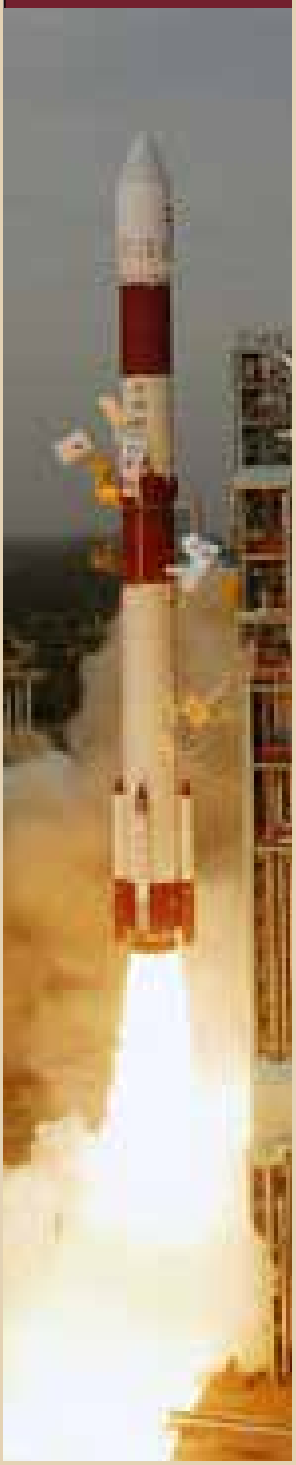
PSLV-C15 / CARTOSAT-2B Mission

12 July, 2010

THE MISSION

PSLV-C15 carrying on-board the Remote Sensing Satellite CARTOSAT-2B lifted-off from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota at 09.22 AM (IST) on July 12, 2010. Along with CARTOSAT-2B, PSLV-C15 also successfully injected four more auxiliary satellites into its circular orbit of 637 km with an orbital inclination of 98.1^0.



PSLV-C15

THE LAUNCH VEHICLE

PSLV-C15 is the 17th flight of ISRO's versatile Polar Satellite Launch Vehicle. For PSLV-C15 mission, the 'Core-alone' version of PSLV had been chosen based on the weight of the payload and the orbit to which it is to be placed. PSLV-C15 is the 6th flight of the 'Core-alone' version of PSLV.

The 44 m tall 'Core-alone' version of PSLV weighs 230 tonne at lift-off. Six solid 'strap-on motors', clustered around the first stage of PSLV 'Standard Version' to enhance its thrust, are absent in 'Core-alone' version.

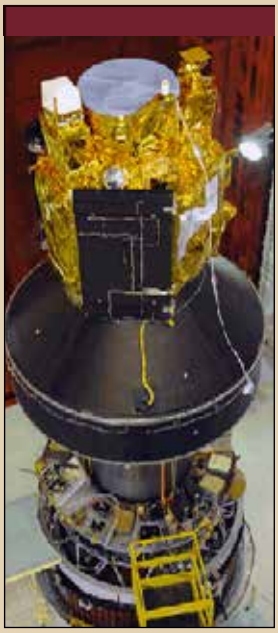
SPECIFICATIONS

Height	44 m	
Lift-Off Mass	230 t	
No of Stages	4	
Payloads	• CARTOSAT-2B • STUDSAT	**3 International Customer Satellites** • Alsat-2A • NLS 6.1 (AISSat-1) • NLS 6.2 (TISat-1)
Orbit Height	637 km	
Inclination (deg)	98.1^0	
Launch Azimuth	140^0	
Launch Pad	First Launch Pad (SDSC, SHAR)	

CARTOSAT-2B

THE SATELLITE

CARTOSAT - 2B is the 17th satellite in the Indian Remote Sensing Satellite Series (IRS). CARTOSAT-2B carried a Panchromatic Camera (PAN) similar to those of its predecessors - CARTOSAT-2 and 2A. It is capable of imaging a swath (geographical strip) of 9.6 km with a resolution of better than 1 m. The scene specific spot imagery sent by CARTOSAT-2B's PAN is useful for cartographic and a host of other applications. The highly agile CARTOSAT-2B is steerable up to ± 26^0 along as well as across track to obtain stereoscopic imagery and achieve a four to five day revisit capability.

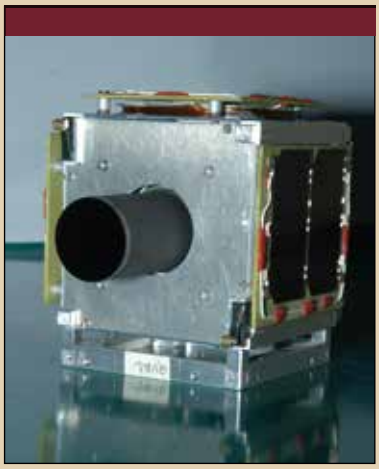


SPECIFICATIONS

Weight	694 kg
Power	Solar Array: 1200 W Batteries: Ni-Cd 24 Ah
Stabilisation	3-axis body stabilised based on inputs from Star Sensors and Gyros using Reaction Wheels, Magnetic Torquers and Hydrazine Thrusters
Type of Satellite	Earth Observation
Payloads	Panchromatic Camera
Mission Life	5 Years

STUDSAT

THE PICO-SATELLITE



STUDSAT is the first Pico-satellite developed in the country by a consortium of 7 engineering colleges from Karnataka and Andhra Pradesh. STUDSAT weighing less than 1 kg, has the primary objective of promoting space technology in educational institutions and encourage research and development in miniaturized satellites, establishing a communication link between the satellite and ground station, capturing the image of earth with a resolution of 90 meters and transmitting the payload and telemetry data to the Earth station.

SPECIFICATIONS

Weight	< 1 kg
Type of Satellite	Student Satellite
Payloads	Imaging (Near IR) Camera of resolution 90 m

THE INTERNATIONAL CUSTOMER SATELLITES

Alsat-2A

Alsat-2A is the first spacecraft in Alsat-2 series, an Alegerian programme consisting of two similar satellites for Earth Obersvation in the Low Earth Orbit. The spacecraft is built by EADS Astrium.

NLS 6.1 (AISSat-1)

AISSat-1 is a Technology Demonstration Spacecraft built for the Norwegian Defence Research Establishment by the Space Flight Laboratory at the University of Toronto Institute for Aerospace Studies (UTIAS), Canada.

NLS 6.2 (TISat-1)

The TISat-1 is a 1 kg CubeSat of 100 x 100 x 100 mm and is built by University of Applied Sciences of Southern Switzerland (SUPSI).