



# Outer Planets Program Status

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OPAG Meeting  
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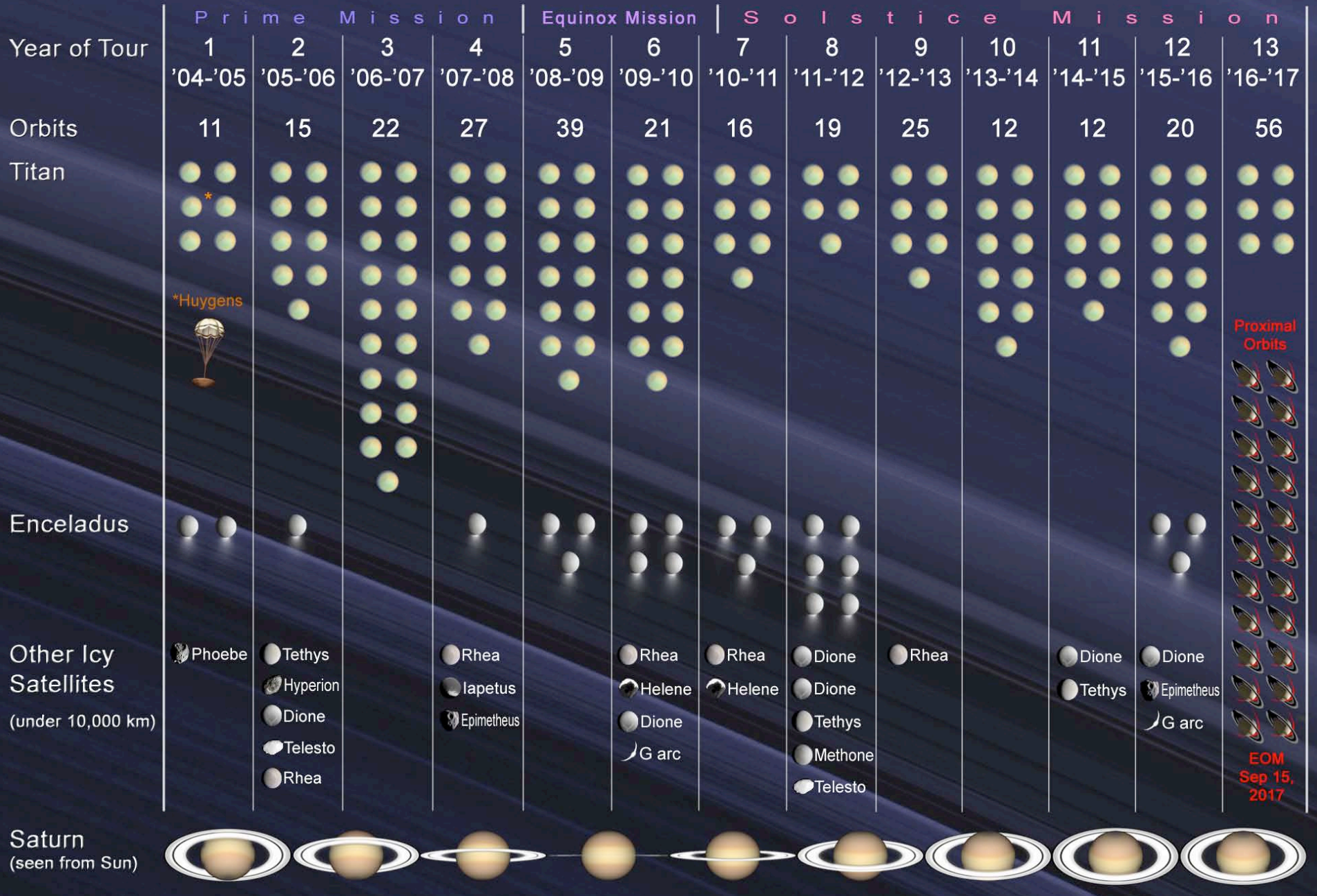
# Cassini Mission to Saturn



- Over half way through first extended mission (Equinox mission)
- Spacecraft healthy\* with a little less than half the hydrazine left
  - Swapped RCS thrusters to B branch in March
    - Performance of A branch thrusters was consistent with end of lifetime
    - At current usage levels B branch will reach same throughput as A branch by 2014
    - Project is studying A branch degradation and potential operations changes for B branch
- Senior review of XXM (Solstice mission) conducted Feb 10-11
  - Very positive report recommended funding XXM at 60%/75%, continuing to improve usability of data, selecting additional IDS's, utilizing Cassini as a training opportunity, producing a traceability matrix, and continuing senior reviews at appropriate times
  - HQ announcement of decision tied to release of FY11 budget ~Feb 2010
- Data Usability effort is proceeding with tangible progress. For example,
  - PDS-funded Ames effort to study improved user access is focusing on organization and access of Titan data (contact Reta Beebe to contribute)
  - HQ is funding creation of some User Guides authored
  - New PDS image Atlas available: <http://pds-imaging.jpl.nasa.gov/search/cassini>
  - Workshops vs. online tutorials

# Cassini Mission Overview

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



EOM  
Sep 15,  
2017



# Supporting Research and Technology



- Cassini Data Analysis Program
  - Proposals were due May 1; Max B. is currently forming the review panel
- Outer Planets Research Program
  - 2004: 142 submitted, 53 selected (37%)
  - 2005: 80 submitted, 26 selected (33%)
  - 2006: 53 submitted, 12 selected (23%)
  - 2007: 117 submitted, 44 selected (38%)
  - 2008: 116 proposals submitted, 20 selected (17%)
  - Issues: proposal quality is up, “service” proposals
- Expanding the Cassini team is still under discussion and is tied to XMM announcement
  - I welcome input on how this should be implemented but urge you to do it soon
- Titan
  - Crafting a relationship with CNES for Titan balloon work
  - Awaiting direction from Decadal Survey to guide study efforts



# Europa Jupiter System Mission



- Continued progress on Risk Mitigation Plan as funding allowed
  - Far more detail to be presented at workshop this week
- Issued a Request for Information from the radiation industry for information on products and/or services that could benefit EJSM instrument providers
- **Organized second EJSM Instrument Workshop**
- Significant effort on foundational tasks needed to transition the effort from a “study” to a “project”
- Developing a single, vertically integrated team ESA/NASA team to study, develop and implement EJSM



# The Road Ahead



- Execute Risk Mitigation Plan identified in report and endorsed by TMC
- Address shortcomings identified by review
- Prepare for instrument proposal and selection
  - Educate community on mission parameters and radiation
  - Next instrument workshop is jointly sponsored by NASA and ESA and takes place immediately following this OPAG meeting
  - Define instrument acquisition strategy, schedule, and support to community
- NASA and ESA have made tremendous progress but many hurdles remain (budgetary, technical, political)
- Keep in mind that EJSM is a complex international mission that is currently in pre-phase A
  - We should expect some changes as we move toward and through Phase A (programmatics, schedules, unforeseen technical issues);
  - But the important things will not change (Europa radiation environment, key science objectives, ESA/NASA team)