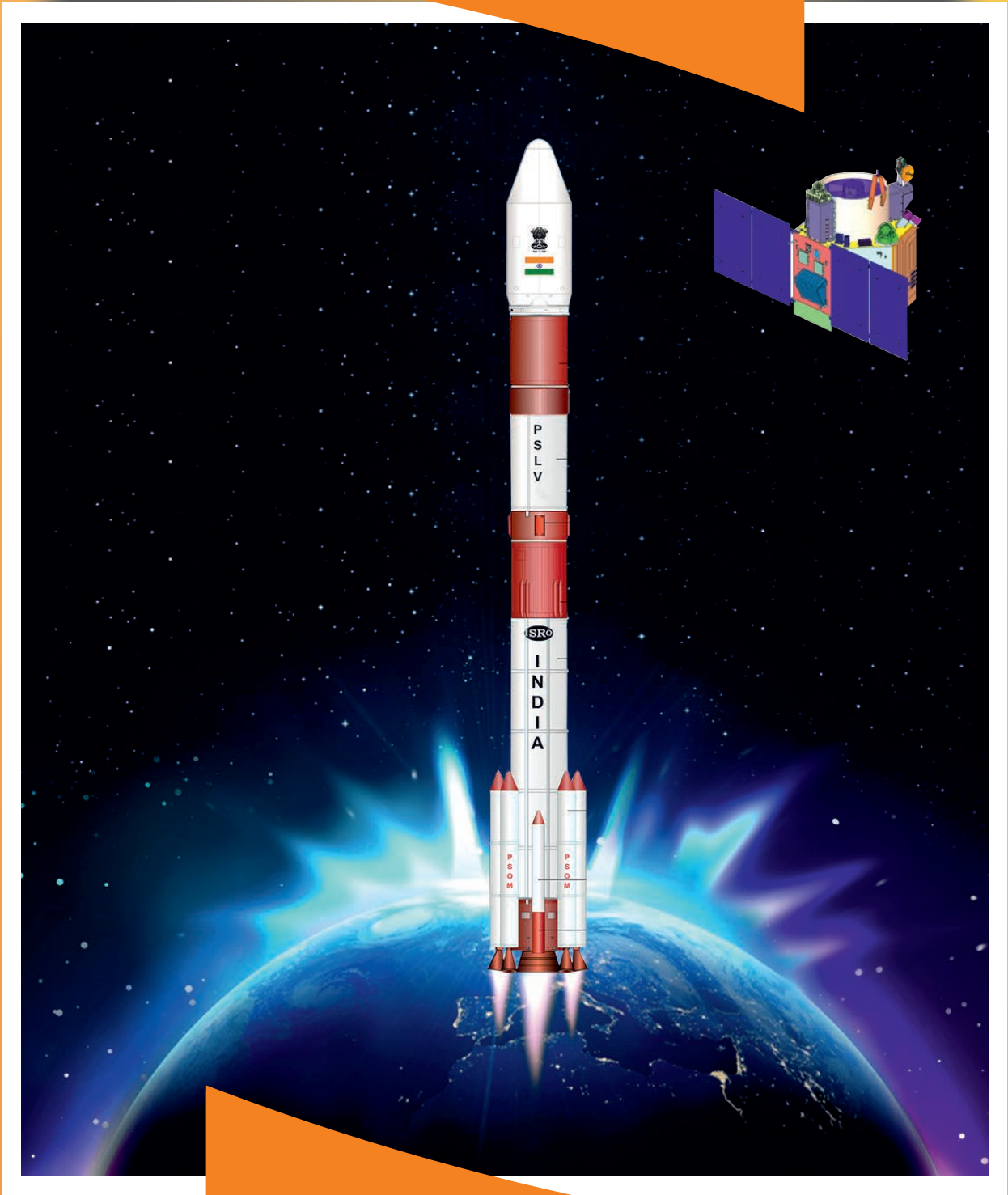


PSLV-C47/CARTOSAT-3 MISSION

Launch Kit



Indian Space Research Organisation

PSLV-C47/CARTOSAT-3 Mission

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MISSION DESCRIPTION

- ▶ India's Polar Satellite Launch Vehicle (PSLV), in its 49th mission (PSLV-C47), will launch Cartosat-3 and 13 commercial nanosatellites of USA into a polar Sun Synchronous orbit from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota.
- ▶ Cartosat-3 is a third generation agile advanced earth observation satellite having high resolution imaging capability.

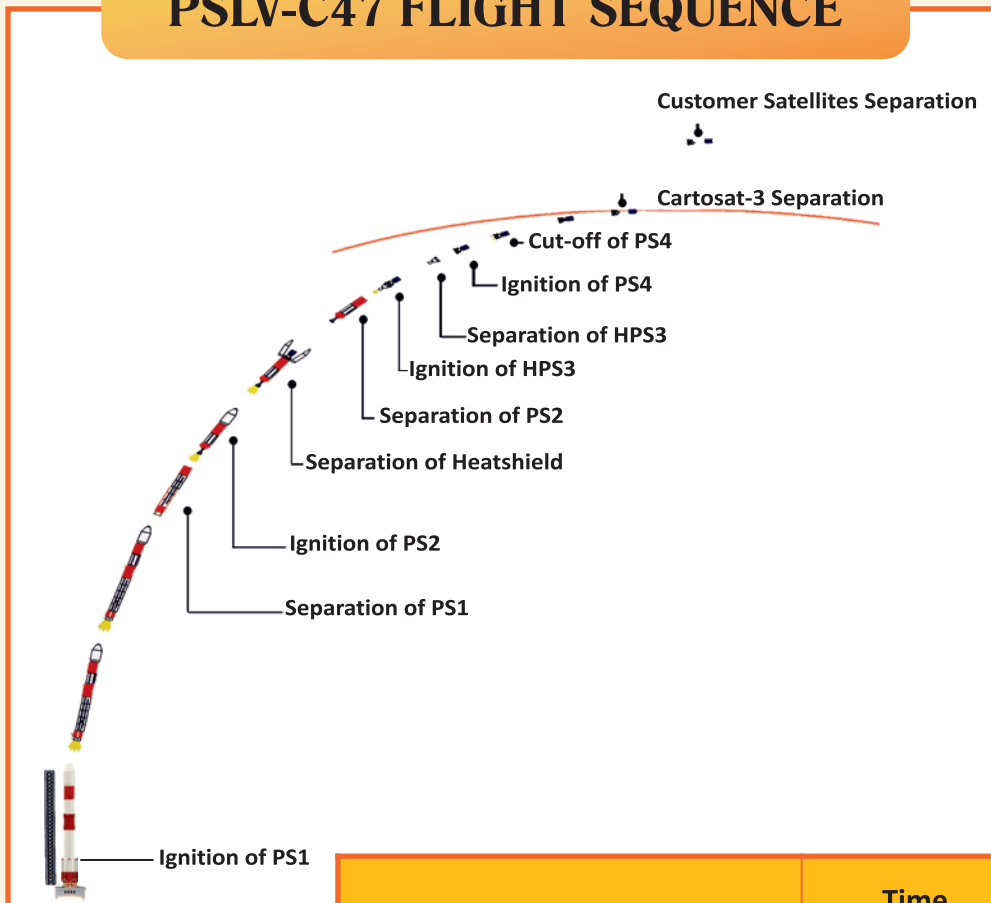
PSLV-C47 MISSION SPECIFICATIONS

Payload	Cartosat-3
Orbit height	509 km
Inclination (deg)	97.5
Launch Pad	Second Launch Pad (SLP)
Launch Azimuth (deg)	140

MILESTONES



PSLV-C47 FLIGHT SEQUENCE



Flight Events	Time	Local Altitude (km)	Inertial Velocity (m/s)
PS1 Ignition	0	0.025	451.9
PSOM XL 1 & 2 Ignition	0.42 s	0.025	451.9
PSOM XL 3 & 4 Ignition	0.62 s	0.025	451.9
PSOM XL 5 & 6 Ignition	25.0 s	2.731	570.8
PSOM XL 1 & 2 Separation	1 min 9.9 s	26.347	1287.5
PSOM XL 3 & 4 Separation	1 min 10.1 s	26.499	1291.8
PSOM XL 5 & 6 Separation	1 min 32 s	46.116	1813.7
PS1 Separation	1 min 53.04 s	69.609	2148.5
PS2 Ignition	1 min 53.24 s	69.832	2147.7
Heat Shield Separation	2 min 36.14 s	115.469	2409.1
PS2 Separation	4 min 25.72 s	221.931	4048.2
PS3 Ignition	4 min 26.92 s	223.139	4045.4
PS3 Separation	8 min 13.22 s	426.317	5841.3
PS4 Ignition	8 min 23.62 s	433.117	5831.2
PS4 Engine Cut-off	16 min 55.06 s	514.302	7603.1
Cartosat-3 Separation	17 min 42.06 s	515.302	7606.8
First Customer Satellite Separation	18 min 22.06 s	516.187	7606.3
Last Customer Satellite Separation	26 min 50.06 s	527.488	7600.6

PSLV-C47/CARTOSAT-3 Mission

PSLV-C47

CARTOSAT-3

Mass: 1625kg

13 Nano-Satellites

Third Stage

HPS3

Height: 3.6m

Diameter: 2 m

Propellant: HTPB

Propellant Mass: 7.65t

First Stage

PS1 + PSOM-XL

Payload Fairing

Fourth Stage

PS4

Height: 3.0m

Diameter: 1.34 m

Propellant: MMH & MON_3

Propellant Mass: 2.5t

Second Stage

PS2

Height: 12.8m

Diameter: 2.8 m

Propellant: UH25 & N_2O_4

Propellant Mass: 41t

PS1

Height: 20m

Diameter: 2.8 m

Propellant: HTPB

Propellant Mass: 138.2t

6 Strap-ons

PSOM-XL

Height: 12m

Diameter: 1 m

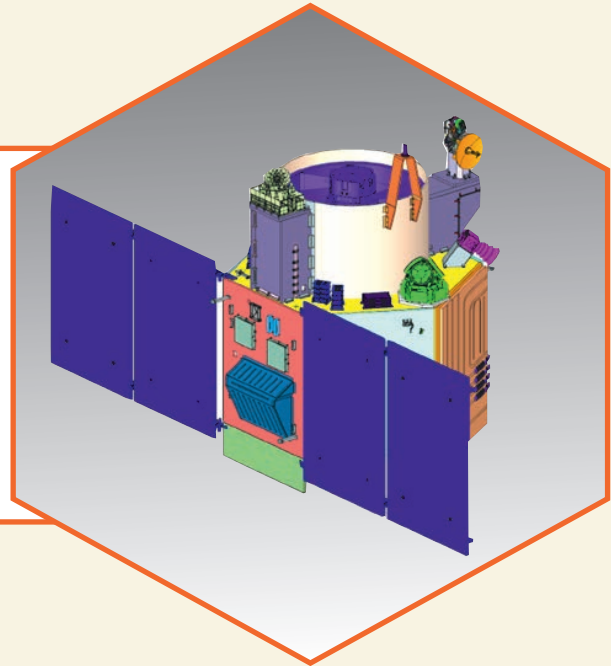
Propellant: HTPB

Propellant Mass: 12.2t

Height : 44.4 m

CARTOSAT-3

Cartosat-3 is a third generation agile advanced earth observation satellite having high resolution imaging capability.



CARTOSAT-3 SPECIFICATIONS

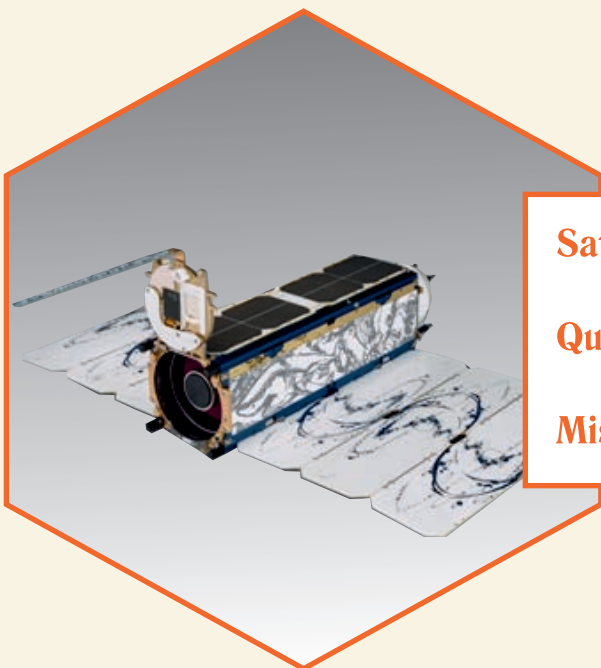
Mean Altitude	-	509 km
Mean Inclination	-	97.5°
Overall Mass	-	1625 kg
Power Generation	-	2000W
Mission Life	-	5 years

APPLICATIONS

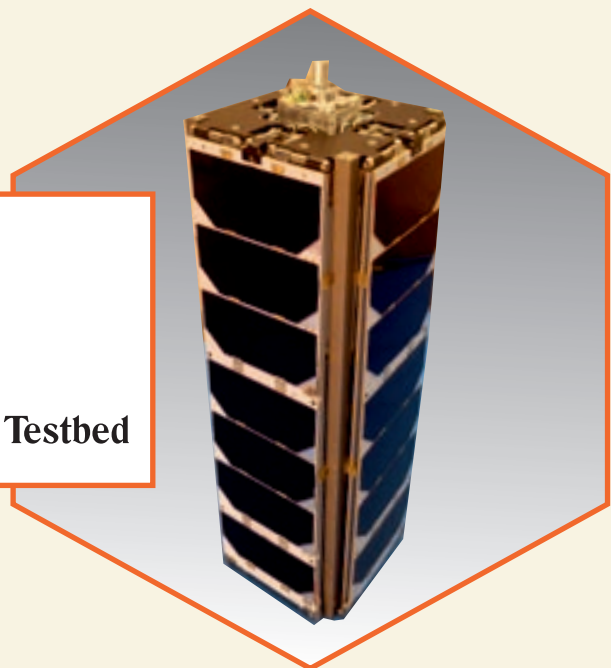
Cartosat-3 shall address the increased user's demands for large scale urban planning, Rural resource and infrastructure development, coastal land use and land cover etc.

INTERNATIONAL CUSTOMER SATELLITES

- ▶ 13 Commercial Nanosatellites from USA are flown along with Cartosat-3 onboard PSLV-C47
- ▶ These commercial satellites are being launched under a commercial arrangement with NewSpace India Limited (NSIL), the commercial arm of Indian Space Research Organisation (ISRO).



Satellite Name : FLOCK-4P
Quantity : 12 Nos
Mission Objective : Earth Observation



Satellite Name : MESHBED
Quantity : 1
Mission Objective : Communication Testbed

GLIMPSES



Indian Space Research Organisation

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