

PSLV-C21 Mission

Commercial Satellite Launch

09 September, 2012

THE MISSION

PSLV-C21 carrying on-board the SPOT-6 Satellite along with 1 other co-passenger satellite lifted-off from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota on September 09, 2012. Spot-6, from France, an Earth Observation Satellite, along with, PROITERES, the Microsatellite from Japan were placed in to a 655 km polar orbit inclined at an angle of 98.23° to the Equator.



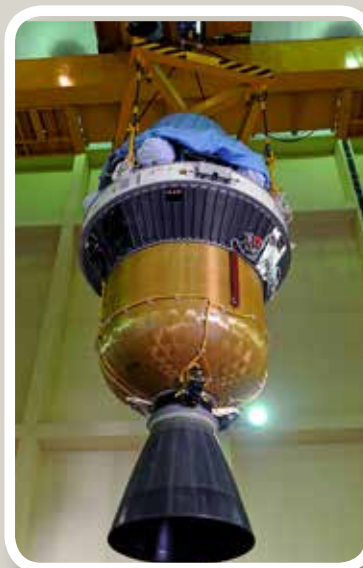
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THE LAUNCH VEHICLE

PSLV-C21 was in its 22nd flight during this mission. It is the 8th flight of PSLV in 'Core-Along' configuration without solid strap-on motors.

SPECIFICATIONS

Height	44 m
Lift-Off Mass	320 t
No of Stages	4
Payloads	2 INTERNATIONAL CUSTOMER SATELLITE France (1), Japan (1)
Orbit Height	655 km
Inclination (deg)	98.23°
Launch Pad	First Launch Pad (SDSC, SHAR)



STAGE CHARACTERISTICS				
	Stage-1	Stage-2	Stage-3	Stage-4
Nomenclature	PS1	PS2	PS3	PS4
Propellant	Solid (HTPB based)	Liquid (UH25 + N ₂ O ₄)	Solid (HTPB based)	Liquid (MMH + MON-3)
Mass (t)	138.0	41.0	7.6	2.5
Max Thrust (kN)	4787	804	242	7.3 x 2
Burn Time (sec)	102	148	110	526
Stage Dia (m)	2.8	2.8	2.0	2.8
Stage Length (m)	20	12.8	3.6	2.6
Control	SITVC for Pitch & Yaw, Reaction Control Thrusters for Roll Control	Engine Gimbal for Pitch & Yaw, Hot Gas Reaction Control Motor for Roll Control	Flex Nozzle for Pitch & Yaw, PS4 Reaction Control System (RCS) for Roll Control	Engine Gimbal for Pitch, Yaw & Roll, on-off RCS for Coast Phase Control



THE INTERNATIONAL CUSTOMER SATELLITES

Satellite	No. of Satellite	Country	Mission Objectives
SPOT-6	1	France	An Earth Observation Satellite capable of imaging the Earth with a resolution of 1.5 m. This latest generation optical remote sensing satellite is built by Astrium SAS. Lift-off Mass: 712 kg
PROITERES	1	Japan	A Microsatellite as an auxiliary payload, is intended to study powered flight of a small satellite by an electrical thruster and observe Kansai district in Japan with a high-resolution camera. Lift-off Mass: 15 kg



SPOT-6



PROITERES