

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

LOK SABHA

UNSTARRED QUESTION NO. 6173

TO BE ANSWERED ON WEDNESDAY, APRIL 01, 2026

SPADEX MISSION

6173. SHRI DEVUSINH CHAUHAN:

Will the PRIME MINISTER be pleased to state:

- (a) the details of the SpaDeX Mission and the outcomes achieved so far;**
- (b) the technology maturity achieved for future missions like Gaganyaan and Bharatiya Antariksh Station;**
- (c) whether the Government has assessed in-orbit servicing potential and proposes follow-on missions; and**
- (d) if so, the details thereof?**

ANSWER

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

(DR. JITENDRA SINGH):

- (a) SPADEX is a technology demonstrator mission for the demonstration of in-space docking using two small spacecraft launched by PSLV. Both the satellites were successfully launched on-board PSLV-C60 on December 30, 2024. The primary objective of the SpaDex mission was to develop and**

demonstrate the technology needed for rendezvous, docking, and undocking of two small spacecraft (SDX01, which is the Chaser, and SDX02, the Target, nominally) in a low-Earth circular orbit. The 1st docking was achieved on January 16, 2025 and the undocking was accomplished on March 13, 2025. The 2nd docking was successfully accomplished on March 20, 2025, followed by undocking and closed loop circumnavigation on April 25, 2025. The mission is strategically significant as docking technology is a foundational requirement for India's Gaganyaan human spaceflight programme, Bharatiya Antariksh Station (Indian Space Station), On-orbit servicing, refueling, and assembly, and Deep-space exploration missions. SpaDeX thus serves as a critical building block for sustainable and long-term space presence.

- (b) Space Docking Experiment (SpaDeX) demonstrated the various technologies for rendezvous and docking in space. These technologies are further improvised to meet the human spaceflight requirement for Gaganyaan programme including Bharatiya Antariksh Station.**
- (c) Yes. The in-orbit servicing requirements has been assessed. The associated technology developments have been initiated. On completion of these development activities a satellite mission for in orbit demonstration will be proposed.**
- (d) The critical technologies required for service missions such as autonomous capture and rigidization mechanism, sensors, AI cameras, algorithms are under development.**
