ASLV-D1 / SROSS-1 Mission

THE MISSION

ASLV-D1 carrying on-board the SROSS-1 lifted-off from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota on March 24, 1987. Being the first in the series, SROSS-1 was meant for establishing the characteristics of the launch vehicle (ASLV) and the spacecraft. It carried payload for launch vehicle performance monitoring, laser tracking experiment and Gamma-Ray Burst Experiment. However, the satellite could not be placed into its intended orbit.

ASLV-D1
THE LAUNCH VEHICLE

The Augmented Satellite Launch Vehicle (ASLV) Programme was designed to augment the payload capacity, thrice that of SLV-3 for Low Earth Orbits (LEO). While building upon the experience gained from the SLV-3 missions, ASLV proved to be a low-cost intermediate vehicle to demonstrate and validate critical technologies that would be needed for the future launch vehicles like strap-on technology, inertial navigation, bulbous heat shield, vertical integration and closed-loop guidance.

ASLV-D1 was the first developmental flight configured as an all-solid propellant vehicle, with a payload capability of 150 kg class satellites into 400 km circular orbits. The strap-on stage consisted of two identical solid propellant motors of 1 m diameter.

SPECIFICATIONS

Height	24 m
Lift-Off Mass	40 t
No of Stages	5
Payloads	SROSS-1

SROSS-1
THE SATELLITE

SROSS-1, the first satellite in the Stretched Rohini Satellite Series was a 150 kg experimental three axis body stabilized satellite designed with a power handling capability of 90 W.

SPECIFICATIONS

Weight	150 kg
Power	90 W
Stabilization	3-axis body stabilized (biased momentum) with a Momentum Wheel and Magnetic Torquer
Type of Satellite	Science & Exploration
Payloads	• Launch Vehicle Monitoring Platform (LVMP) • Gamma Ray Burst (GRB) Payload • Corner Cube Retro Reflector (CCRR) for Laser Tracking
Mission Life	Not Realised