

# ISRO's PSLV-C62/EOS-N1 Mission Experienced an Anomaly During the Third Stage



## IN NEWS

ISRO's first launch of the year, the PSLV-C62 mission failed to place its 16 satellites into the intended orbit, marking the second consecutive failure of the long-reliable PSLV rocket.

## The PSLV-C62 / EOS-N1 Mission

- > It was the 64th flight of India's PSLV and ninth commercial mission by NewSpace India Limited (NSIL).
- > It aimed to launch the EOS-N1 Earth observation satellite along with 15 co-passenger satellites.
- > EOS-N1 is an Earth observation satellite intended for environmental monitoring, resource mapping, and disaster management.

## Additional information - Polar Satellite Launch Vehicle (PSLV)

**Stage-4 (Liquid)** It is the **3rd** generation launch vehicle of India. It has also been called "the workhorse of ISRO" for consistently delivering various satellites into low earth orbits with a high success rate.

**Stage-3 (Solid - ANOMALY POINT)** It is a **4**-stage rocket in which each stage has its own engine and fuel. It is the first Indian launch vehicle to be equipped with liquid stages.

**Major launches:**

- > First successful launch in October 1994.
- > PSLV successfully launched two spacecraft - Chandrayaan-1 in 2008 and Mars Orbiter Spacecraft in 2013 that later travelled to Moon and Mars respectively.
- > It also launched India's first space observatory, Astrosat.

## Geosynchronous Satellite Launch Vehicle (GSLV)

**LVM-3 (Solid, Liquid, Cryogenic)** > It is India's largest fourth-generation launch vehicle, designed to overcome the limitations of the PSLV by carrying heavier payloads to higher orbits.

**Stage-3 (Cryogenic)** > GSLV is a three-stage vehicle, capable of delivering up to 1,750 kg to low Earth orbit (up to 600 km) and smaller payloads to Geostationary Transfer Orbit.

**Stage-2 (Liquid)** > Its advanced variant, LVM-3 (formerly GSLV Mk III), employs solid, liquid, and cryogenic engines, carrying up to 8,000 kg to low Earth orbit (up to 2,000 km) and 4,000 kg to geosynchronous orbit (36,000 km), earning the nickname 'Bahubali' for its payload capacity.

**Stage-1 (Solid)** > LVM-3's first successful mission was in 2017 with GSAT-19. > It was followed by Chandrayaan-2 in 2019 and Chandrayaan-3 in 2023.

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**Note:** ISRO is developing its heaviest rocket, the Lunar Module Launch Vehicle (LMLV), expected by 2035, to support future lunar missions, including India's first human Moon mission planned for 2040.