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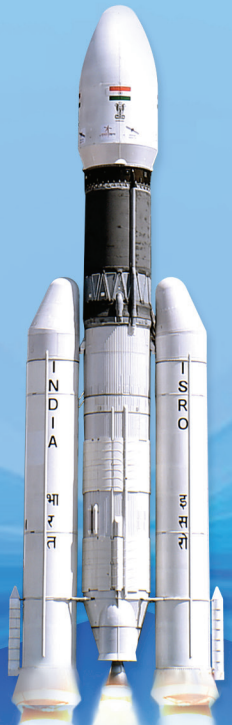
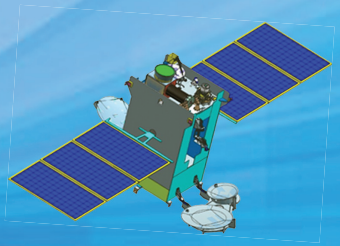




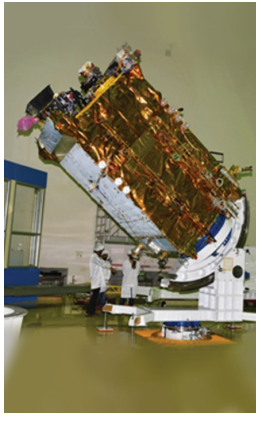
GSLV MkIII-D2/GSAT-29

THE MISSION

GSLV MkIII-D2 is the second developmental flight of Geosynchronous Satellite Launch Vehicle Mark III. In this flight, the vehicle will carry the 3423 kg GSAT-29 satellite and place it in Geosynchronous Transfer Orbit (GTO).

GSLV MkIII-D2

- GSLV MkIII is the fifth generation launch vehicle developed by ISRO.
- GSLV MKIII vehicle is designed to place a satellite of up to 4000 kg in GTO.



GSAT-29

- GSAT-29 is a multibeam, multiband communication satellite.
- It will be launched into an elliptical GTO with a 190 km perigee and 35,975 km apogee with an inclination of 21.5 deg.
- GSAT-29 will be taken to its final Geostationary Orbital location by firing its onboard propulsion system in steps and the satellite will be stationed at 55 deg East longitude.

Targeted GTO:
Perigee: 190 km, Apogee: 35,975 km, Inclination: 21.5 deg

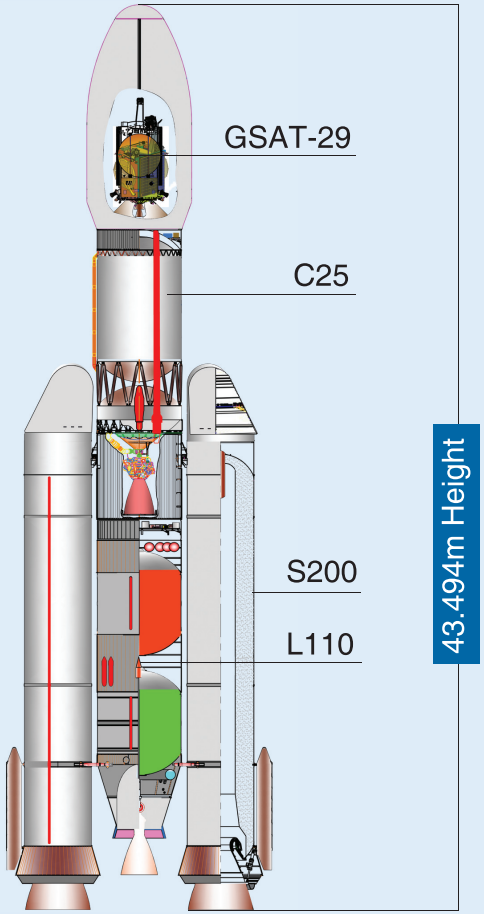
67th Launch vehicle mission from SDSC SHAR	**33rd** Communication Satellite built by ISRO	**23rd** Launch from Second Launch Pad	**5th** Launch of 2018	**2nd** Developmental Flight of GSLV MkIII

THE VEHICLE

GSLV MkIII-D2 is a three stage launch vehicle with 2 solid strap-ons (S200), a liquid core stage (L110) and a cryogenic upper stage (C25). The strap-on motors are located on either sides of the liquid core stage equipped with two engines. Compared to solid and liquid stages, the C25 cryogenic stage is more efficient as well as complex.

GSLV MkIII-D2 at a Glance

Parameters	Stages		
	S200	L110	C25
Length (m)	26.2	21.3	13.5
Diameter (m)	3.2	4	4
Propellants	Solid (HTPB based)	Liquid (UH25 + N_2O_4)	Cryogenic (LH_2 & LOX)
Propellant Mass (t)	2 x 205	116	28.6
Stage Mass at Lift Off (t)	472	125.8	33



THE SATELLITE

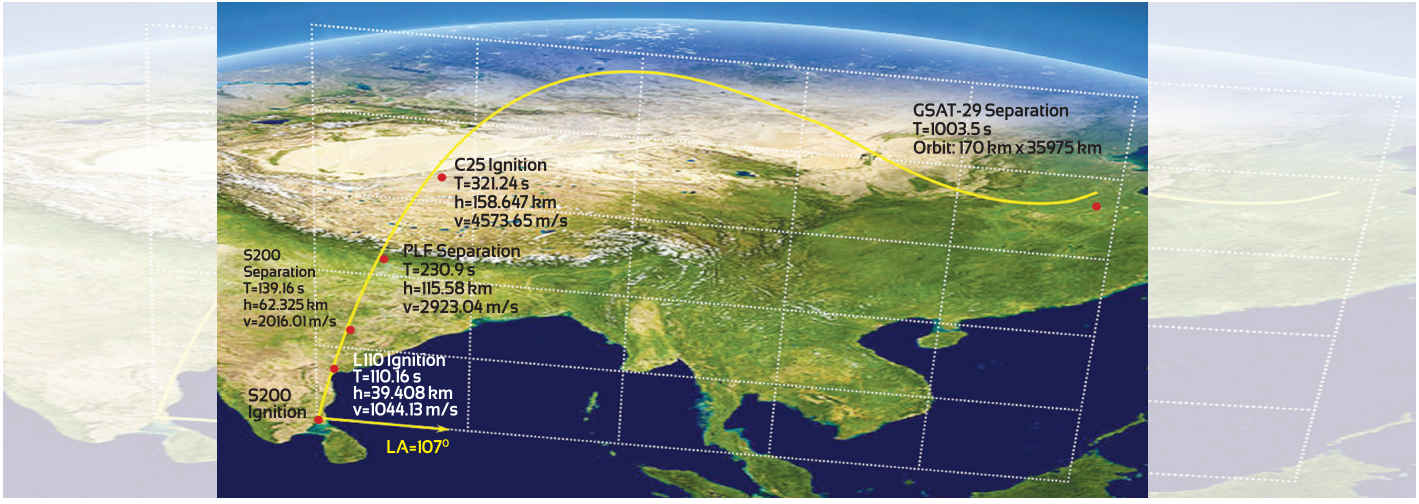
GSAT-29 is a 3-axis body-stabilised geostationary communication satellite intended to serve as a test bed for several new technologies. It is specifically designed to cater to the communication requirements of users from remote areas of India.

Salient Features

- Multibeam Communication Satellite
- Lift-off mass: 3423 kg
- I-3k Spacecraft Bus
- Power: 4600 W
- Payloads
    1. Ku-band four user spot beams
    2. Ka-band four user spot beams and one user steerable beam
    3. Q/V-Band Communication Payload
    4. Geo High Resolution Camera
    5. Optical Communication Payload
- Mission Life: 10 years

GSLV MkIII-D2 Flight Events

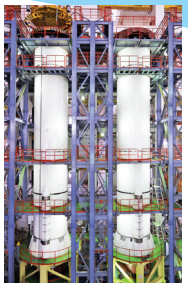
Events	Time	Altitude (km)	Initial Velocity (m/s)
GSAT-29 Separation	16min 43.50sec	207.576	10234.67
C25 Shutoff	16min 28.50sec	201.031	10210.64
C25 Ignition	5min 21.24sec	158.647	4573.65
L110 Separation	5min 18.82sec	157.245	4576.52
L110 Shutoff	5min 15.72sec	155.413	4539.82
Payload Fairing Separation	3min 50.90sec	115.580	2923.04
S200 Separation	2min 19.16sec	62.325	2016.01
L110 Ignition	1min 50.16sec	39.408	1644.13
S200 Ignition	0.00	0.24	451.91

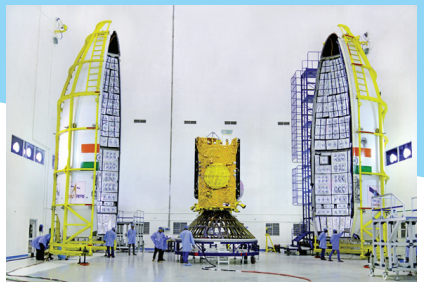


Targeted Geosynchronous Transfer Orbit (GTO) :
Perigee : 190 km , Apogee : 35,975 km, Inclination : 21.5 deg

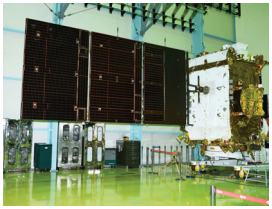
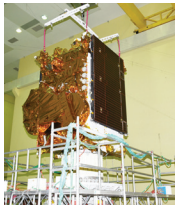
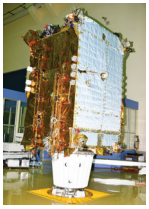
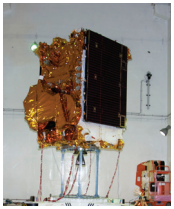
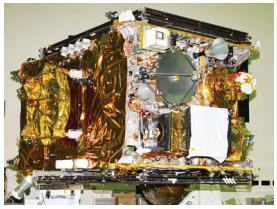
GLIMPSES

GSLV MkIII-D2



GSAT-29

Indian Space Research Organisation

Office of Media and Public Relations
ISRO Headquarters, Antariksh Bhavan
New BEL Road, Bengaluru-560 094, India
Telephone: +91-80-23415474
Fax: +91-80-23412253

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