

SSLV-D1/EOS-02 mission

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In news– The ISRO's Small Satellite Launch Vehicle (SSLV), carrying earth observation satellite EOS-02 and co-passenger satellites are no longer usable as they deviated from their circular orbit.

About SSLV-D1/EOS-02 mission-

- After that, SSLV placed the satellites in an elliptical orbit, instead of a circular orbit, rendering them, “no longer usable.”
- It **was carrying EOS-02 which is an Earth observation satellite and AzaadiSAT, a student satellite.**
- It went on to complete all stages of the lift-off successfully until the terminal stage, which is where ISRO scientists observed the **“data loss”**.
- Due to this malfunction, the launch vehicle put the satellites into a 365km x 76 km elliptical orbit instead of the intended 365 km circular orbit, meaning that the science objectives of the mission could not be completed.
- **The EOS-02 is an experimental optical remote sensing satellite with a high spatial resolution.**
- It is to **realise and fly an experimental imaging satellite** with a short turnaround time and to demonstrate launch-on-demand capability. **EOS-02 belongs to the microsatellite series of spacecraft.**
- **The AzaadiSAT is a 8U CubeSat** weighing around 8 kilograms. It carries 75 different payloads each weighing around 50 grams. Girl students from rural regions across the country were provided guidance to build these payloads.
- The payloads are integrated by the student team of **‘Space Kidz India’**.

Previous failures-

- This isn't the first time that ISRO has faced a setback on its mission launch.
- The Polar Satellite Vehicle Launch (PSLV), now considered as ISRO's trusted workhorses, was not successful in its first flight way back on 20 September 20 1993.
- ISRO first tasted defeat back on 10 August 1979, when the country's first experimental flight of SLV-3 carrying Rohini Technology Payload could not place the satellite into its intended orbit.
- ISRO witnessed of its biggest setbacks on 7 September 2019 when the Chandrayaan 2 orbiter crashed on the lunar surface instead of gently landing and was destroyed together with the rover
- Later in August 2021, the launch of GISAT-1, an earth observations satellite onboard GSLV Mk 2 rocket, had failed barely 350 seconds after its launch from India's spaceport.