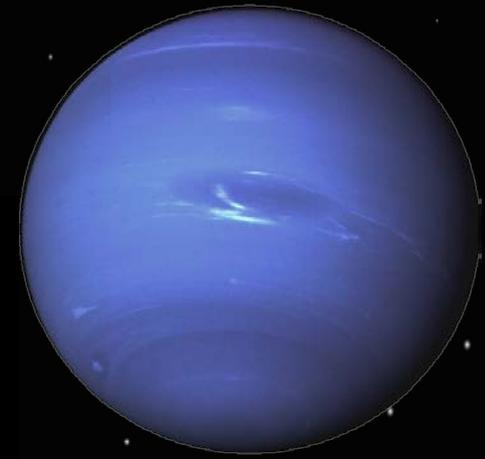
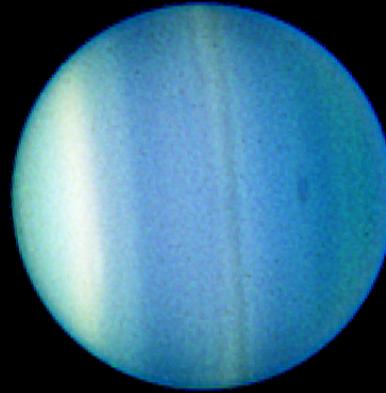
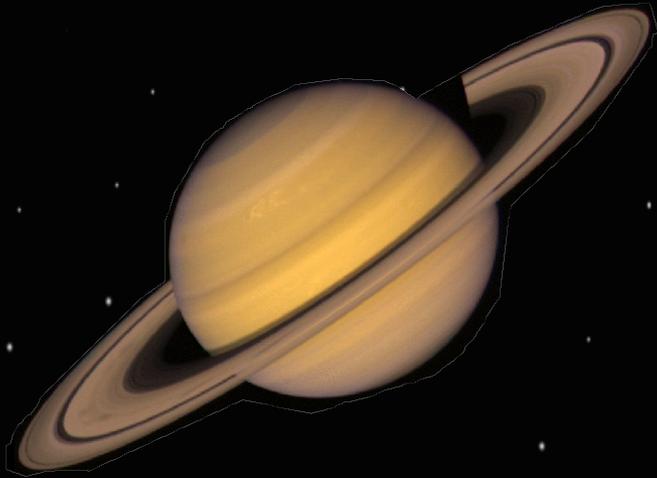


Outer Solar System Exploration



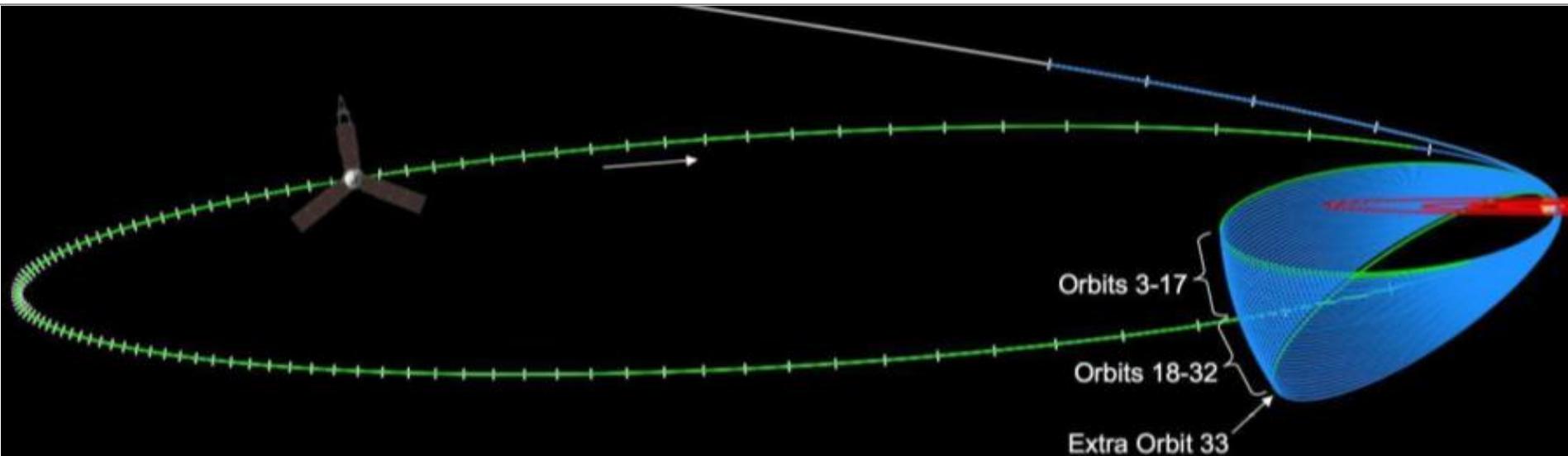
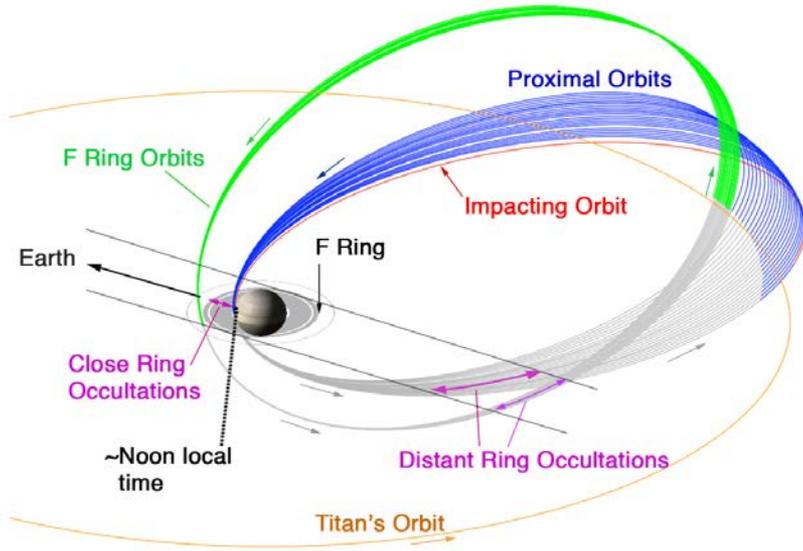
Outer Planets
Assessment Group
(OPAG) Report
October 2013

OPAG Assessment: Mind the Gap

- OPAG regularly evaluates outer solar system exploration goals, objectives, investigations and required measurements on the basis of the widest possible community outreach. The group assembles twice per year to assess the current state of outer solar system exploration, goals for future exploration, and technology development needed to achieve those goals.
 - >500 people have signed up on OPAG website with indication of interest
 - Most recent OPAG meeting was 15-16 July 2014
- ***Our biggest concern remains the looming gap in missions to the outer solar system***
- The near-term future is bright
 - Juno at Jupiter
 - Cassini at Saturn
 - New Horizons flyby of Pluto
- After that we have only
 - Limited participation in JUICE
 - Possible New Horizons flyby of a KBO

Juno and the final stages of the Cassini mission

- After a long successful mission at Saturn the Cassini End-of-Mission is planned for Sept. 2017 when the spacecraft runs out of fuel
- Juno End-of-Mission at Jupiter is predicted as October 2017 with expected radiation damage
- Comparable science objectives – giant planet interior structure, gravity field, auroral studies, magnetospheric physics



Threat to Cassini's final years?

- NASA's notional budget for the outyears no longer includes funding for Cassini in the outer planets line
- The final three years of the Cassini mission promise entirely new discoveries as the orbit of the spacecraft is cranked to high inclination and periapse is brought inside the rings. *This geometry enables acquisition of new data on Saturn's interior and magnetosphere*, as well as a new perspective for viewing its rings, that continue the Cassini legacy of ground-breaking new scientific discoveries in the Saturnian system; **equivalent to a New Frontiers class mission** (Juno)
- ***OPAG finding:*** *NASA should explicitly show a notional budget for the Cassini Solstice Mission in 2015, 2016, and 2017. OPAG asserts that the unique science return from the Cassini end-of-mission observations strongly warrants full funding of the final three years of the mission.*
- ***OPAG finding:*** *OPAG seeks clarification from NASA PSD on the details of the senior review process as well as a better understanding of the ground rules for these reviews. In addition OPAG suggests NASA PSD should consider returning to senior reviews focused solely on the merit of individual extended missions.*