

Jupiter Icy Moons Explorer

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Why in news?

- **Jupiter Icy Moons Explorer (Juice)** 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.
- After four years of moon flybys, Juice will then enter into orbit around **Ganymede, the largest moon in the Solar System** — becoming the first spacecraft ever to reach orbit around the moon of another planet.
- The icy moons of Jupiter are interesting as they are all **believed to host oceans of liquid water beneath their frozen surfaces**. Europa, in particular, is regarded as one of the most likely abodes in the Solar

System for extra-terrestrial life.

- Juice will be equipped with **ten scientific instruments** including ice-penetrating radar to study the internal oceans. This use of radar is a practical first step in mapping the sub-surface oceans, paving the way for more exotic future missions involving submersible vehicles — some of which have already been put forward.

Q1) Which Organisation is developing the JUICE spacecraft?

Airbus is developing and building JUICE (JUperiter ICy moons Explorer) spacecraft for the European Space Agency to study Jupiter and its icy moons.

Source: [Five space exploration missions to look out for in 2023](#)

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