

World

India attempts a superpower move: docking two satellites in orbit

India

Amrit Dhillon Delhi

India hopes to make another leap in the space race next week by trying to connect two spacecraft while they orbit Earth.

The national space agency launched a rocket carrying two satellites in Sriharikota, Andhra Pradesh, on Monday. On or around January 7 it will attempt the complex manoeuvre of uniting — or “docking” — the two satellites.

If successful, the Space Docking Experiment, known as Spadex, would make India the fourth country to achieve the feat after the United States, Russia and China.

Sreedhara Somanath, head of the Indian Space Research Organisation, said the launch of a PSLV rocket had placed the two small satellites, each weighing about 220kg, into the “right orbit” about 290 miles from Earth’s surface. Each carries advanced payloads, including an imaging system and a

radiation-monitoring device designed to measure electron and proton radiation levels in space, providing critical data for future human spaceflight.

The agency is relying on the technology to achieve goals such as bringing samples from the south pole of the moon back to earth in 2027. In a first for India, the rocket and the satellites were integrated and tested at a private company called Ananth Technologies, rather than at a government body.

Once connected, the docked space-

craft are set to demonstrate the transfer of electric power which would be vital for applications such as in-space robotics, controlling composite spacecraft and payload operations.

Two stages of the PSLV launch rocket — which would usually turn into redundant space debris — are also due to become uncrewed space laboratories to be used for various experiments.

India’s space ambitions have acquired new momentum in recent years. Narendra Modi, the prime minister, has

often described India as a global power and wants its space capabilities to reflect the country’s status as the world’s fifth-largest economy and most populous nation. Docking is considered pivotal to complex space missions.

Chaitanya Giri, a space expert with the Observer Research Foundation in Mumbai, said: “Any growing economy will want some measure of space capability and for a country of India’s size, it needs multiple capabilities which is why a concerted effort is being made.”