

GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE

RAJYA SABHA

**UNSTARRED QUESTION NO. 2377**

TO BE ANSWERED ON THURSDAY, MARCH 20, 2025

**ISRO SPADeX MISSION**

2377. SHRI NARAYANA KORAGAPPA:

Will the PRIME MINISTER be pleased to state:

- (a) whether Indian Space Research Organisation (ISRO) launched SpaDeX mission recently;
- (b) if so, aims and objectives of the above mission;
- (c) whether it is a fact that through the above mission India has become the only fourth country in the world to have space docking technology;
- (d) the efforts being made to sell this technology to other countries to earn revenue for further explorations of ISRO; and
- (e) to what extent the above mission helps to send Indian on the Moon on its own?

**ANSWER**

**MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC  
GRIEVANCES & PENSIONS AND IN THE PRIME MINISTER'S OFFICE**

**(DR. JITENDRA SINGH):**

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- (a) Yes, Sir. The SpaDeX satellites were successfully launched by the Polar Satellite Launch Vehicle (PSLV-C60) into the intended orbit on December 30<sup>th</sup>, 2024 from Satish Dhawan Space Centre, SHAR. Space Docking Experiment (SpaDeX) mission successfully demonstrated the in-orbit docking of two satellites on January 16, 2025 and undocking of the satellites on 13 March, 2025.

- (b) The primary objective of the mission was to demonstrate rendezvous and docking and undocking of two small spacecrafts in-orbit.
- (c) Space docking technology has been successfully demonstrated by the United States of America, Russia and China. Japan has also demonstrated in-orbit spacecraft docking through the use of robotic arm and European space agency, which is an inter-governmental body, has also developed docking technology.
- (d) It may be noted that no space agency has approached the Department for procuring the technology.
- (e) The SpaDeX technology demonstration is a precursor to the major missions envisaged as part of Space Vision 2047, which includes Chandrayaan-4 sample return mission, Bharatiya Antariksha Station & Indian crewed landing on the moon. An indispensable technology in accomplishing such complex and challenging missions is the capability in the field of space docking. This is primarily because larger spacecrafts are no longer constrained by launch vehicle capability as docking essentially allows us to assemble the spacecrafts in space. It allows spare spacecrafts to address contingency situations which become critical for human centric missions. The successful demonstration of In-space Docking experiment is thus a forerunner for autonomous docking and crucial for India's future missions for assembling modules of space stations for BAS, for transporting crew and supplies to these stations and Chandrayaan-4 for bringing the samples back to Earth orbit, where the modules will dock with a re-entry module designed to withstand Earth's atmosphere.

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