

Isro launches three satellites, one of them developed by 750 girls

AzaadiSAT sends message of 'Namaste World: From the G20 presidency' after reaching orbit

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“**N**amaste World: From the G20 presidency.” This was the first message an 8-kg micro-satellite developed by 750 girl children of rural India sent at 9.43 am on Friday after reaching orbit.

AzaadiSAT was part of the Indian Space Research Organisation's (Isro) launch of the Small Satellite Launch Vehicle (SSLV-D2) that blasted off at 9.18 am from the Satish Dhawan Space Centre in Sriharikota.

SSLV-D2 is Isro's second developmental flight after the first failed in August last year. D2 carried three satellites: ISRO's EOS-07, the US-based firm Antaris' Janus-1 and Chennai-based space start-up SpaceKidz's AzaadiSAT-2. The successful launch of SSLV-D2 is considered as step towards ensuring a thriving ecosystem for the emerging small and micro-satellite commercial market, which has the potential to grow into a large market in the coming years.

“We have already got signals from our satellite. Our satellite is working beautifully. It is a telecommunication satellite and an expandable one — from eight units to 64 units. This can be used for any communication purpose, especially for student researchers and all,” said Srimathy Kesan, founder and chief executive officer of Chennai-based Space Kidz India, which promotes space awareness among children.

AzaadiSAT used a spring mechanism-based external frame to open up once it reached the orbit. “This is for the first time that students from Kashmir to Kanyakumari are becoming



Isro's Small Satellite Launch Vehicle SSLV-D2 lifts off from Sriharikota

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part of a project to make satellites,” Kesan said. AzaadiSAT had around 75 small payloads developed by schoolgirls of 75 rural schools.

SSLV's first demonstration flight to put an earth observation satellite (EOS2) and AzaadiSat into orbit failed on August 7 when the rocket could not inject its payload. An SSLV rocket, which costs around ₹56 crore, can carry satellites weighing around 500 kilo gram. The government has approved ₹169 crore for the three units at the developmental stage of SSLV.

SSLV aims to win the small- and

micro-satellite commercial market. Government estimates say India's share in the global space economy of \$360 billion is hardly around 2 per cent. With SSLV, the country will be able to increase its share to more than 10 per cent.

“Due to a rise in the demand for small satellites, the ‘Make in India’ initiative is anticipated to boost growth in the satellite manufacturing industry. As per the ISPA EY report, satellite manufacturing is expected to become the second fastest-growing segment in the Indian space economy by 2025. This accomplishment is also a step forward into India's growing capabilities in the launch-on-demand satellite market, which will give the private space industry a competitive advantage in the coming years,” said AK Bhatt, Director General, Indian Space Association (ISPA).” We also applaud Space Kidz's efforts in launching the AzaadiSAT-2 satellite, which has demonstrated the potential of India's growing young talent and interest in the space sector,” Bhatt added.

This is not the first time that Isro is betting big on small launch vehicles. The country tried its luck with Augmented Satellite Launch vehicle (ASLV) in the eighties, but it did not work as expected. Starting from 1999, Isro's commercial arms have earned total foreign exchange revenue of \$ 56 million and Euro 190 million through launching of satellites from 34 countries using Polar Satellite Launch Vehicle (PSLV). Out of this, around \$35 million and Euro 10 million euros came during the last three years between 2019-21, said government estimates.

PSLV has launched 342 foreign satellites.