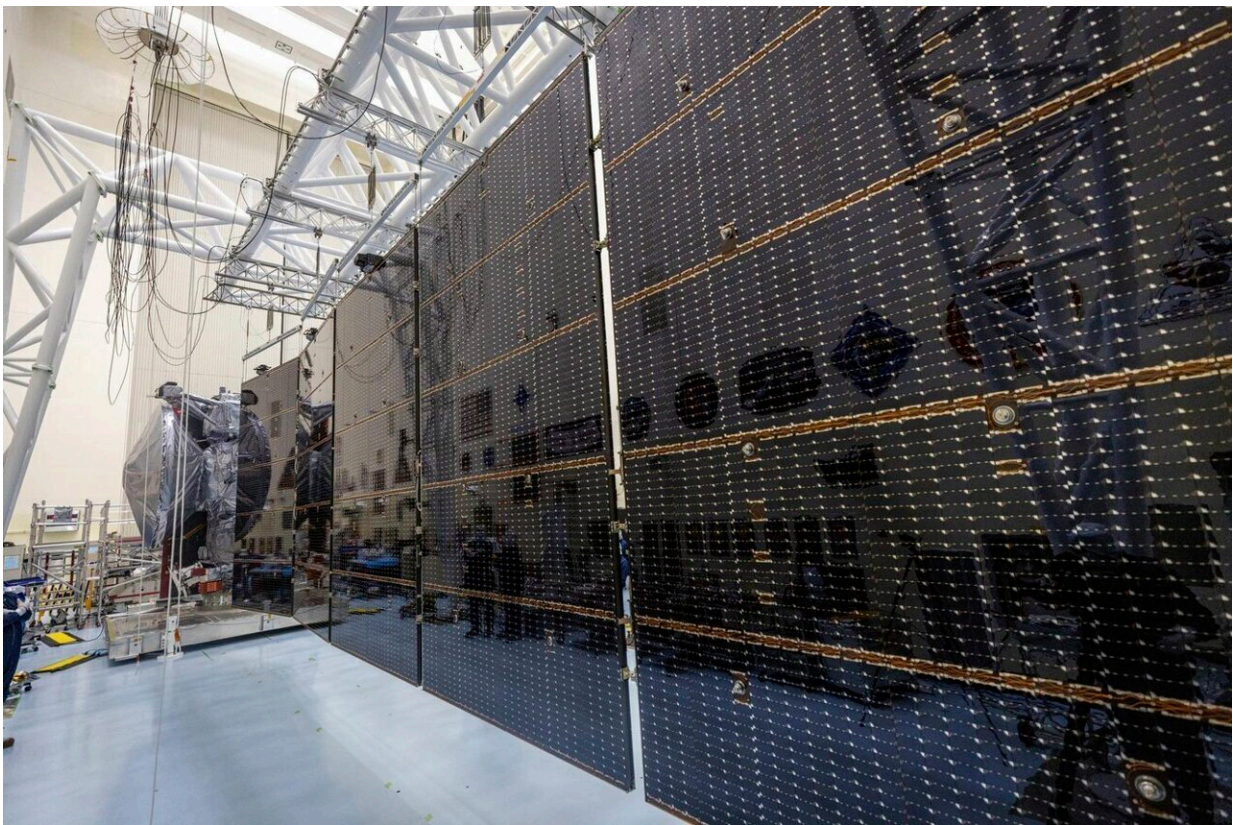


# NASA spacecraft to study Jupiter moon's underground ocean cleared for October launch

September 10 2024, by Marcia Dunn

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In this image released by NASA, NASA's Europa Clipper is seen here on Aug. 21, 2024, at the agency's Kennedy Space Center in Florida. Engineers and technicians deployed and tested the giant solar arrays to be sure they will operate in flight. Credit: Frank Michaux/NASA via AP

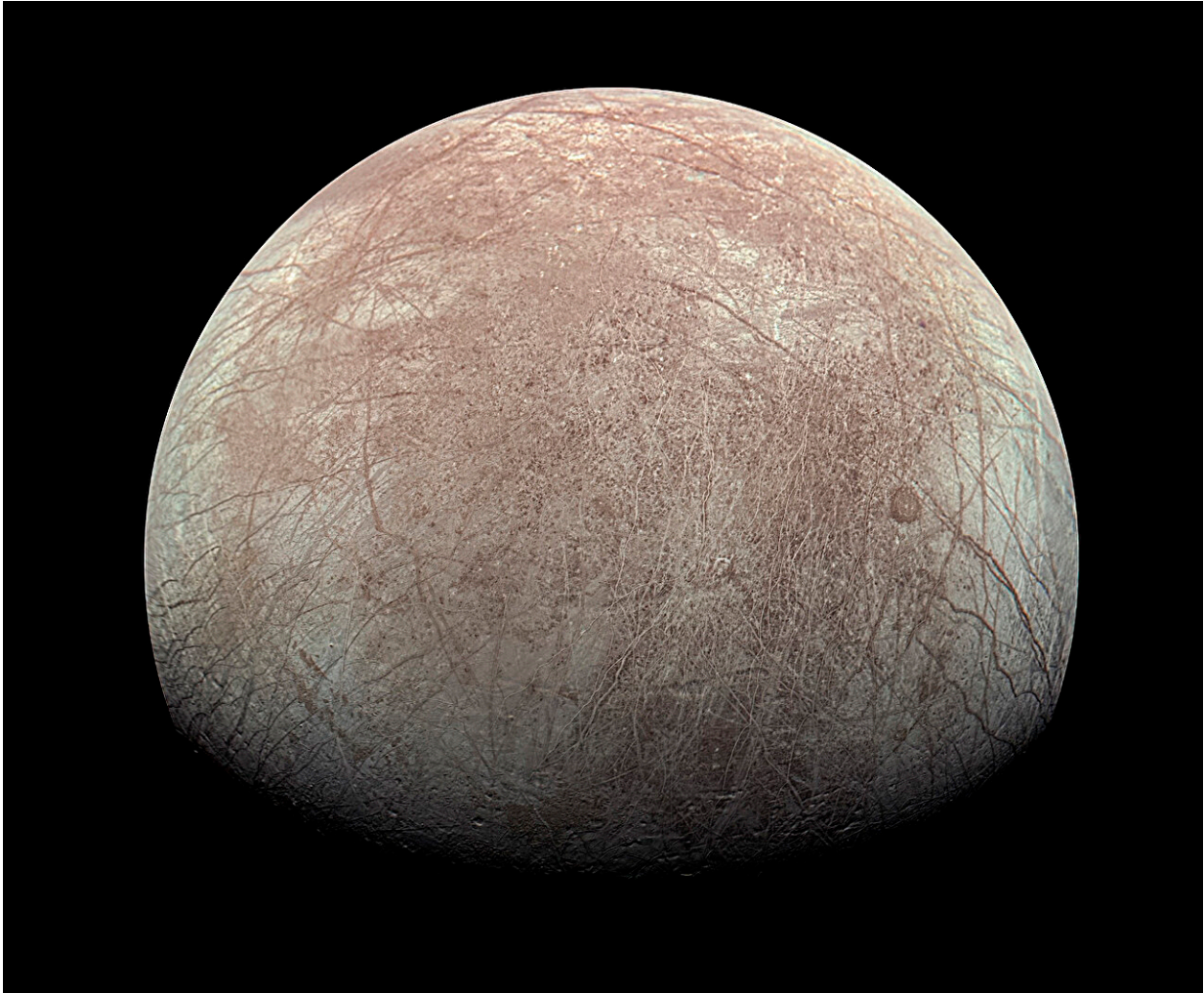
NASA on Monday approved next month's launch to Jupiter's moon Europa after reviewing the spacecraft's ability to withstand the intense radiation there.

Questions about the reliability of the transistors on the Europa Clipper spacecraft arose earlier this year after similar problems cropped up elsewhere. With the tight launch window looming, NASA rushed to conduct tests to verify that the electronic parts could survive the \$5 billion mission to determine whether the suspected ocean beneath Europa's icy crust might be suitable for life.

Liftoff remains scheduled for Oct. 10 aboard a SpaceX Falcon Heavy rocket. NASA has three weeks to launch the spacecraft before standing down for more than a year to await another proper planetary alignment; the spacecraft needs to swing past Mars and then Earth for gravity assists.

Project manager Jordan Evans said the transistors—located in circuits across the entire spacecraft—are expected to degrade when Europa Clipper is exposed to the worst of the radiation during the 49 flybys of the [moon](#). But they should recover during the three weeks between each encounter, said Evans of NASA's Jet Propulsion Laboratory.

Teams from labs across the country came to that conclusion following round-the-clock testing over the past four months.



This image provided by NASA, processed by Kevin M. Gill, shows Jupiter's moon Europa captured by the Juno spacecraft on Sept. 29, 2022, with north to the left. Research published Monday, March 4, 2024, suggests there's less oxygen on the icy surface of Jupiter's moon Europa than thought — and that could affect what if any life might be lurking in the moon's underground ocean. Credit: Kevin M. Gill/NASA/JPL-Caltech/SwRI via AP, File

The project has "high confidence we can complete the original mission for exploring Europa as planned," Evans said. "We are ready for Jupiter."

It will take six years for Europa Clipper to reach Jupiter, where it will orbit the gas giant every three weeks. Dozens of flybys are planned of Europa as close as 16 miles (25 kilometers), allowing cameras and other instruments—including ice-penetrating radar—to map virtually the entire moon.

Europa Clipper is the biggest [spacecraft](#) ever built by NASA to investigate another planet, spanning more than 100 feet (30 meters) with its [solar panels](#) unfurled.

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Citation: NASA spacecraft to study Jupiter moon's underground ocean cleared for October launch (2024, September 10) retrieved 10 September 2024 from <https://phys.org/news/2024-09-nasa-spacecraft-jupiter-moon-underground.html>

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