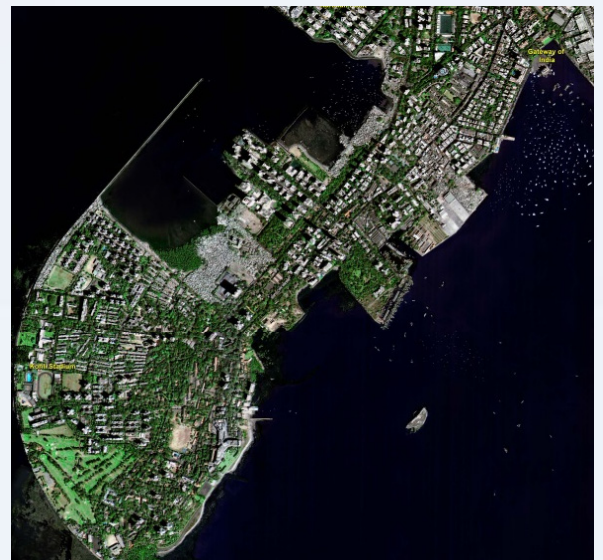


Cartosat-3 was launched successfully by ISRO's Polar Satellite Launch Vehicle (PSLV-C47), along with 13 co-passenger satellites at 09:28 hours IST on November 27, 2019 from Satish Dhawan Space Centre (SDSC), Sriharikota, Andhra Pradesh.

Cartosat-3 is a third generation, agile and advanced satellite, with a very high resolution imaging capability. Cartosat-3 provides Panchromatic imagery with a resolution of 0.28m and Multispectral imagery in four spectral bands with a spatial resolution of 1.12m, with a nominal swath of ~17 Km. The satellite is capable of steering up to $\pm 45^\circ$ and $\pm 26^\circ$ along and across the track respectively.

Major advancements in Cartosat-3

- X and Ka-band transmission and reception to handle high data rates.
 - ❖ X band data rate 960 Mbps .
 - ❖ Ka Band data rate is 2880 Mbps.
- Time Delay Integration (TDI) to achieve better Signal-to-Noise Ratio (SNR).
- Continuous imaging capability to cover long strips up to 4,200 Km.
- Capability to image up to 28 spots in one orbit
- 11-bit radiometric resolution
- SSR Capacity 3 x 1.2 TB.
- Control Moment Gyro (CMG) and Fiber Optic Gyro (FOG) to provide better attitude control.



Salient Features	
Satellite Mass (kg)	1,625 kg.
Orbit Type	Polar, Sun Synchronous Orbit
Orbit Height (Km)	505 Km
Orbit Inclination (deg.)	97.5 deg.
Local Time of Equator Crossing	9:30 a.m.

On the first day of imaging (1st Dec. 2019), Panchromatic and Multispectral images will be captured in **orbit 62**.

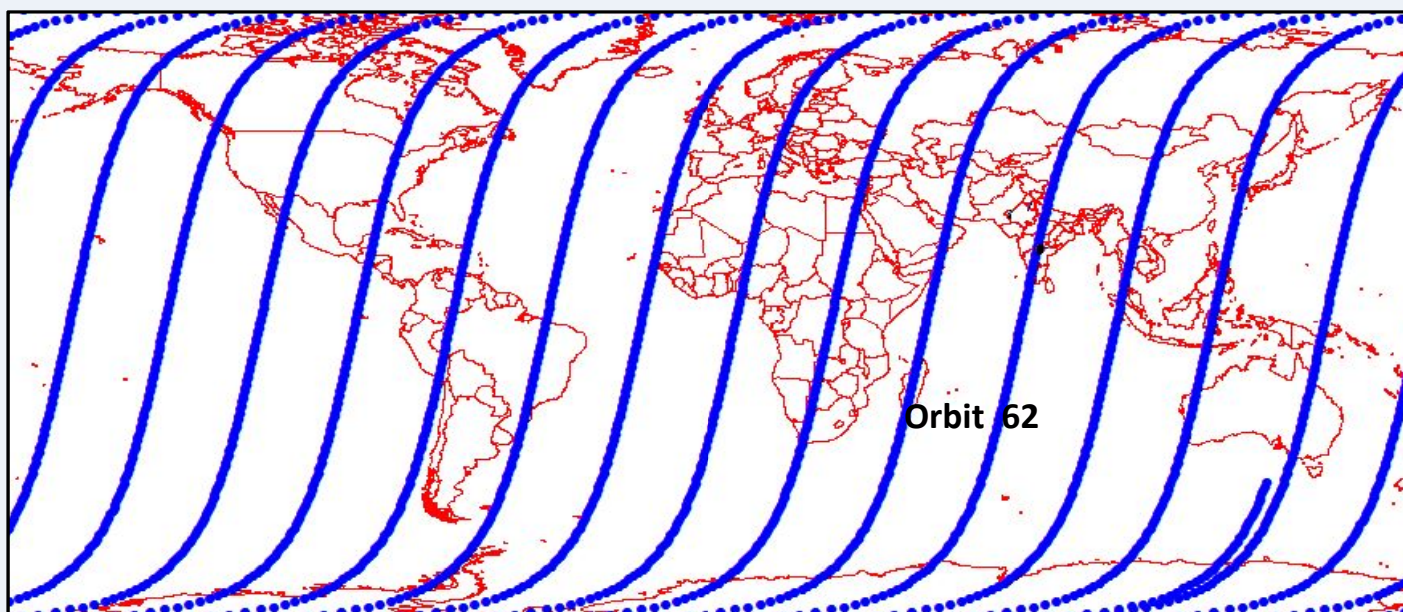


Fig 1: Cartosat- 3 Orbit pattern on 01-Dec-2019

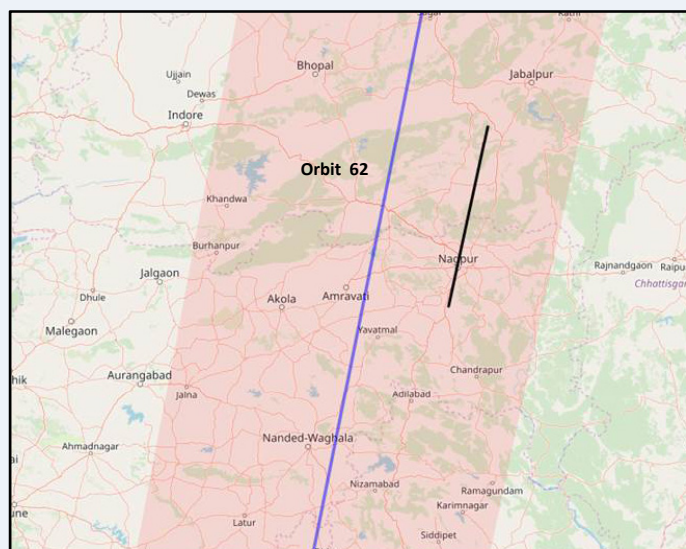


Fig 2 : Imaging strip in Orbit 62

Date of Pass	Orbit Number	Location / Length of the strip / Imaging mode / imaging and play back time
01-Dec-2019	62	Nagpur 200 Km Strip Along Track ~9:50 IST

Cartosat-3 data will meet the increasing user demands for cartographic applications at cadastral level, precision farming, crop insurance, taxation, disasters at micro level, urban and rural resource management, coastal land use and land cover, utility mapping and GIS applications. This is achieved with its agility and revisit and imaging capability.

The following Cartosat- 3 data products will be offered.

- ❖ Geo referenced/Ortho kit
- ❖ Ortho rectified
- ❖ Pan + Mx Bundle/Merged
- ❖ Mosaic Products

Sensor Parameters

PARAMETERS	PAN	MULTISPECTRAL
Ground Sampling Distance (GSD)	0.28 m	1.12 m
Swath	~17 Km	~17 Km
Spectral Band width (µm)	0.45 - 0.9	B1:0.45 - 0.52 B2:0.52 - 0.59 B3:0.62 - 0.68 B4:0.77 - 0.86
Quantisation	11 Bits	11 Bits
Nominal TDI Stages	45	45
No. of Detectors	24	24
SSR Capacity(3Nos)	3.6 TB	

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