

LVM3-M5 / CMS-03 Mission



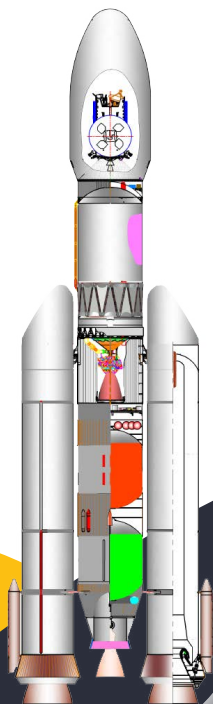
LVM3-M5 / CMS-03 Mission

LVM3 is the operational heavy lift Launch Vehicle of ISRO and has a spectacular pedigree of completing seven consecutive successful missions. LVM3-M5 is the fifth Operational Flight of LVM3, aims to launch the CMS-03 spacecraft to Geo-synchronous Transfer Orbit (GTO). LVM3-M5 will be launched from the Second Launch Pad (SLP), SDSC, SHAR.

Mission Highlights:

- CMS-03, weighing about 4410 kg, will be the heaviest communication satellite to be launched to Geo-synchronous Transfer Orbit (GTO) from Indian soil.
- CMS-03 is a multi-band communication satellite that will provide services over a wide oceanic region including the Indian landmass.

LVM3-M5 Vehicle Configuration (2S200+L110 (HTVE)+C25+5 m OPLF)



LVM3-M5 Stages at a Glance			
Stages	Strap-Ons (2 x S200)	Core Stage (L110)	Upper Stage (C25)
Length (m)	26.22	21.4	13.5
Diameter (m)	3.2	4.0	4.0
Propellant	Solid (HTPB)	Liquid (UH25 + N ₂ O ₄)	Cryo (LH ₂ & LOX)
Propellant Mass (t)	204.5 (each)	115.9	28.6

5th
Operational
Flight of
LVM3

LVM3-M5 Vehicle Characteristics

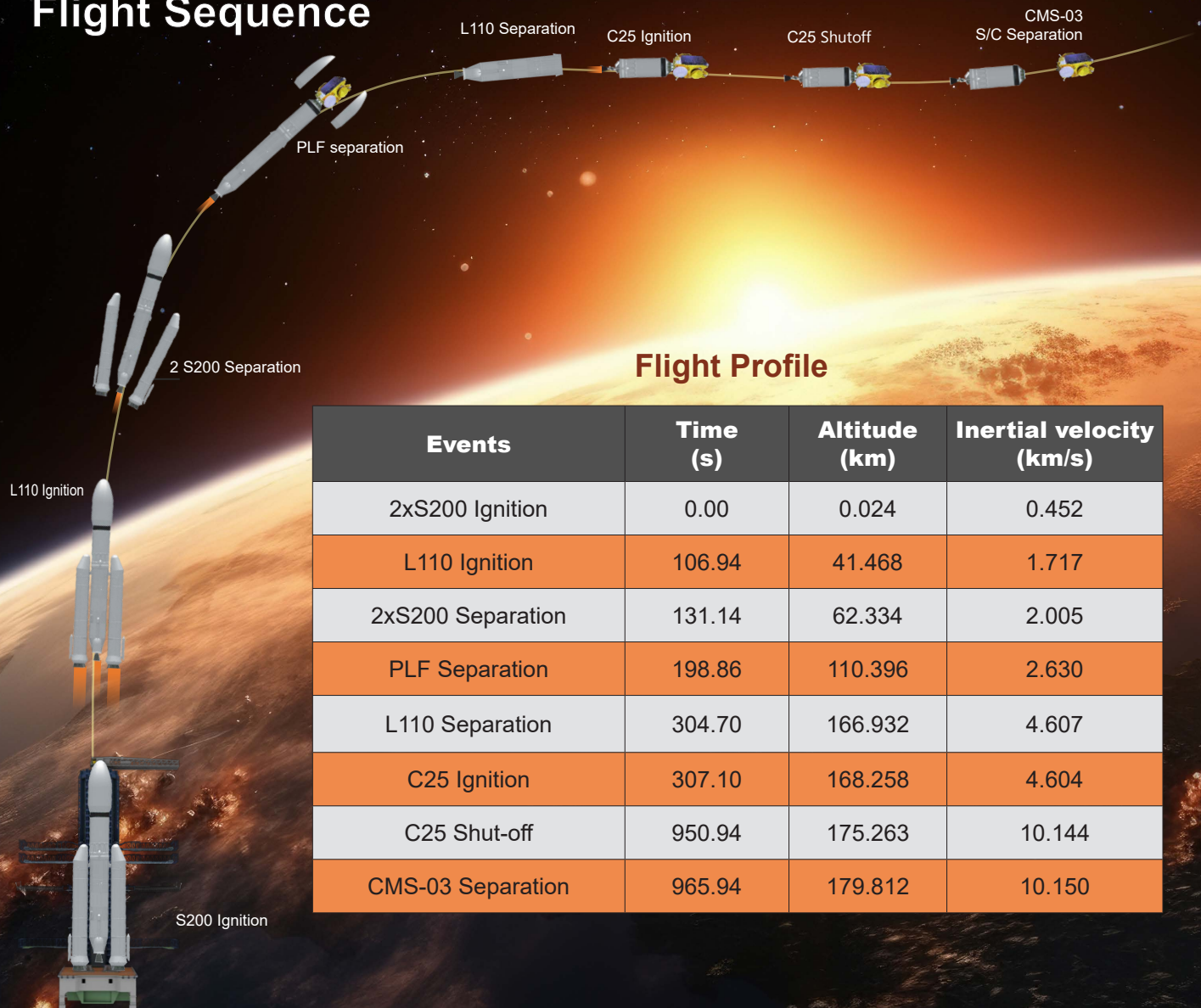
Vehicle Height	43.5 m
Lift off Mass	642 t

LVM3-M5 Mission Specification

GTO Apogee	29970 ± 3700 km
GTO Perigee	170 ± 3.5 km
Inclination	21.4° ± 0.1°
Argument of Perigee	178° ± 0.3°
Launch Azimuth	107°

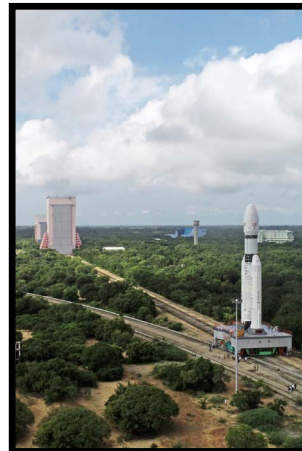
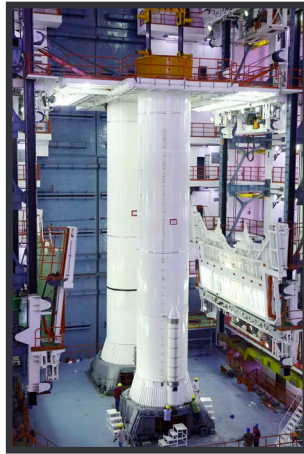
LVM3-M5

Flight Sequence



Flight Profile

Events	Time (s)	Altitude (km)	Inertial velocity (km/s)
2xS200 Ignition	0.00	0.024	0.452
L 110 Ignition	106.94	41.468	1.717
2xS200 Separation	131.14	62.334	2.005
PLF Separation	198.86	110.396	2.630
L110 Separation	304.70	166.932	4.607
C25 Ignition	307.10	168.258	4.604
C25 Shut-off	950.94	175.263	10.144
CMS-03 Separation	965.94	179.812	10.150



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