Geophysical Research Abstracts
Vol. 20, EGU2018-5563, 2018
EGU General Assembly 2018

Juno: Overview of Results

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The Juno spacecraft was launched in 2011 and arrived at Jupiter on July 4, 2016. Juno's scientific objectives include the study of Jupiter's interior, atmosphere and magnetosphere with the goal of understanding Jupiter's origin, formation and evolution. The baseline mission utilizes thirty-two polar orbits to effectively map Jupiter both inside and out. Each perijove provides Juno's nine instrument payload a close pass over Jupiter at altitudes as close as 3500 km above the cloud tops. With its unique orbit and unique viewing geometry, Juno peers into Jupiter's deep atmosphere, deep interior and hovers over the polar magnetosphere to reveal for the first time the physics of giant planets. The results have fundamentally changed our understanding of Jupiter and are providing a new approach to solar system investigation. An extensive campaign of Earth based observations of Jupiter and the solar wind were orchestrated to complement Juno measurements during Juno's approach to Jupiter and during its orbital mission around Jupiter. This presentation provides an overview of results from the Juno measurements and the collaborative campaign. Scientific results include Jupiter's interior structure, magnetic field, deep atmospheric dynamics and composition, and the first in-situ exploration of Jupiter's polar magnetosphere and aurorae.