

# PSLV-C48 / RISAT-2BR1 Mission

11 December, 2019

## THE MISSION

PSLV-C48 carrying on-board the RISAT-2BR1 Satellite lifted-off from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota at 03:25 PM (IST) on December 11, 2019. About 16 minutes and 23 seconds after lift-off, the PSLV-C48 placed RISAT-2BR1 into an orbit of 576 km at an inclination of 37° to the Equator. RISAT-2BR1 is a Radar Imaging Earth Observation Satellite which will provide services in the field of Agriculture, Forestry and Disaster Management. Along with RISAT-2BR1, 9 other commercial satellites were also successfully injected into their designated orbits.



## PSLV - C 4 8

### THE LAUNCH VEHICLE

PSLV-C48 was the 2<sup>nd</sup> flight of PSLV in 'QL' configuration with 4 solid strap-on motors. It was also an important milestone in the history of PSLV for successfully launching its 50<sup>th</sup> mission.

### SPECIFICATIONS

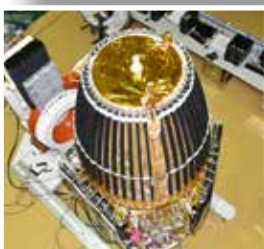
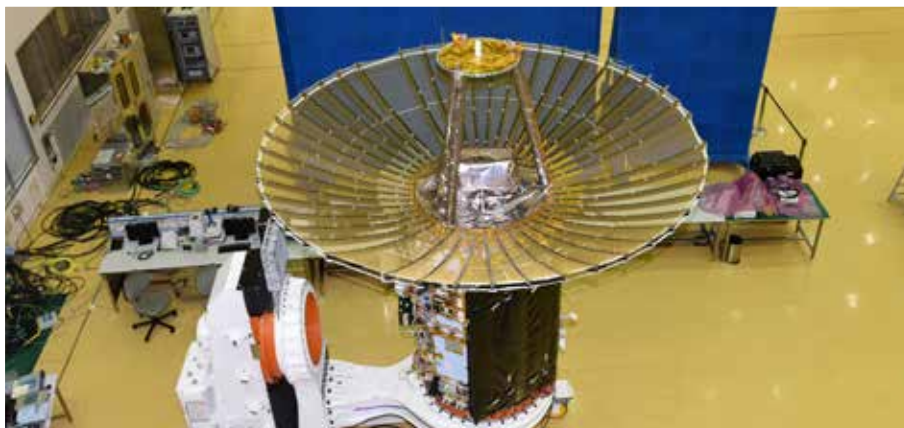
|                          |                               |  |
|--------------------------|-------------------------------|--|
| <b>Height</b>            | 44.4 m                        |  |
| <b>Lift-Off Mass</b>     | 287 t                         |  |
| <b>No of Stages</b>      | 4                             |  |
| <b>Payloads</b>          | RISAT-2BR1                    | <b>9 International Satellites</b><br>Israel (1)<br>Italy (1)<br>Japan (1)<br>USA (6) |
| <b>Orbit Height</b>      | 576 km                        |  |
| <b>Inclination (deg)</b> | 37°                           |  |
| <b>Launch Azimuth</b>    | 140°                          |  |
| <b>Launch Pad</b>        | First Launch Pad (SDSC, SHAR) |  |



# RISAT-2BR1

## THE SATELLITE

RISAT-2BR1 is a Radar Imaging Earth Observation Satellite developed by ISRO. Radial Rib Antenna of RISAT-2BR1 spacecraft was successfully deployed in orbit. This complex technology involved unfurling and deployment of the 3.6 m antenna which was folded & stowed during launch. The deployment was completed in 9 minutes, 12 seconds. The satellite will provide services in the field of Agriculture, Forestry and Disaster Management.



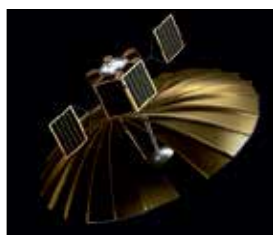
### SPECIFICATIONS

|                          |                |
|--------------------------|----------------|
| <b>Weight</b>            | 628 kg         |
| <b>Altitude</b>          | 576 km         |
| <b>Type of Satellite</b> | Remote Sensing |
| <b>Payloads</b>          | X-band Radar   |
| <b>Mission Life</b>      | 5 Years        |

## THE INTERNATIONAL CUSTOMER SATELLITES

The 9 customer satellites are launched under a commercial arrangement with NewSpace India Limited (NSIL).

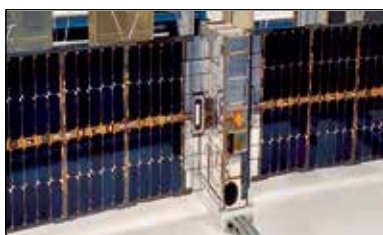
| Satellite         | No. of Satellites | Country | Mission Objectives                    |
|-------------------|-------------------|---------|---------------------------------------|
| <b>QPS-SAR</b>    | 1                 | Japan   | Radar Imaging Earth Observation       |
| <b>Tyvak-0092</b> | 1                 | Italy   | Search and Rescue                     |
| <b>Tyvak-0129</b> | 1                 | USA     | Technology Demonstration              |
| <b>Duchifat-3</b> | 1                 | Israel  | Remote Sensing                        |
| <b>Lemur</b>      | 4                 | USA     | Multi-mission Remote Sensing Platform |
| <b>IHOPSAT</b>    | 1                 | USA     | Earth Imaging                         |



*QPS-SAR*



*Tyvak-0092*



*Tyvak-0129*



*Duchifat-3*



*Lemur*