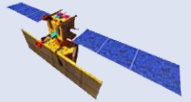


EOS-04 was launched successfully by ISRO's Polar Satellite Launch Vehicle (PSLV-C52), along with two co-passenger satellites at 05:59 hours IST on February 14, 2022 from Satish Dhawan Space Centre (SDSC), Sriharikota, Andhra Pradesh.

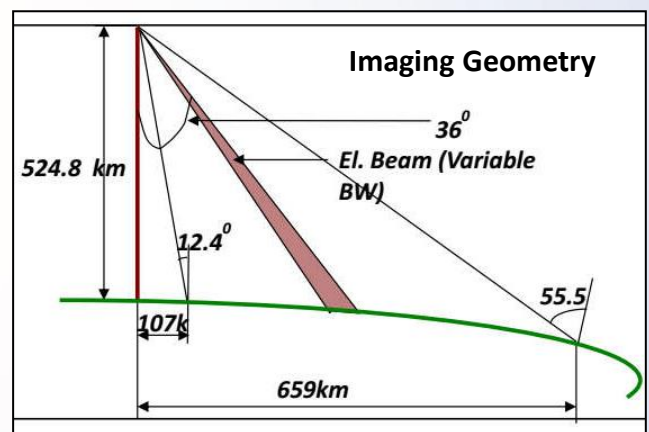


EOS-04 carrying a C-band Synthetic Aperture Radar (SAR) is a follow-on mission to RISAT-1 launched in 2012. The satellite has all weather, day and night imaging capability. It provides continuity of C-band SAR data to the user community, especially for agricultural applications. To meet the defined mission objectives for a mission life of 5 years, various components including payload, satellite orbit, in-orbit satellite management and data handling on ground are well defined with the following functionalities:

- ❖ Space segment comprising of three axis stabilized satellite with SAR payload and mainframe subsystems.
- ❖ Data reception, Level-0 processing, data product generation and dissemination facilities with supporting infrastructure on ground.
- ❖ Spacecraft control centre for tracking, commanding, satellite health analysis, orbit maintenance and scheduling of payload operations.
- ❖ Development of user-friendly value-added data products and data archival.

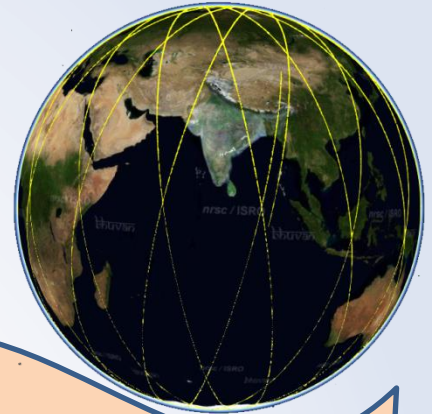
Major Applications of EOS -04

- ❖ Agriculture
- ❖ Forestry and Plantations
- ❖ Flood Mapping
- ❖ Soil Moisture & Hydrology
- ❖ Change Detection and man-made structure delineation
- ❖ Oceanography



Salient Features of EOS - 04

Sl.No	Parameters	Coarse Resolution mode (12 beam)	Medium Resolution Mode(8-beam)	Fine Resolution Mode (FRS-1)	High Resolution Mode (Spot mode)
1	Altitude (Km)	524.87			
2	Inclination (Deg)	97.5 °			
3	Repeativity (days)	17	17	139	--
4	Orbit period (minutes)	95			
5	Swath (Km)	223	160	25	10
6	Azimuth Resolution (metres)	50	33	3	1
7	Local Time (IST)	6:00 AM/PM (± 10 min)			



Acquisition Strategy

- **Descending Passes** : Undisturbed systematic coverage in MRS mode with 8 beams everyday
- **Ascending Passes** : All national and International user requests in all modes & MRS mode for archival build up

Payload Modes, Specifications

Imaging Mode	Swath in km	Off-nadir Coverage in km	Polarization	Resolution (Azi. x Sl Rng.)
FRS-1	25 #20	100-650 #100-400	Single, Dual, Circular, Full	3m x 2m
FRS-2	25 #20	100-650 #100-400		3m x 4m
MRS (8-Beam)	160 #115	100-650 #100-400		33m x 8m
CRS	223 #168	100-650 #100-400		50m x 8m
*HRS	10	100-650	Single, Dual, Circular,	1m x 2m

FRS- Fine Resolution Stripmap; MRS - Medium Resolution ScansAR; CRS Coarse Resolution ScansAR; HRS- High Resolution Spotlight.

represents specifications for full polarimetric mode. * Data products under evaluation.

Level of products

	Standard Products / Format	Value Added Products	
Level-0	Raw Signal Product (Generic Binary)	Level-1C	Geo-tagged Polarimetric products
Level-1	• Slant Range Geo-Tagged Product (CEOS/GeoTiff) • Ground Range Products (CEOS/GeoTiff)	Level-3A	Geo-referenced Polarimetric products
Level-2 Geo ref	Enhanced Terrain corrected Geo Referenced Product (GeoTiff) Projection: UTM (Level-2) Datum : WGS84 (Level-2) Resampling : CC (Level-2)	Mosaic Products : India Mosaic (for systematic coverage) Large Area Mosaic, Full Strip Mosaic	