



ISRO's Seven Mega Missions

ISRO has planned seven mega missions, including Chandrayaan-2, to be conducted over a period of 10 years.

- Of these, only two missions have been defined — **XPoSat** and **Aditya-L1**.
- The four other undefined missions, which are in the planning stage, are **Mangalyaan-2, Venus mission, Lunar Polar Exploration** and **Exoworlds**.
- Xposat will be launched to study cosmic radiation in 2020, Aditya-L1 to the Sun in 2021, Mars Orbiter Mission-2 in 2022, Venus Mission in 2023, Lunar Polar Exploration or Chandrayaan-3 in 2024 and Exoworlds, an exploration outside the solar system in 2028.
- Aditya-L1 will play a key role in understanding and predicting climate change on Earth. The payloads will study the solar corona. Corona has an influence on the upper atmosphere and that impacts climate change on earth.
- Aditya-L1 will be placed in a '**libration orbit**', which is about 1.5 million km from Earth. It is about 1% of the distance between the Sun and the Earth, where the **gravity of the two celestial objects equalises**. Placing it in such an orbit **allows the spacecraft to circle along with the earth, thereby constantly facing the Sun**.
- Xposat will be a five-year mission, carrying a polarimeter instrument made by Raman Research Institute to measure cosmic radiation. The spacecraft will be placed in a circular 500-700km orbit.

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