



PSLV-C44

Indian Space Research Organisation

THE MISSION



- India's Polar Satellite Launch Vehicle – C44 (PSLV-C44) will launch Microsat-R and Kalamsat into Sun Synchronous Polar Orbit
- PSLV-C44 will be launched from the First Launch Pad (FLP) at Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota
- Demonstration of spent stage PS4 (fourth stage) as an experimental orbital platform for carrying out technology demonstration
- Kalamsat is a student satellite which will be the first to use the fourth stage of PSLV as orbital platform
- Microsat-R is an imaging satellite

PSLV-C44 Mission Specifications		
Parameter	PS4 Orbital Platform + Kalamsat	Microsat-R
Altitude	450 km	274.12 km
Inclination	$98.767 + 0.2^\circ$	$96.567 + 0.2^\circ$
Launch Pad	First Launch Pad (FLP)	
Launch Azimuth	140°	

Milestones

<p>70th Launch Vehicle Mission from SDSC SHAR</p>	<p>46th Flight of Polar Satellite Launch Vehicle</p>	<p>35th Launch from First Launch Pad</p>	<p>1st Flight of PSLV-DL (with 2 strap-ons)</p>	<p>1st Launch of 2019</p>
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THE VEHICLE

Payload Fairing

STAGE 4

PS4

Height: 2.5m

Diameter: 1.34 m

Propellant: MMH +MON3

Propellant mass: 1.6 t

STAGE 2

PS2

Height: 12.8m

Diameter: 2.8 m

Propellant: UH25 & N₂O₄

Propellant mass: 4.1 t

Strap-ons

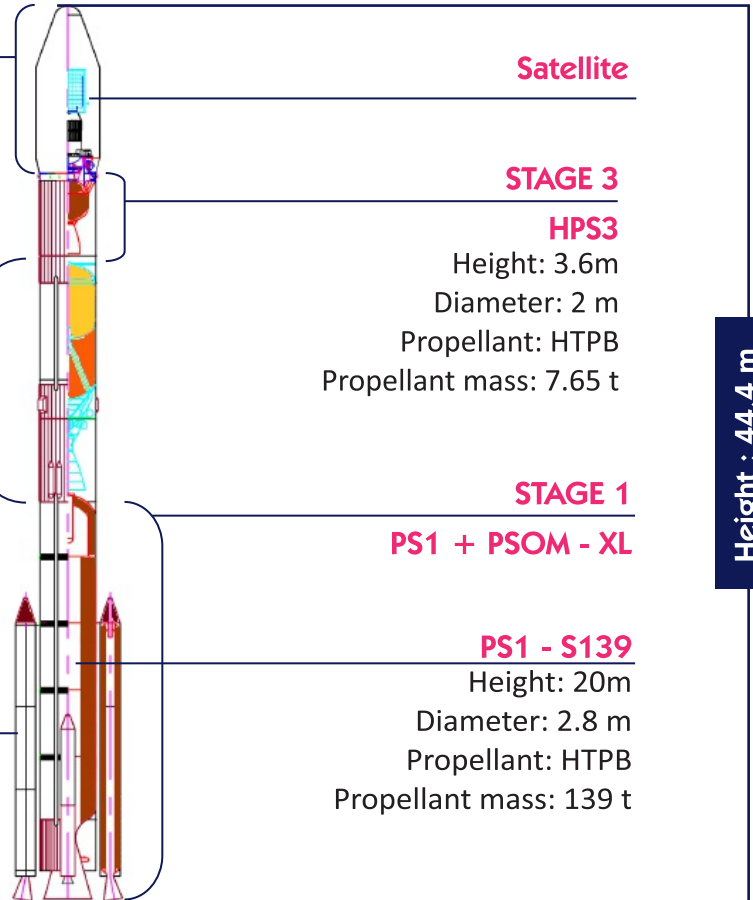
(2 x PSOM-XL)

Height: 12m

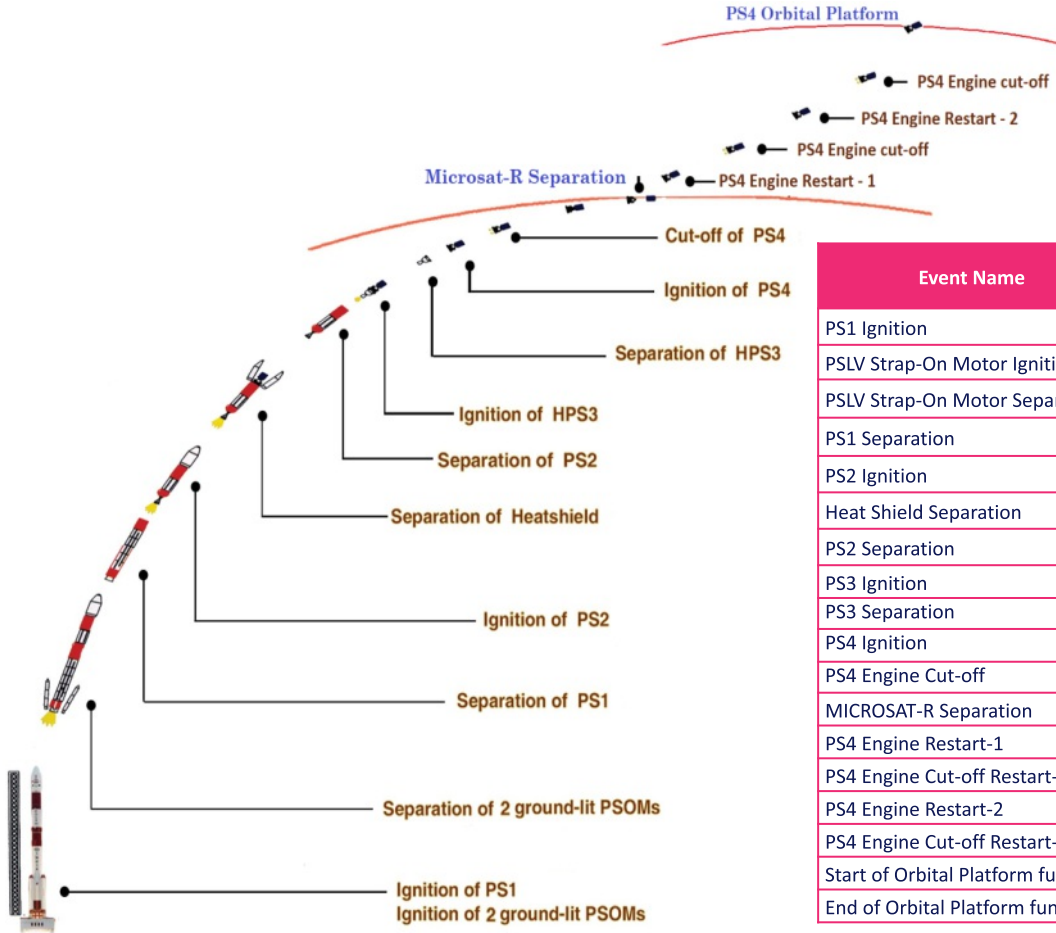
Diameter: 1 m

Propellant: HTPB

Propellant mass: 2 X12.2 t



PSLV-C44 Flight Sequence



Event Name	Time after lift-off	Altitude (km)	Inertial Velocity (m/s)
PS1 Ignition	0.00	0.025	451.9
PSLV Strap-On Motor Ignition	0.42	0.025	451.9
PSLV Strap-On Motor Separation	69.90	23.941	1078.4
PS1 Separation	109.58	59.077	1871.3
PS2 Ignition	109.78	59.281	1870.4
Heat Shield Separation	168.58	115.751	2377.4
PS2 Separation	262.12	187.751	4055.6
PS3 Ignition	263.32	188.551	4053.8
PS3 Separation	487.72	273.906	6529.1
PS4 Ignition	498.12	275.310	6527.2
PS4 Engine Cut-off	766.56	276.576	7735.2
MICROSAT-R Separation	813.56	277.295	7740.0
PS4 Engine Restart-1	3275.52	269.040	7748.3
PS4 Engine Cut-off Restart-1	3291.68	269.057	7794.4
PS4 Engine Restart-2	6026.52	450.145	7591.7
PS4 Engine Cut-off Restart-2	6041.26	450.215	7638.1
Start of Orbital Platform function	6151.00	450.000	
End of Orbital Platform function	54000.00	450.000	

Glimpses of Launch Vehicle PSLV-C44





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