul style="list-style-type: none"> • SCATSAT-1 • PRATHAM • PISAT 	5 International Customer Satellites Algeria (3), Canada (1), USA (1)
Orbit Height	724 km	
Inclination (deg)	98.1°	
Launch Pad	First Launch Pad (SDSC, SHAR)	



SCATSAT - 1

THE SATELLITE

SCATSAT-1 is a continuity mission for Oceansat-2 Scatterometer to provide wind vector data products for weather forecasting, cyclone detection and tracking services to the users. The satellite carried Ku-band Scatterometer similar to the one flown on-board Oceansat-2. The spacecraft is built around standard IMS-2 Bus.

SPECIFICATIONS

Weight	371 kg
Power	750 W / 28 AH Li-Ion Battery
Altitude	720 km
Type of Satellite	Earth Observation
Payloads	Ku-band Scatterometer
Mission Life	5 years



PRATHAM & PISAT

THE SATELLITES

PRATHAM is the Student Satellite from IIT, Bombay with the mission objective to estimate the Total Electron Count (TEC) over India and Paris (France) with a resolution of 1 km x 1 km location grid.

PISAT is also a Student Satellite from PES University, Bengaluru and its consortium.

The mission objective is to design and develop a Nanosatellite for Remote Sensing Applications.

SPECIFICATIONS

	PRATHAM	PISAT
Weight	10 kg	5.25 kg
Type of Satellite	Student	Student



PISAT



PRATHAM