



Juno Status Report

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**OPAG Meeting
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Juno Mission Design

Currently in Phase B

Launch: July 2010 or August 2011

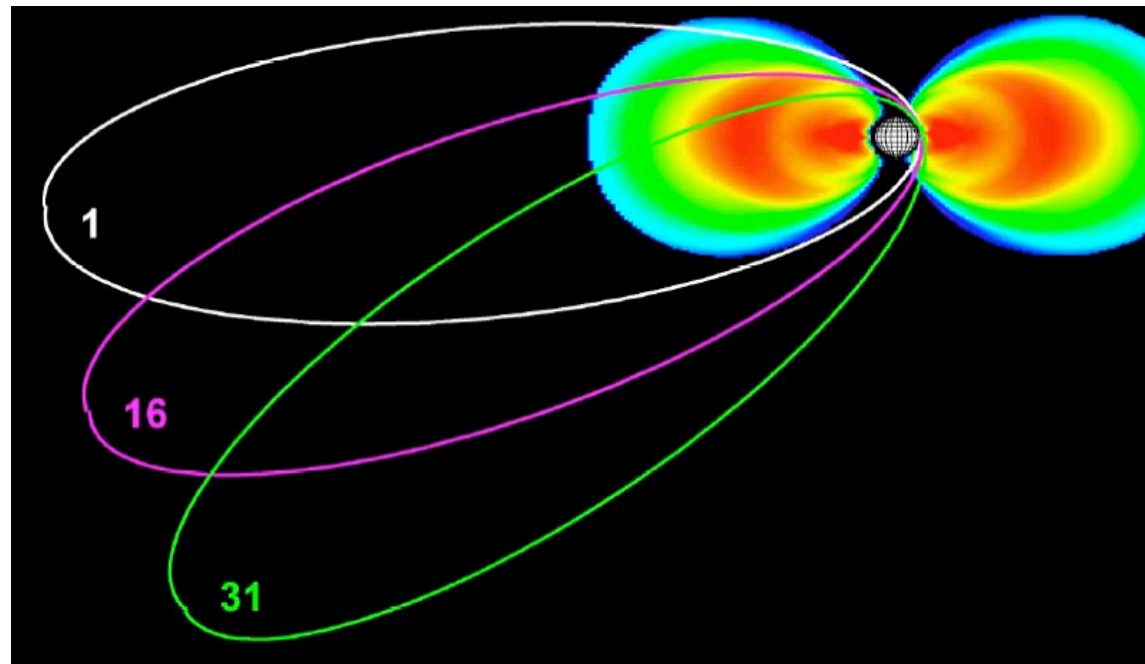
5 year cruise

Baseline mission:

- 32 polar orbits
- Perijove ~5000 km
- 11 day period
- Spinner
- Solar-powered

Science Objectives:

- Origin of Jupiter
- Interior Structure
- Atmosphere Composition & Dynamics
- Polar Magnetosphere



>\$8M to support science participation – PSP/DAP



Juno Science Objectives

Origin

Determine O/H ratio (water abundance) and constrain core mass to decide among alternative theories of origin.

Interior

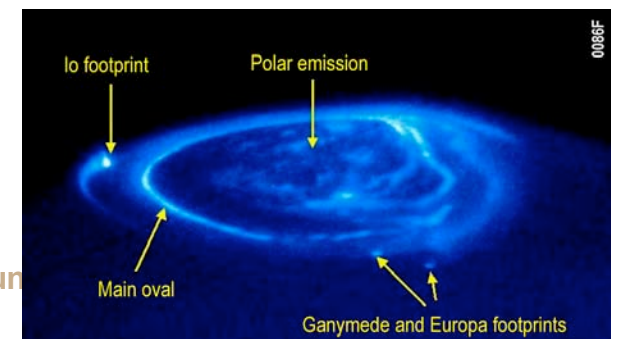
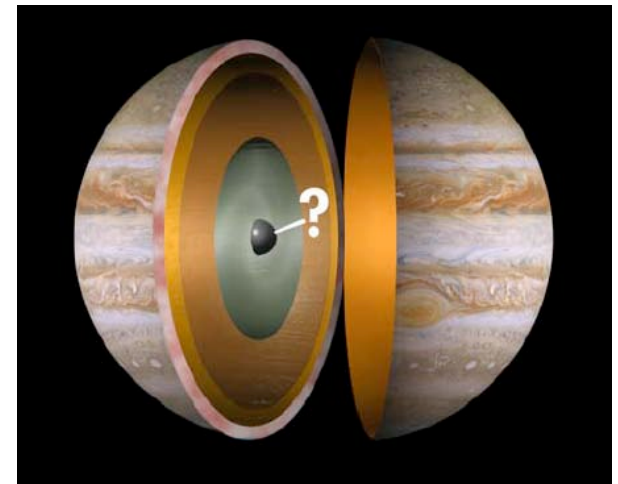
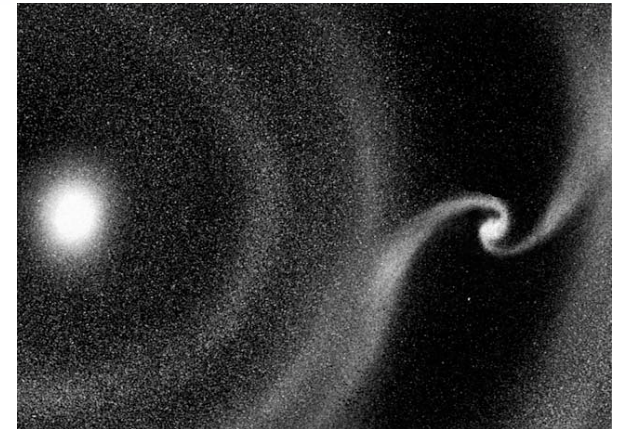
Understand Jupiter's interior structure and dynamical properties by mapping its gravitational and magnetic fields

Atmosphere

Map variations in atmospheric composition, temperature, cloud opacity and dynamics to depths greater than 100 bars at all latitudes.

Magnetosphere

Characterize and explore the three-dimensional structure of Jupiter's polar magnetosphere and auroras.



Jun

Gravity Science (JPL)

Magnetometer— MAG (GSFC/JPL)

Microwave Radiometer— MWR (JPL)

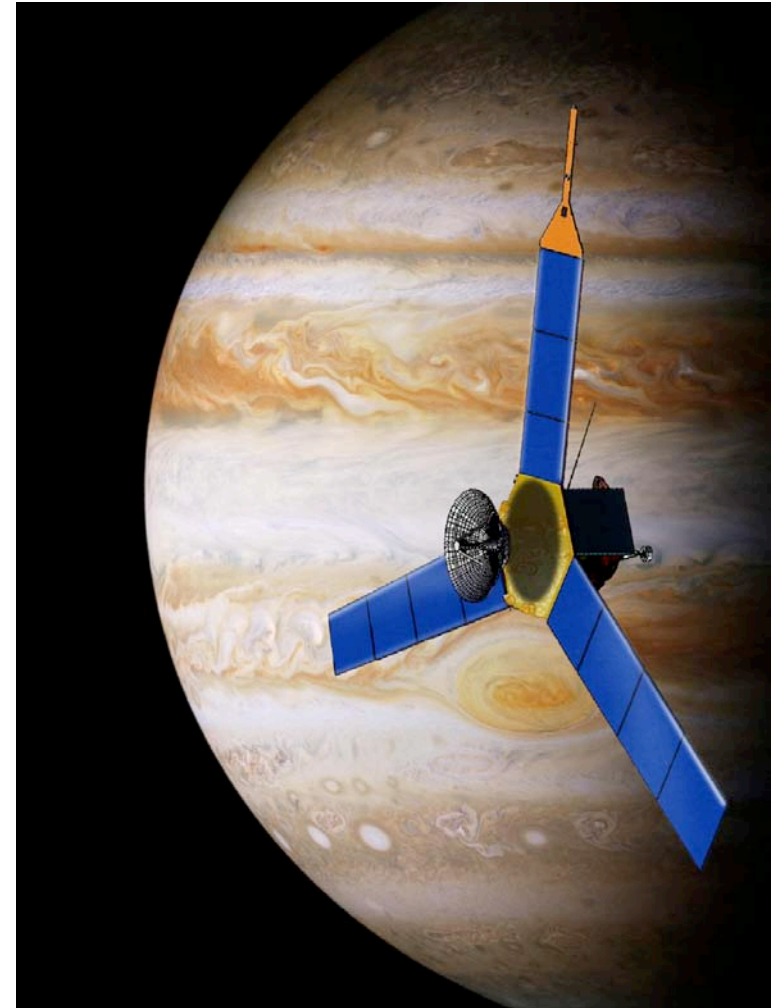
Energetic Particle Detector—EPD (APL)

**Jovian Auroral Distributions
Experiment— JADE (SwRI)**

Waves (U of Iowa)

UV Spectrometer— UVS (SwRI)

Visible Camera - JunoCam (Malin)



- **Now in Phase B.**
- **Currently studying launch year options.**
 - Final report to NASA HQ on November 2, 2005.
 - Goal to optimize mission plan consistent with available funding profile.
 - Options include delaying launch from 2009 to 2010 or 2011.
 - No impact to science return.
 - Both 2010 and 2011 launches can work technically.
 - Primary difference is in risk posture.
 - 2010 launch has advantage over 2011 for better margins/reserves, lower radiation dose, and lower overall cost.
 - 2010 launch disadvantage is that it requires funding beyond expected available profile in FY08.