ESA’s JUICE Probe Completes 3rd Earth Gravity Assist on Course to Jupiter

The European Space Agency’s (ESA) Jupiter Icy Moons Explorer (JUICE) spacecraft successfully completed its third Earth gravity assist flyby, gaining 12,606 km/h in speed.

A gravity assist (or slingshot manoeuvre) uses the relative movement and gravity of a planet to alter a spacecraft’s trajectory and velocity without expending onboard propellent.

KEY EXAM POINTS

- JUICE gained approximately 3.5 km/s (12,606 km/h) during the Earth flyby.
- Primary scientific target: Jupiter and its three ocean-bearing Galilean icy moons — Ganymede, Callisto, and Europa.
- Mission timeline: Scheduled to enter Jupiter’s orbit in 2031 and enter Ganymede’s dedicated orbit in 2034.
- Ganymede is the largest moon in the Solar System, larger than planet Mercury and dwarf planet Pluto.

DID YOU KNOW..!?

JUICE was launched in April 2023 aboard an Ariane 5 rocket from Europe’s Spaceport in Kourou, French Guiana.

It will become the first spacecraft ever to orbit a moon other than Earth’s Moon when it enters orbit around Ganymede.

Syllabus Relevance: Essential for International Space Missions section.

Daily Current Affairs
Read the most important daily exam-relevant news summaries easily on Essaar.
Read Online: essaaracademy.in/ca