

Shiv Shakti Point

Context

- Data from Chandrayaan-3's Pragyan rover has revealed that the soil at **Shiv Shakti Point** near the Moon's South Pole is chemically very similar to a **lunar meteorite (ALHA 81005) discovered in Antarctica**.
- The findings are based on **observations made by the Alpha Particle X-ray Spectrometer (APXS)** onboard the rover.

Chandrayaan-3

- It is **India's third moon mission**.
- It was made by the Indian Space Research Organisation (ISRO).
- On **August 23, 2023**, it landed near the Moon's South Pole.
- This made **India the first country to reach the south polar region and the fourth country to land on the Moon**. August 23 is now celebrated as National Space Day in India.

The Three Spacecraft Parts



Propulsion Module: Carried the lander close to the Moon. It has 1 payload

- SHAPE (Spectro-polarimetry of Habitable Planet Earth):** Studies Earth from orbit.

Vikram Lander: The main box that made the soft landing. It has 4 payloads

- ChaSTE (Chandra's Surface Thermophysical Experiment) :** Measures surface temperature.
- ILSA (Instrument for Lunar Seismic Activity):** Records moonquakes.
- RAMBHA-LP (Radio Anatomy of Moon Bound Hypersensitive Ionosphere and Atmosphere - Langmuir Probe) :** Measures plasma density.
- LRA (Laser Retroreflector Array) :** Measures Moon distance (NASA)

Pragyan Rover: A small 6-wheeled robot. It has 2 payloads.

- LIBS (Laser-Induced Breakdown Spectroscopy):** Finds elements (found Sulphur).
- APXS (Alpha Particle X-ray Spectrometer):** Studies soil minerals.

Shiv Shakti Point

- It is the official name of the place on the Moon where India's **Chandrayaan-3** mission landed.
- The mission's lander, **Vikram**, successfully touched down at this spot on **23 August 2023**.
- With this achievement, **India became the first country to land a spacecraft near the lunar south pole**.



Key Quick Facts



- Launch Rocket:** LVM3-M4 rocket.



- Landing Site:** Named Shiv Shakti Point.



- Mission Life:** 1 Lunar Day (about 14 Earth days).

Why the South Pole Matters



- Water Ice:** Deep craters have ice that never melts.



- Resources:** This ice can make drinking water, oxygen, and fuel for future astronauts.



- History:** The cold preserves old solar system clues.