

ISRO LAUNCHES RADAR IMAGING OBSERVATION SATELLITE RISAT-2B

Relevant for: Indian Economy | Topic: Issues Related to Poverty, Inclusion, Employment & Sustainable Development

In a predawn launch on Wednesday, a PSLV rocket of the Indian Space Research Organisation (ISRO) placed RISAT-2B, an X-band microwave Earth observation satellite, into orbit 556 km above earth.

Data from the satellite would be vital for the Armed Forces, agriculture forecasters and disaster relief agencies.

The new satellite “will enhance India’s all-weather [space-based] capabilities in agriculture, forestry and disaster management,” ISRO said.

In a post-launch address from the Sriharikota spaceport, ISRO Chairman K. Sivan hailed the ‘textbook launch’ of a very important and complex satellite.

Dr. Sivan described RISAT-2B as “an advanced Earth Observation satellite with an advanced technology of 3.6-metre radial rib [unfurlable] antenna”.

After the satellite separated from the launcher, its solar arrays deployed automatically.

“ISRO Telemetry Tracking and Command Network at Bengaluru took control of the satellite. In the coming days, the satellite will be brought to its final operational configuration,” the space agency said.

Two important secondary or “piggyback trial payloads that would revolutionise its future missions” were also included in the launch.

They are the new Vikram processor from Semiconductor Laboratory (SCL), Chandigarh, that will control future launchers, and a low-cost microelectronic inertial navigation system from the ISRO Inertial Systems Unit, Thiruvananthapuram.

Chandrayaan-2 launch

Dr. Sivan, who is also Secretary, Department of Space, announced that the Chandrayaan-2 lander-rover mission would be launched between July 9-16.

The high resolution Cartosat-3, the first small satellite launch vehicle (SSLV) mission and the second test of a future reusable launch vehicle would follow from Sriharikota in the coming months.

The PSLV-C46 launcher carrying the 615-kg RISAT-2B blasted off at 5.30 a.m. About 15 minutes later, the satellite reached its designated position and started orbiting in space, with an inclination of 37°.

Designed at ISRO’s U.R. Rao Satellite Centre (URSC) in Bengaluru and fast-tracked in just 15 months, the RISAT-2B is built to operate for at least five years.

Its X-band synthetic aperture radar can give added details such as the size of objects on earth, structures and movement.

Information from RISAT-2B will complement data from normal optical remote sensing satellites.

Such data are useful for agencies that need ground images during cloud, rain and in the dark.

This is the third Indian RISAT in 10 years, and follows the Israeli-built RISAT-2 in 2009 and the ISRO-built RISAT-1 in 2012. The older RISATs have reached the end of their lives.

ISRO has planned a series of radar imagers in the coming months to enhance its space based observation of Earth and the Indian region.

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