

Space Exploration and Innovation

Mr. Chair and Distinguished delegates

India has made significant contributions to the scientific exploration of outer space through concerted effort of the national academia, institutes, start-ups and industries.

A gamut of enabling space technologies and capabilities, have been demonstrated, like the space-docking / undocking experiments (SPADEX), managing off-nominal conditions in human space-flight, Environmental Control and Life Support System, Human Rated launch vehicle, advanced propulsion systems, to name a few.

The fourth stage (PS4) of the PSLV-C60, configured as the PSLV Orbital Experimental Module (POEM-4), hosted 24 payloads, with experiments in space robotics, germination of seeds & growth of bacterium in microgravity, green propulsion etc, yielding valuable science data through innovation.

Mr. Chair,

India's Human Spaceflight Programme Gaganyaan is also gearing up with its plan for the series of crewed and uncrewed flights, eventually aimed at integrating to the endeavours towards establishing Indian Space Station named Bharatiya Antariksha Station (BAS). BAS will serve as an orbital laboratory for microgravity experiments benefitting the humanity. An Indian astronaut will soon fly aboard Axiom-4 mission to the International Space Station (ISS), and conduct micro-gravity experiments in diverse areas such as human health, biotechnology etc.

Mr. Chair,

India's Chandrayaan-3 has yielded first of their kind of scientific results on lunar surface and near-surface physics from the Southern high latitudes of the Moon. The Aditya L1 mission has yielded unique results on the coronal origin and solar flares. The scientific data from these missions have been released for the global scientific community. There has also been a discovery of an exoplanet using the ground based telescope PARAS-2. Preparations are in progress to release the datasets from XPoSat.

India is working towards major exploration missions. The Chandrayaan-4 will be India's first lunar sample-return mission. It aims to collect lunar samples from the yet-unexplored Southern higher latitudes of the Moon. The Chandrayaan-5 / LUPEX mission will be a joint endeavour between ISRO and JAXA, which will study the lunar polar volatiles in the vicinity of a Permanently Shadowed Region (PSR) of the Moon. The Venus Orbiter Mission will be India's first mission to study Venus, from an orbital platform. The mission aims to study the Venusian atmosphere, in addition to the Sun-Venus interaction.

These three missions open up opportunities for international cooperation in planetary science and exploration.

Mr Chair,

India looks forward to contributing resourcefully to the global efforts of space exploration and innovation, and promote peaceful and sustainable use of the outer space.

Thank you Mr. Chair and distinguished delegates, for your kind attention.