

ISRO Launches SSLV

Why In News

- Indian Space Research Organisation (ISRO) successfully launched **the third developmental flight of the Small Satellite Launch Vehicle (SSLV)** from the Satish Dhawan Space Centre in Sriharikota on (August 16). SSLV-D3 placed the Earth observation satellite EOS-08 precisely into orbit.



About The Launch

- It also marks the completion of **ISRO/Department of Space's SSLV Development Project**. **NewSpace India Limited (NSIL)**, ISRO's commercial arm, and India's private space industry can now produce SSLVs for commercial missions.
- Prime Minister Narendra Modi also congratulated ISRO in a post on X, saying "The cost-effective SSLV will play an important role in space missions and will also encourage private industry."



SSLV-D3/EOS-08 Mission:

The launch of the third developmental flight of SSLV is scheduled for August 16, 2024, in a launch window of one hour starting at 09:17 Hrs. IST [Show more](#)



What Is An SSLV

- ISRO's **Small Satellite Launch Vehicle (SSLV)** is a three-stage Launch Vehicle configured with **three Solid Propulsion Stages**. It also has a **liquid propulsion-based Velocity Trimming Module (VTM)** as a terminal stage, which can help adjust the velocity as it prepares to place the satellite.



- Essentially, the **aim behind SSLVs** is to produce low-cost launch vehicles with short turnaround times and minimal infrastructural requirements. The SSLV can launch satellites **weighing up to 500kg** and accommodate multiple satellites.
- Before SSLVs, smaller payloads had to be sent into Space using other launch vehicles carrying multiple, bigger satellites. They depended upon the launch schedules of those satellites.

What Are PSLVs and GSLVs

- **Polar Satellite Launch Vehicle (PSLV)** is the third generation of Indian satellite launch vehicles. **first used in 1994**. More than 50 successful PSLV launches have taken place to date. It has also been called “**the workhorse of ISRO**” for consistently delivering various satellites into low earth orbits (less **than 2,000 km in altitude**) with a high success rate. The **PSLV-XL can carry around 1,860 kg** of payload.



- On the other hand, **Geosynchronous Satellite Launch Vehicles (GSLVs)** have been instrumental in launching communication satellites in the geosynchronous transfer orbit.
- According to the **European Space Agency (ESA)**, telecommunications satellites are usually placed in geostationary Earth orbit (GEO). It is a circular orbit 35,786 kilometres above Earth’s equator.



Objectives Of The ISRO Mission

- The Demonstrate consistent flight performance of the SSLV vehicle systems.
- Successfully deploy the EOS-08 satellite and SR-0 DEMOSAT into a 475 km circular orbit.

