

GSLV-F02 / INSAT-4C Mission

10 July, 2006

THE MISSION

GSLV-F02 carrying on-board the INSAT-4C Satellite lifted-off from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota at 5:38 PM (IST) on July 10, 2006. However, GSLV-F02 could not complete the mission as the satellite could not be placed in the orbit.

G S L V - F 0 2

THE LAUNCH VEHICLE

GSLV-F02 is the 2nd operational flight of GSLV. GSLV was declared operational in its present configuration (GSLV MK-I) after two successful developmental test flights conducted in April 2001 and May 2003.



The 49 m tall, 414 tonne, GSLV is a three stage vehicle. The first stage, GS1, comprises a core motor with 138 tonne of solid propellant and four strap-on motors each with 42 tonne of hypergolic liquid propellants (UH₂₅ and N₂O₄). The second stage has 39 tonne of the same hypergolic liquid propellants. The third stage (GS3) is a cryogenic stage with 12.6 tonne of Liquid Oxygen (LOX) and Liquid Hydrogen (LH₂). The Aluminum alloy GSLV payload fairing is 3.4 m in diameter and is 7.8 m long. The three axis attitude (orientation) stabilisation of GSLV is achieved by autonomous control systems provided in each stage.



SPECIFICATIONS

Height	49 m
Lift-Off Mass	414 t
No of Stages	3
Payloads	INSAT-4C
Inclination (deg)	20.71 ± 0.1°
Launch Azimuth	106°
Apogee	35975 ± 675 km
Perigee	170 ± 5 km



INSAT-4C

THE SATELLITE

INSAT-4C was an exclusive Ku-band satellite with 12 high power Ku-band transponders providing India coverage. The spacecraft was configured around proven I-2K structure with a power handling capacity of 2867 W. The spacecraft was planned to be co-located with INSAT-3C, KALPANA-1 & GSAT-3 at 74° E longitude in Geostationary Orbit with a mission life of 12 years.

SPECIFICATIONS

Weight	2181 kg
Power	Solar Array: 2867 W Batteries: Ni-H2
Stabilization	3-axis body stabilized using Momentum / Reaction Wheels, Magnetic Torquers, Sensors and Thrusters
Type of Satellite	Communication
Payloads	12 Ku-band Transponders
Mission Life	Not Achieved

