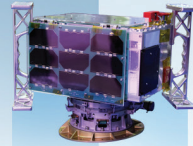


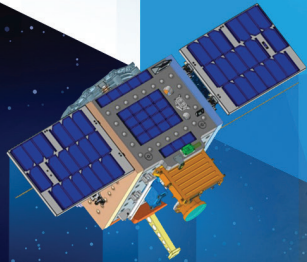
A satellite with two long, rectangular solar panel arrays extending from its central body. The panels are blue with a grid pattern.

EOS-04



INSPIREsat-1

PSLV-C52/ EOS-04 MISSION



INS-2TD



Visit Mission page



PSLV C52/ EOS-04

MISSION DESCRIPTION

PSLV-C52 launches EOS-04 (Earth Observation Satellite - 04) to a Sun Synchronous orbit. It carries two satellites as co-passengers.

This is the 54th flight of PSLV and 23rd mission using PSLV-XL configuration with 6 PSOM-XLs.

PSLV-C52 lifts off from First Launch Pad (FLP), SDSC, SHAR.

Vehicle Characteristics

Vehicle Height	44.4 m
Lift off Mass	321 t
Propulsion Stages	
First Stage	6PSOM-XL+ S139
Second Stage	PL40
Third Stage	HPS3
Fourth Stage	L2.5 (Ti)

Mission Specifications

Semi-Major Axis (km)	6907.159
Altitude (km) (wrt. equatorial Earth radius)	529.022
Inclination (deg)	97.514
Launch Azimuth (deg)	140

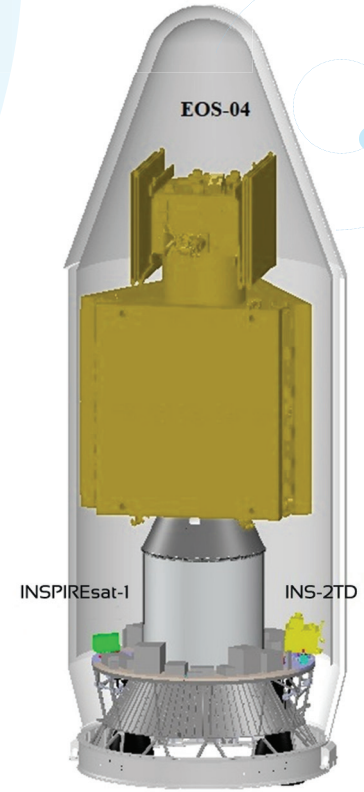
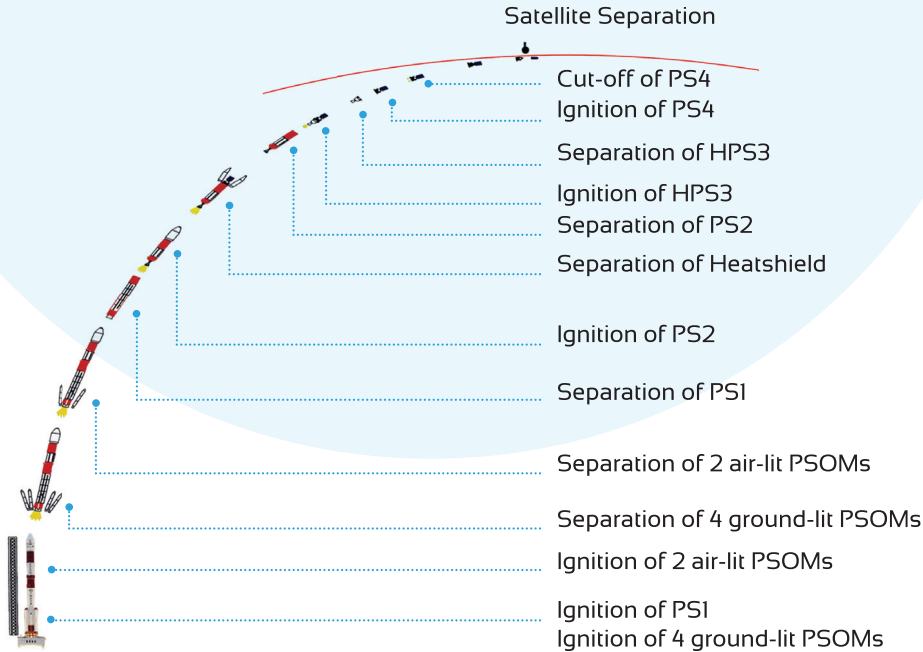


PSLV-C52 Stages at a Glance

	Stage 1		Stage 2 (PS2)	Stage 3 (HPS3)	Stage 4 (PS4)
	PS1	PSOM-XL			
Length (m)	20	12	12.8	3.6	3.0
Diameter (m)	2.8	1	2.8	2	1.34
Propellant	Solid (HTPB based)	Solid (HTPB based)	Liquid (UH25 + N ₂ O ₄)	Solid (HTPB based)	Liquid (MMH+ MON3)
Propellant Mass (t)	139	12.2 (each)	41	7.65	2.5

PSLV C52/ EOS-04

PSLV-C52 Flight Sequence



Payload Accommodation in PSLV-C52

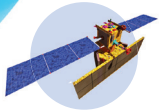
PSLV C52/ EOS-04

PSLV-C52 Typical Flight Profile

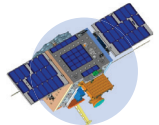
Event	Time (s)	Local Altitude (km)	Inertial Velocity (m/s)
RCT Ignition	-3	0.024	451.9
PSI Ignition	0	0.024	451.9
PSOM XL 1,2 (GL) Ignition	0.42	0.024	451.9
PSOM XL 3,4 (GL) Ignition	0.62	0.024	451.9
PSOM XL 5, 6 (AL) Ignition	25.0	2.742	570.7
PSOM XL 1,2 (GL) Separation	69.9	26.943	1304.2
PSOM XL 3,4 (GL) Separation	70.1	27.103	1308.7
PSOM XL 5,6 (AL) Separation	92.0	47.956	1865.8
PS1 Separation	109.68	68.937	2143.3
PS2 Ignition	109.88	69.174	2142.4
Heat Shield Separation	150.28	115.505	2380.9
CLG Initiation	155.28	121.099	2407.9
PS2 Separation	262.46	237.047	4033.4
PS3 Ignition	263.66	238.368	4030.4
PS3 Separation	493.60	450.692	5815.1
PS4 Ignition	504.00	457.445	5805.2
PS4 Cutoff	1020.36	533.967	7592.0
EOS-04 separation	1057.36	534.707	7596.0
Inspiresat-1 Separation	1112.36	535.859	7595.5
INS-2TD Separation	1127.36	536.182	7595.4
MON Passivation Start	1370.36	541.573	7591.8
MMH Passivation Start	2010.36	538.276	7596.2



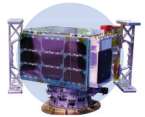
PSLV C52/ EOS-04



EOS-04 is a Radar Imaging Satellite designed to provide high quality images under all weather conditions for applications such as Agriculture, Forestry and Plantations, Flood Mapping, Soil Moisture & Hydrology. Collecting earth observation data in C-Band, it complements/supplements the data from Resourcesat, Cartosat series and RISAT-2B series.



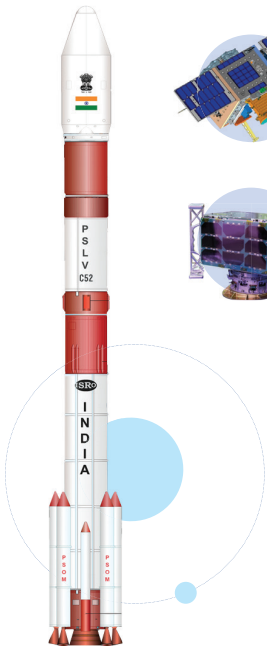
INS-2TD is a technology demonstrator satellite from ISRO, which is a precursor to the India-Bhutan joint satellite (INS-2B). Having a thermal imaging camera as its payload, the satellite benefits the assessment of: land surface temperature; water surface temperature of wetlands/lakes; delineation of vegetation (crops and forest); and thermal inertia (day/night).



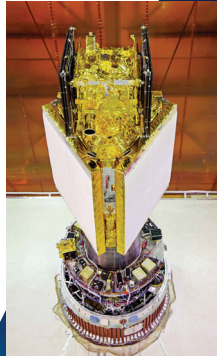
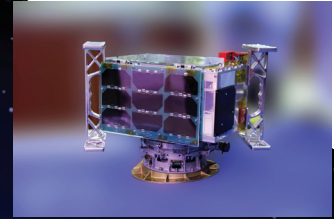
INSPIRESat-1 is a student satellite developed by Indian Institute of Space Science & Technology (IIST), in association with University of Colorado, USA. Other contributors are NTU, Singapore and NCU, Taiwan. Two scientific payloads improve the understanding of ionosphere dynamics and sun's coronal heating processes.

SALIENT FEATURES

Satellite	Mass (kg)	Power (W)	Mission life
EOS-04	1710	2280	10 years
INS-2TD	17.5	42	6 months
INSPIRESat-1	8.1	30	1 year



GLIMPSES



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