

Juno spacecraft set for fifth Jupiter flyby

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This enhanced-color image of a mysterious dark spot on Jupiter seems to reveal a Jovian "galaxy" of swirling storms. Credit: NASA/JPL-Caltech/SwRI/MSSS/Roman Tkachenko

NASA's Juno spacecraft will make its fifth flyby over Jupiter's mysterious cloud tops on Monday, March 27, at 1:52 a.m. PDT (4:52 a.m. EDT, 8:52 UTC).

At the time of closest approach (called perijove), Juno will be about 2,700 miles (4,400 kilometers) above the planet's [cloud tops](#), traveling at a speed of about 129,000 miles per hour (57.8 kilometers per second) relative to the gas-giant planet. All of Juno's eight science instruments will be on and collecting data during the flyby.

"This will be our fourth science pass—the fifth [close flyby](#) of Jupiter of the mission—and we are excited to see what new discoveries Juno will reveal," said Scott Bolton, principal investigator of Juno from the Southwest Research Institute in San Antonio. "Every time we get near Jupiter's cloud tops, we learn new insights that help us understand this amazing giant planet."

The Juno science team continues to analyze returns from previous flybys. Scientists have discovered that Jupiter's magnetic fields are more complicated than originally thought, and that the belts and zones that give the planet's cloud tops their distinctive look extend deep into the its interior. Observations of the energetic particles that create the incandescent auroras suggest a complicated current system involving charged material lofted from volcanoes on Jupiter's moon Io.

Peer-reviewed papers with more in-depth science results from Juno's first flybys are expected to be published within the next few months.

Juno launched on Aug. 5, 2011, from Cape Canaveral, Florida, and arrived in orbit around Jupiter on July 4, 2016. During its mission of exploration, Juno soars low over the planet's cloud tops—as close as

about 2,600 miles (4,100 kilometers). During these flybys, Juno is probing beneath the obscuring cloud cover of Jupiter and studying its auroras to learn more about the planet's origins, structure, atmosphere and magnetosphere.

Provided by NASA

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