



SCIENCE

# Outer Planets Program Status

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OPAG Meeting

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# Outer Planets Status



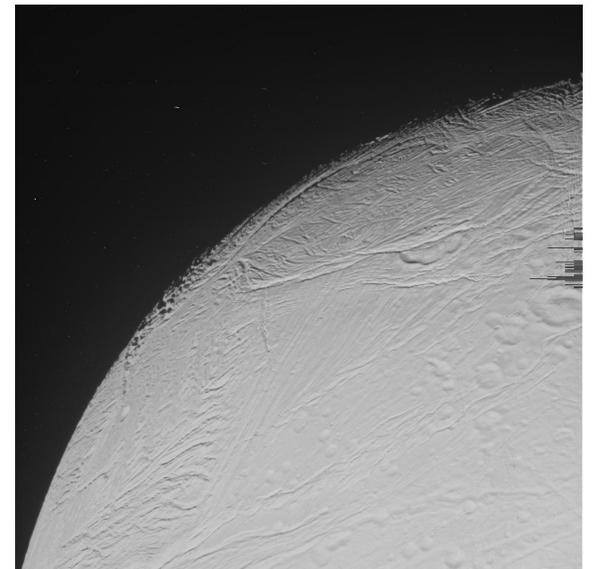
- PSD has been directed to conduct its first *consolidated* senior review
  - Review covers Cassini, LRO, Mars Odyssey, MER, MEX, and MRO for FY13-14 operations plan and budget
  - Proposals detailing two options (baseline plus 85% option) are due May 30
  - Review panel will provide written questions to projects, which will be answered at face-to-face briefing
  - PSD expects to hold this consolidated SR every two years
- Staffing changes:
  - Jim Adams, PSD Deputy Director, has accepted a position with OCT
  - Mary Mellott, Juno Program Scientist, retired in December
  - Henry Throop has started a detail at HQ and has taken over as Discipline Scientist for CDAPS
- Concept Study Reports for Discovery were recently submitted
  - As everyone knows, two of the three concepts in competition are outer planets missions



# Cassini Solstice Mission



- Overall Cassini status is positive with a healthy spacecraft
  - Cassini Plasma Spectrometer (CAPS) has returned to service
  - We just flew by Enceladus!
- Team is working on proposal for senior review
- Twelve Participating Scientists were selected just after the last OPAG meeting, fulfilling a 22-year old promise
  - We are currently competing the second round of Participating Scientists via CDAPS





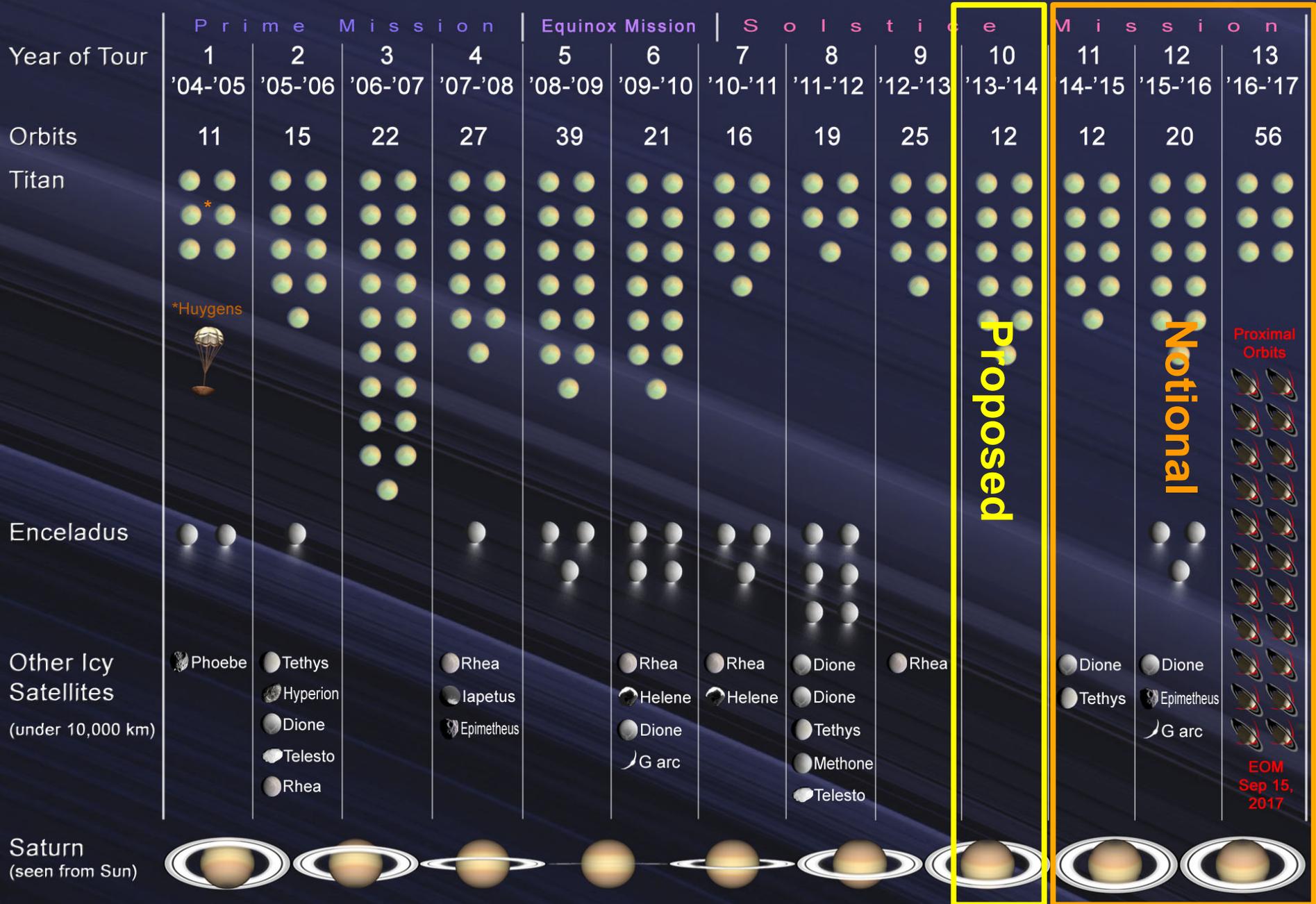
# New Cassini Participating Scientists



PI	Institution	Title	Discipline
Carrie Anderson	GSFC	Aerosol and Ice Properties of Titan's Stratosphere from a Combined Cassini CIRS and DISR Analysis	Titan stratosphere
Alberto Adriano	INAF-IASF (Italy)	Seasonal variability of the chemical composition of Titan's upper atmosphere	Titan atmosphere
Jason Barnes	Univ. ID	Distribution, Composition, and Texture of Titan's Evaporites	Titan evaporites
Gianrico Filacchione	INAF-IASF (Italy)	From rings to satellites: a VIS-IR spectrophotometric investigation of water ice and chromophores distrib. on Saturnian system icy bodies	Icy satellites
Matthew Hedman	Cornell	The Seasonal and Temporal Evolution of Saturn's Faint Rings	Rings
Brigette Hesman	GSFC	Cassini/CIRS Studies of Saturn's Storm Systems	Saturn storms
Carly Howett	SWRI	Thermal Mapping of Saturn's Icy Satellites	Icy satellites
Ozgur Karatekin	Royal Obs. of Belgium	Seasonal and Temporal Variations of Titan's Seas and Atmospheres	Titan
Panayotis Lavvas	Univ. of Reims (France)	Aerosol properties in Titan's upper atmosphere	Titan atmosphere
Carol Paty	Georgia Tech	Seasonal Variability of Saturn's Magneto-sphere	Saturn magnetosphere
Paul Schenk	LPI	The Snowpack of Enceladus	Enceladus craters
Jason Soderblom	Univ. AZ	Organics on Titan's Surface	Titan surface organics

# Cassini Mission Overview

Four-Year Prime Tour, Equinox Mission, and Solstice Mission (Proposed), July 2004 - July 2017



Proposed

Notional

Proximal Orbits

EOM Sep 15, 2017



# ESA L-class Mission Competition



- Three candidates (JUICE, IXO, LISA) remain in competition for ESA's L-class mission opportunity
  - Further information in tomorrow's JUICE briefing
- An ESA AO will follow soon thereafter for downselected mission
  - If selected, JUICE team plans AO release in summer 2012
- NASA and ESA have begun deliberations to work out an agreement for US-provided instruments on the JUICE payload
  - NASA's effort to understand and scope its level of investment would certainly benefit from any updated teaming arrangements you can provide to me...



# Descoped Europa Trio - Status



- Pursuant to Decadal recommendation, NASA is adapting the Europa mission concept to find major cost reductions to the Europa mission concept
- Intent of the Trio study (orbiter, lander, flyby) is to define and validate a set of minimum concepts that demonstrate missions exist at the lower end of the cost spectrum that still provide significant science return
- Last fall you heard briefings on the completed orbiter and flyby concepts; today you will hear about the lander
- Results of the trio (and their independent review results) will be considered with many other inputs as NASA determines the next steps



# Outer Planet Flagship Budget



- FY12 budget allocated \$43M for outer planet flagship missions
  - Budget acknowledges that descoped studies (the Trio) are near completion and requests study report be submitted to Appropriations Committee
  - Budget directs that NASA continue working on “detailed definition of an appropriately descoped flagship mission...”
- We intend to follow the law
  - We have spent \$4M of the \$43M on the descoped Europa trio study (first sub-bullet above)
  - We currently have permission to spend an additional \$5M of detailed definition of a single mission (second sub-bullet above)



# Repositioning the Outer Planets



- With the release of the Decadal Survey and the developing budget environment, the issues have become
  - How do we create mission opportunities for destinations in the outer solar system?
  - How do we best position the outer planet community to respond to those opportunities?
- We need to mature key elements including science definition and prioritization (including broad community “buy in”), mission concepts, technology identification and investment, Decadal Survey interpretation and implementation, policy development
- What is OPAG doing in these areas? What is NASA? What should they be doing?
- The next Discovery AO is currently scheduled for release in FY15. What are we doing in FY12-14 to prepare for it?