

Nuclear Reactor for Prometheus Jupiter Icy Moons Orbiter

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Northrop Grumman Corp. has been selected to partner with [NASA's](#) Jet Propulsion Laboratory to develop a preliminary design for the Prometheus Jupiter Icy Moons Orbiter (JIMO), an electric propulsion vehicle **powered by a nuclear fission reactor**. The contract award is for approximately \$400 million, covering work through mid-2008.

JIMO would orbit Jupiter's three ice-covered Galilean moons - Ganymede, Callisto and Europa - gathering data to help scientists understand the moons' origin and evolution, potential for sustaining life, and radiation environment. These moons are thought to harbor vast oceans beneath their icy surfaces.

The orbiter would have 100 times more usable onboard power than any previous probe, enabling its science instruments to gather more and higher quality data and to send it back to Earth at vastly higher data rates. The reactor would be developed by the U.S. Department of Energy's Office of Naval Reactors, in Washington, D.C.

"This project has the potential to revolutionize space exploration," said Wes Bush, president, Northrop Grumman Space Technology. "JIMO's power system would pave the way for long-duration, deep-space robotic missions powerful enough to significantly increase scientific output. We will continue to draw on the strengths of our team in systems engineering, large-scale integration, reactor integration and nuclear safety to develop a robust and low-risk design."

Northrop Grumman's team is being led by its Space Technology sector and includes its Newport News, Electronic Systems, Integrated Systems and Information Technology sectors along with Hamilton Sunstrand and Alliance Space Systems Inc. "We look forward to partnering with JPL," said Craig Staesinich, vice president, Project Prometheus at Northrop Grumman. "We are bringing together the best resources from our organizations to make this mission a success."

The company will develop systems requirements and a preliminary spacecraft design, building on trade studies and a system concept developed under an earlier phase of the program.

Following that, the next phase of the contract calls for the full-scale design, fabrication, integration and test of the space system. JIMO is expected to launch no earlier than 2015 on its five-to-eight year interplanetary journey.

Northrop Grumman Space Technology is a leader in the development of satellites and space systems for science, remote sensing, communications and military applications. Space Technology is NASA's prime contractor for the James Webb Space Telescope, the successor to the Hubble Space Telescope, and is the prime contractor for the National Polar-orbiting Operational Environmental Satellite System. Northrop Grumman Space Technology is based in Redondo Beach, Calif.

Source: Northrop Grumman Corp.

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