

# Indian Satellite Launch Vehicle

January 8, 2021

In news

SD Sat is a 3U cube satellite named after the former Chairman and one of the founding fathers of the Indian space programme Professor Satish Dhawan.

## Introduction Satellite Launch Vehicle

- The **primary instruments for space applications** are satellites but they must be placed in carefully determined orbits in order to be useful.
- **Launch vehicles that send satellites and other spacecraft into space** must be far more powerful than other types of rockets, because they carry more cargo farther and faster than other rockets.

## Indian Satellite Launch Vehicles

- A **launch vehicle is a rocket-powered** vehicle used to transport a spacecraft beyond Earth's atmosphere, either into orbit around Earth or to some other destination in outer space.
- The launch vehicles have been **used to send crewed spacecraft, uncrewed space probes, and satellites** into space since the 1950s.
- Launch Vehicles are used to transport and put satellites or spacecraft into space.
- In India, the launch vehicles development program began in the early 1970s. **The first experimental Satellite Launch Vehicle (SLV-3)** was developed in **1980**.
- An Augmented version of this, **ASLV**, was launched successfully in **1992**.
- India has made tremendous strides in launch vehicle

technology to achieve self-reliance in the satellite launch vehicle program with the operationalization of Polar Satellite Launch Vehicle (**PSLV**) and Geosynchronous Satellite Launch Vehicle (**GSLV**).

### Satellite Launch Vehicle (SLV)

- Satellite Launch Vehicle or SLV was a small-lift launch vehicle project started in the early 1970s by the Indian Space Research Organisation to develop the technology needed to launch satellites.
- SLV was intended to reach a height of 400 kilometres (250 mi) and carry a payload of 40 kg (88lb).
- The first experimental flight of SLV-3, in August 1979, was a failure. The **first successful launch SLV-3** on July 18, 1980 from Sriharikota Range (SHAR), when **Rohini satellite, RS-1**, was placed in orbit, thereby making India the **sixth member of an exclusive club** of space-faring nations .
- The successful culmination of the SLV-3 project showed the way to advanced launch vehicle projects such as the Augmented Satellite Launch Vehicle (ASLV), Polar Satellite Launch Vehicle (PSLV) and the Geosynchronous satellite Launch Vehicle (GSLV).

### List of SLV Launches

<b>SN</b>	<b>Title</b>	<b>Launch Date</b>	<b>Payload</b>	<b>Remarks</b>
<b>1</b>	SLV-3E1	10Aug,1979	Rohini Technology Payload(RTP)	<b>Un</b> successful
<b>2</b>	SLV-3E2	18Jul,1980	Rohini Satellite RS-1	successful
<b>3</b>	SLV-3D1	31May,1981	Rohini Satellite RS-D1	successful
<b>4</b>	SLV-3	17Apr,1983	Rohini Satellite RS-D2	successful