

Agra-based lab powers Gaganyaan's parachute success in aerial drop test

TIMES NEWS NETWORK

Lucknow: The Aerial Delivery Research & Development Establishment (ADRDE), an Agra-based DRDO laboratory, achieved a significant milestone in India's Gaganyaan mission with the successful Integrated Aerial Drop Test (IADT-01) at Satish Dhawan Space Centre, Sriharikota, on Sunday.

This test validated the parachute-based deceleration system critical for the country's first human spaceflight program.

"A 4.8-ton dummy crew module was air-dropped from a Chinook helicopter at 3 km altitude, 30 km offshore. All 10 integrated Gaganyaan parachutes, developed by ADRDE, deployed flawlessly, achieving key objectives: verifying apex cover separa-



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tion, pyro mechanisms, onboard logic, parachute performance, and crew module dynamics," read the statement issued by ADRDE.

Notably, the test extended the packed life of parachutes from six months to over a year, as 20-month-packed parachutes performed impeccably. The project was led by Swadesh Kumar.

ADRDE's recovery parachute system is designed to ensure safe deceleration of the crew module post-reentry, slowing it to a safe splashdown speed after heat shields and drogue parachutes. The IADT-01 test simulated real-world conditions, with the module descending through a precise parachute deployment sequence. This success marks a critical step in validating crew escape mechanisms and ground recovery operations for Gaganyaan.

The test's triumph paves way for subsequent trials, including TV-D2 and the G1 mission, to ensure astronaut safety during ascent, descent and splashdown phases. ISRO chairman congratulated ADRDE team for instrumental role in the achievement.