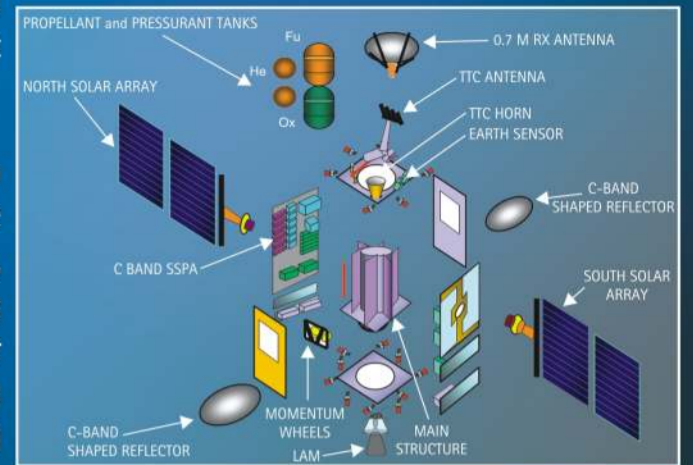


# GSAT-5P

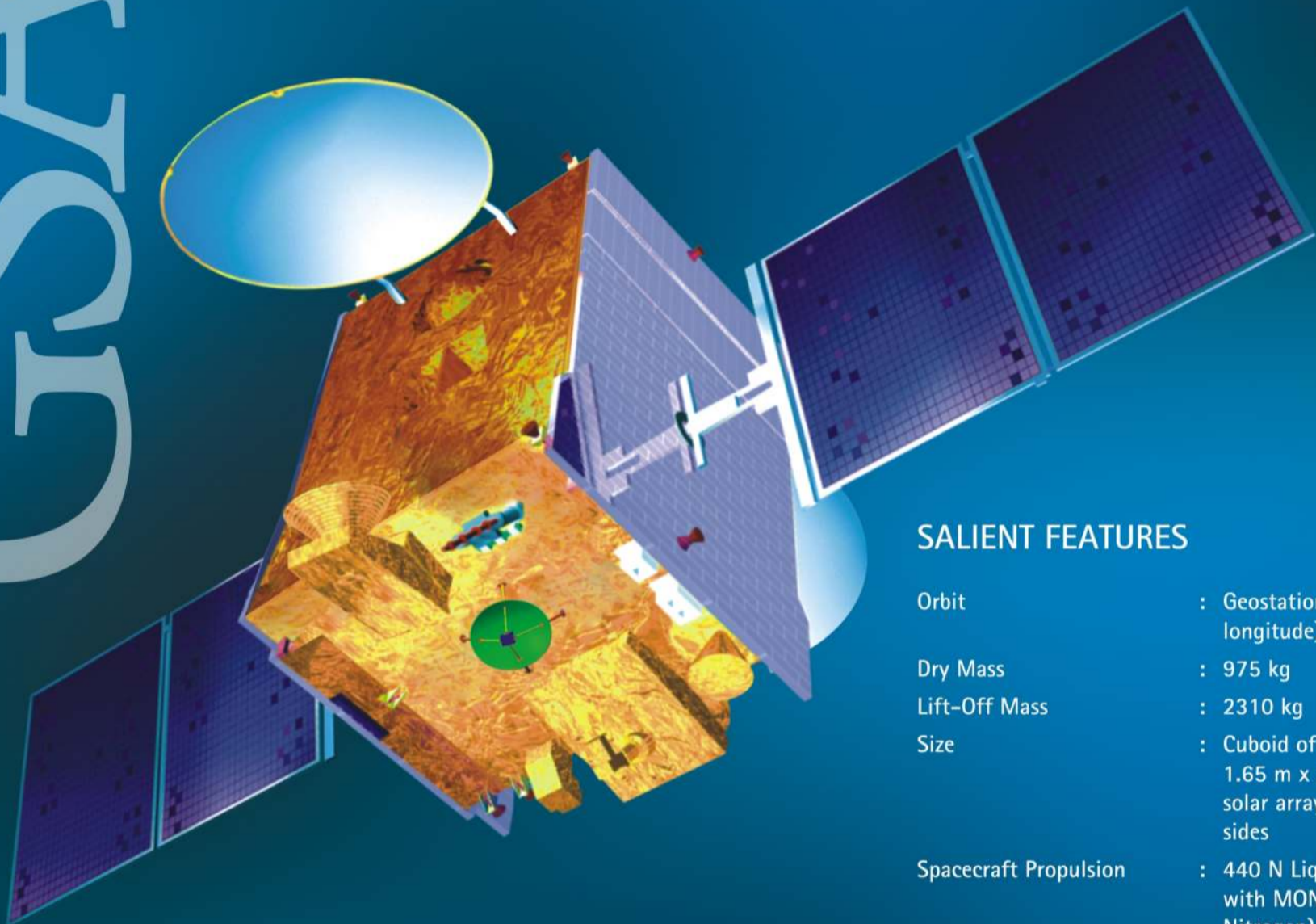
**GSAT-5P** is the fifth satellite to be launched in the GSAT series. It is an exclusive communication satellite to further augment the communication services currently provided by the Indian National Satellite (INSAT) System. Weighing 2310 kg at lift-off, GSAT-5P carries 24 Normal C-band and 12 Extended C-band transponders.

GSAT-5P will be launched from Satish Dhawan Space Centre SHAR, Sriharikota by the seventh flight of India's Geosynchronous Satellite Launch Vehicle (GSLV- F06) into a Geosynchronous Transfer Orbit (GTO) with a perigee of 170 km and an apogee of 35,975 km inclined at an angle of 19.3 deg to the equator. The satellite then manoeuvred to its final circular 36,000 km high Geostationary Orbit by repeatedly firing the Liquid Apogee Motor (LAM) on board the satellite. GSAT-5P will be stationed at 55 deg East longitude.

Commissioned in 1983, INSAT is the largest domestic communication satellite system in the Asia-Pacific region. At present, it has nine satellites – INSAT-2E, INSAT-3A, INSAT-3C, INSAT-3E, KALPANA-1, GSAT-2, INSAT-4A, INSAT-4B and INSAT-4CR – providing Telecommunications, TV broadcasting, Meteorological Imaging, Disaster Warning and Satellite-aided Search and Rescue services. INSAT system provides about 178 transponders in S-band, C-band, extended C-band and Ku-band.



Disassembled view of GSAT-5P

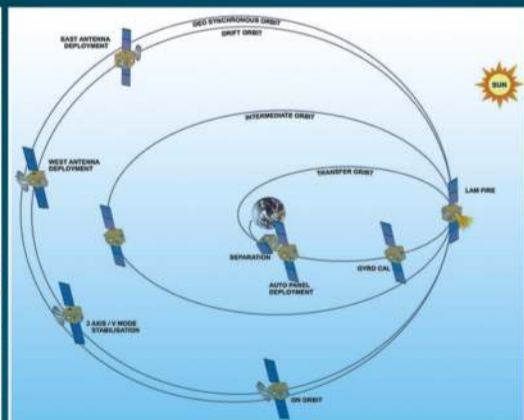


## SALIENT FEATURES

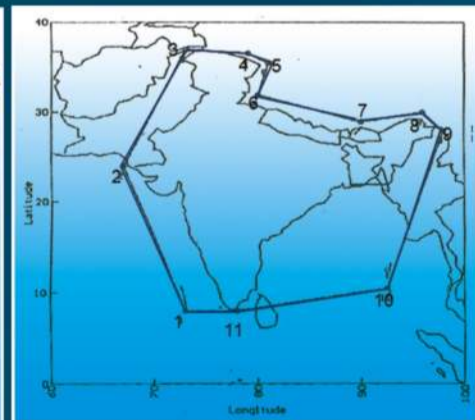
Orbit	: Geostationary (55 deg East longitude)
Dry Mass	: 975 kg
Lift-Off Mass	: 2310 kg
Size	: Cuboid of dimensions 1.65 m x 1.53 m x 2.98 m with solar arrays on North and South sides
Spacecraft Propulsion	: 440 N Liquid Apogee Motor with MON-3 (Mixed Oxides of Nitrogen) and MMH (Mono Methyl Hydrazine) for orbit raising
Stabilisation	: 3-axis body stabilised in orbit using Sun and Earth sensors, Gyroscopes, momentum and reaction wheels, magnetic torquers and eight 10 Newton and eight 22 Newton Reaction Control Thrusters
Power	: Solar array generating 2600 W, Two 64 Ah Lithium-Ion batteries to support full payload operation during eclipse period
Mission life	: 13.7 years



GSAT-5P during a pre launch test



GSAT-5P Mission Profile



Payload Coverage Polygon

## COMMUNICATION PAYLOAD

24 Normal C-band transponders having India beam coverage, providing an Edge of Coverage-Effective Isotropic Radiated Power (EOC-EIRP) of 37 dBW

12 Extended C-band transponders having India beam coverage, providing an EOC-EIRP of 38 dBW

