

GSLV-F06 / GSAT-5P Mission

25 December, 2010

THE MISSION

GSLV-F06 carrying on-board the GSAT-5P Satellite lifted-off from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota on December 25, 2010. GSLV-F06 aimed to inject GSAT-5P communication satellite into a Geosynchronous Transfer Orbit (GTO). However, mission was not successful.

G S L V - F 0 6

THE LAUNCH VEHICLE

The major changes incorporated in GSLV-F06 compared to the previous flight include loading of 15 tonnes of propellants in its third stage and the uprating of the third stage thrust by 26%. Besides, the overall length of the vehicle was increased by about 1.3 metres.

SPECIFICATIONS

Height	51.315 m
Lift-Off Mass	418.5 t
No of Stages	3
Payloads	GSAT-5P



STAGE PARAMETERS

Parameters	First Stage (GS1)		GS2 Second Stage	GS3 Third Stage
	S139	L40H Strap-on		
Length (m)	20.13	19.68	11.56	10.05
Diameter (m)	2.8	2.1	2.8	2.8
Total Mass (t)	161.11	191.08	44.30	17.87
Propellant	HTPB	UH25 & N ₂ O ₄	UH25 & N ₂ O ₄	LOX & LH ₂
Propellant Mass (t)	138.12	42.67	39.47	15.23

GSAT-5P

THE SATELLITE

GSAT-5P was the 5th satellite launched in the GSAT series. It was an exclusive communication satellite to further augment the communication services currently provided by the Indian National Satellite (INSAT) System.

GSAT-5P configured as a replacement of INSAT-3E. GSAT-5P had a power handling capability of around 2600 W and was built around I-2K satellite bus platform. However, the mission goals could not be achieved due to snags in launch vehicle performance.

SPECIFICATIONS

Weight	2310 kg
Power	Solar Array: 2600 W Batteries: Li-Ion (64 Ah)
Stabilisation	3-axis body stabilised using Momentum / Reaction Wheels, Magnetic Torquers, Sensors and Thrusters
Type of Satellite	Communication
Payloads	<ul style="list-style-type: none">• 24 Normal C-band Transponders• 12 Extended C-band Transponders
Mission Life	Not achieved

