

SPACE EXPLORATION MISSION IN 2023

2023 is set to be another busy year. Here are five of the most exciting missions to watch out for.

Missions

Jupiter Icy Moons Explorer

- In April 2023, the European Space Agency (ESA) is set to launch the **Jupiter Icy Moons Explorer (Juice)**, in what will be Europe's first dedicated robotic mission to Jupiter.
- Juice is due to reach the planet in July 2031 after performing an incredible flight path through the Solar System. The mission will enter into orbit around Jupiter and perform numerous flybys of its large icy moons: **Europa, Ganymede and Callisto.**

SpaceX Starship

- Starship will be the **largest spacecraft capable of carrying humans from Earth to destinations in space** (the International Space Station is larger, but it was assembled in space).
- It will be the **most powerful launch vehicle ever to fly**, capable of **lifting 100 tonnes of cargo to low Earth orbit.**

dearMoon

- The dearMoon project, **will take members of the public on a six-day trip around the Moon and back.**
- It will be the **first true deep space tourism launch.**

Asteroid explorer returns to Earth

- The Origins Spectral Interpretation Resource Identification Security – Regolith Explorer, more **commonly known as OSIRIS-REx**, is a **NASA mission to near-Earth asteroid Bennu.**
- A key goal of this robotic mission was to **acquire samples of Bennu and return them to Earth for analysis.**
- OSIRIS-REx is now fast returning to Earth with up to **a kilogram of precious asteroid samples stored aboard.**

India's private space launch

- Skyroot Aerospace, which successfully launched its Vikram-S rocket in November 2022, is **soon to become the first private Indian company to launch a satellite.**
- The rocket itself reached 90km in altitude, a distance that would need to be improved upon to get a constellation of satellites into orbit. **Skyroot's first satellite launch is planned for 2023**, with a goal of undercutting the cost of private space launch rivals by producing its 3D-printed rockets in a matter of days. If successful, **this could also provide a route for cheaper launches of scientific missions**, enabling a faster rate of research.

