

# Planetary Science Subcommittee Report to OPAG

teleconference  
July 15, 2013

*Presented by Janet Luhmann for PSS*

Our last meeting: April 4-5, 2013 PSS Meeting via Webex

Topics addressed:

- PSD Status (J. Green)
- Mars Program Status (L. May)
- MSL /Curiosity Update (J. Gortzinger)
- R&A Program Update (J. Rall)
- JUICE (J. Salute)
- Strategic Plan briefing (J. Rall)
- 'AG' Reports (AG Chairs and/or Reps)
- NAC IT Infrastructure presentation (L. Smarr)

Next teleconference meeting on July 19, 2013. Next in-person meeting tentatively planned for fall.

## What had occurred prior to our April meeting:

- Partial PSD FY13 budget restoration realized, including 75M dedicated to Europa Clipper further definition
- Selection of JUICE participants supported by NASA PSD
- Submission of proposals in response to Solar System Exploration Research Virtual Institute CAN
- Establishment of Mars 2020 mission SDT.
- Plutonium recovery strategy and PSD role further defined
- Announcement of HEOMD NEO capture mission
- Budgetary developments

Dr. Jim Green has provided you with updates on these.

# PSS General Discussions and Concerns

- Impact of sequestration and rescission cuts to partially restored PSD budget
- Impact of budget cuts on R&A programs and planetary science workforce
- Restoration of mission opportunities, especially Discovery and New Frontiers as soon as possible
- Uncertain fate of the Europa Clipper beyond FY13, ceding US leadership in outer solar system exploration within the next decade.
- Continuing efforts to keep Decadal Survey in Mars 2020 mission planning
- Procedures for private enterprise mission involvements and use of science community in joint efforts with HEOMD

## Trends in PSD R&A 2007-2011 (J. Rall Presentation):

- \* Overall: selection rates steadily decline from 35% to 24% while proposal submittal/year increases from ~1000 to >1300
- \* Specific cases of decreasing selection rate 2007-2011 in Core programs:

Cosmochemistry: ~55% to 20%

Planetary Geology: ~55% to 30%

Planetary Atmospheres: ~55% to <20%

Planetary Astronomy: ~60% to <20%

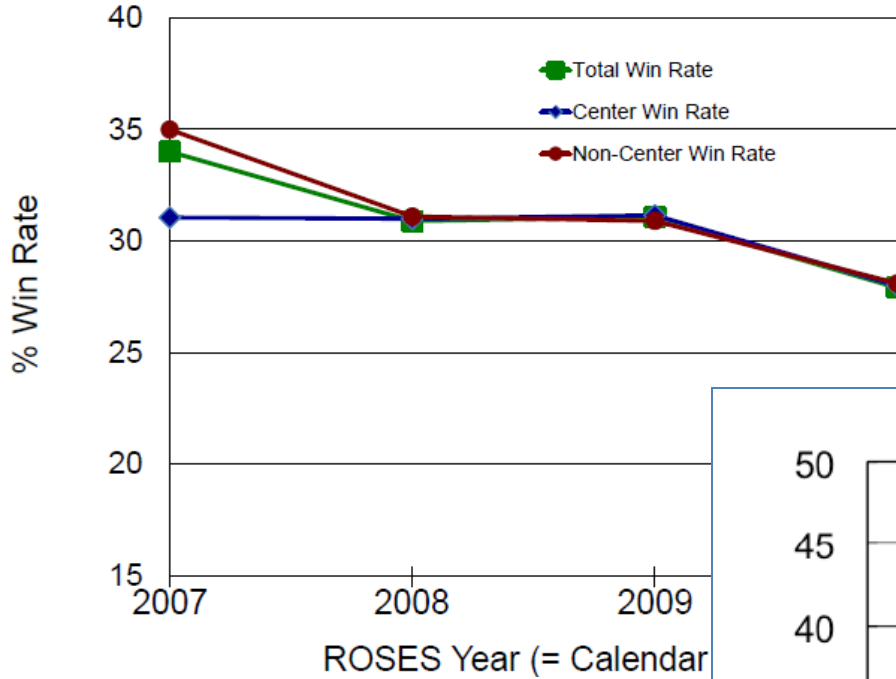
Mars Data Analysis: ~45% to ~20%

Mars Fundamental Research: >40% to <20%

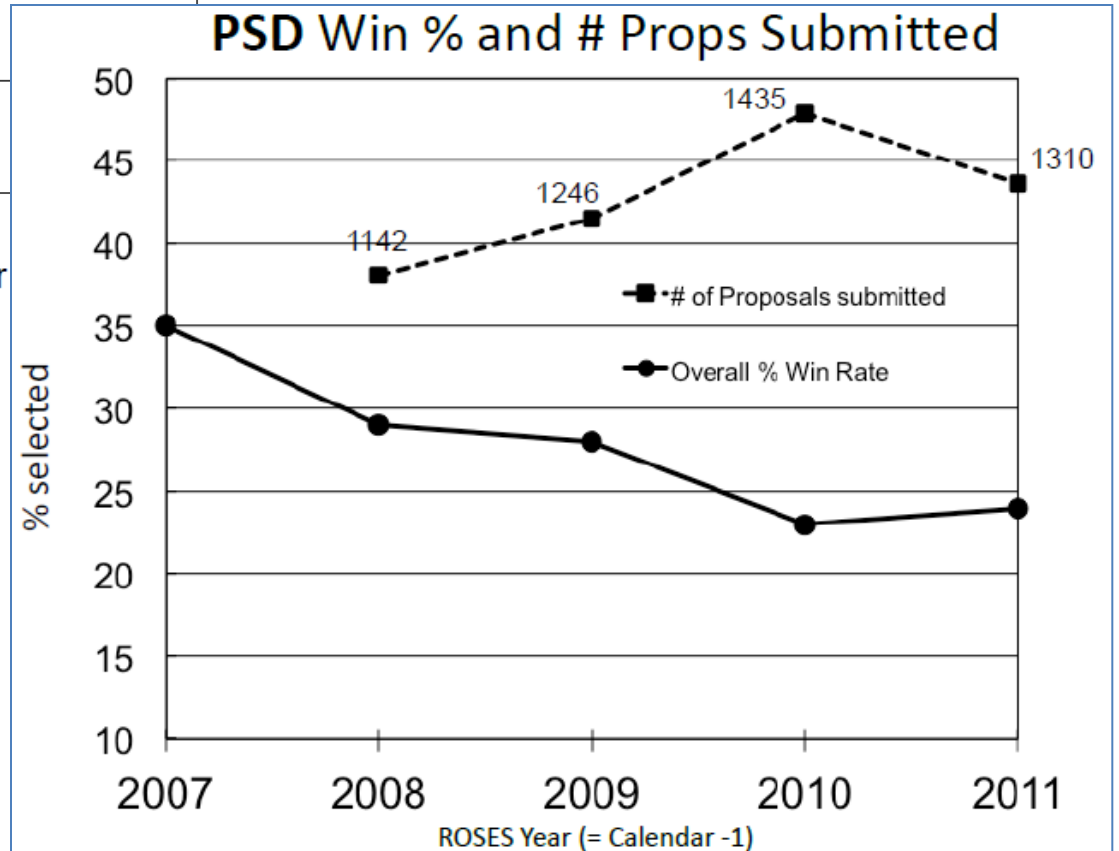
Instrument Development: ~25% to <15%

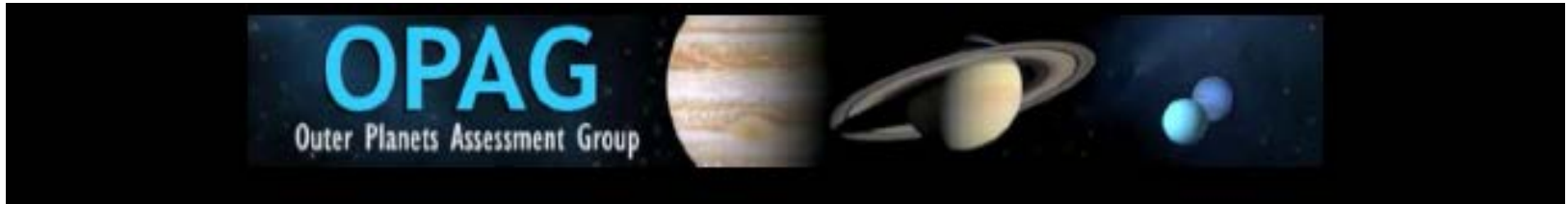
Exobiology: >40% to <20%

# Overall SMD Win Rates vs. ROSES Year by Org



***Downward trends in PSD R&A were steeper than for all SMD even before FY13 budget issues***





## Selected specific OPAG Concerns:

- After 2017 no spacecraft will operate at the giant planets and their satellites for 13 years (JUICE launches in 2020, ~ 10 year cruise time)
- \* NASA plans for proceeding with the Europa Clipper are needed
- \* Cassini must be exploited through its extended Solstice mission (to mid 2017) to take full advantage of this spacecraft
- \* NASA plans for supporting future JUICE science are needed
- \* Should CAPS consider extending the next New Frontiers mission options to include the next 2 lists due to the delay in opportunity?
- Options for selectable outer planet missions in the Discovery line need to be considered

Items for our upcoming PSS teleconference on July 19:

- Program update including budgetary issues and missions status/plans (Jim Green)
- R&A Program status/updates (Jonathan Rall et al.)
- Discussion of major issues arising since last meeting:
  - EPO support status
  - Mars 2020 SDT report overall impact on PSD
  - Future of non-Mars activities and plans of PSD\*



The PSS April 4-5, 2013 full Meeting Findings text is posted at:

[www.lpi.usra.edu/pss/](http://www.lpi.usra.edu/pss/)

-and in the following slides.

# PSS April 2013 Meeting Findings (1)

## Findings:

1. The PSS heard from PSD Director Dr. Jim Green about the latest news on the FY13 budget. In a move that recognizes the value and interest of NASA's Planetary Science activities to the Nation's space research and educational enterprises, the congressional budget replaces some of the PSD funding lost in the President's FY13 budget. The congressional recommendation of a PSD budget that is increased by ~\$220M prior to sequestration represents significant recoveries (about 50%) of some key planned efforts including ~\$75M toward defining the next flagship mission to Europa (the highest large mission priority in the decadal survey) and the possibility of announcements of opportunity for Discovery and New Frontiers PI-class missions that are a year earlier than were anticipated given the President's FY13 budget. The increased budget also enables our contributions to international missions such as the European ExoMars and JUICE missions to be realized without sacrificing other projects including ongoing missions. Our congressional representatives, supporters in the public, and strong PSD leadership are responsible for these changes in our support at a time when discretionary funding is increasingly targeted for cuts. **The PSS gratefully acknowledges this positive and supportive response, on the part of Congress and the public, and the extra efforts of the PSD Director as an essential and responsive source of information, to a budgetary crisis that could have undermined what has been a US leadership role in planetary exploration and science for at least the next few decades.**

## PSS April 2013 Meeting Findings (2)

**2. Until final decisions are made on the sequestration and rescission reductions, and then by the NASA administration on how the agency budget cuts are distributed among the divisions and activities, PSD will not be able to proceed forward with the potential benefits described above.** In the meantime, ongoing activities involving PSD-supported travel and EPO efforts have been significantly impacted pending further directives from NASA.

## PSS April 2013 Meeting Findings (3)

- 3. R&A programs are still struggling and sequestration and rescissions could further erode selection rates, particularly program elements with late-in-the-year due dates and decisions.** In spite of the good budgetary news, the PSS is concerned about the impact of the budget cuts, of still uncertain amounts, to the individual scientists and efforts supported by the R&A programs. Because the missions are necessarily given priority in funding due to the long term commitments and investments they represent, the R&A programs that support smaller, focused, often less-visible activities are typically of lower priority in decisions on where to spend available resources. The R&A programs have had a recent trend of over-subscription and resulting low selection rates (~10-20%, typically) in part due to the increasing reliance of missions on the R&A programs for their extended science analyses, and in part due to the historical lack of other sources of support for planetary science and scientists (re. Bagenal survey). Thus this already struggling part of the PSD and its community is set to suffer even more shrinkage with the expected cuts. In particular, later-selected programs and the tier of previously 'selectable' proposals that used to obtain late-year support will suffer. In the view of the PSS, programs with selection rates below 10% are not viable. PSD science workforce and their expertise will be lost unless some special commitment is made by PSD to protect this element of the division's activities. Considering the windfall of new observations that have been accumulating and will result from reaping the fruits of the recent 'year of the Solar System', together with missions just arriving at their targets that have limited-size project-supported teams, this is a serious matter requiring renewed consideration.

## PSS April 2013 Meeting Findings (4)

**4. The PSS strongly supports the PSD Director's efforts to recover the Decadal Survey-recommended cadence of Discovery and New Frontiers mission opportunities as soon as is feasible.** These programs keep NASA at the forefront of planetary exploration. They also allow the US to take leadership roles in international collaborations enabling larger endeavors. A wide range of paradigm-changing and textbook-rewriting discoveries, some of which are emphasized in the Decadal Survey, can be accomplished by these competed, cost-capped PI-led missions, maintaining our competitiveness as the longer-term programmatic missions are being developed.

5. Relating to the next New Frontiers announcement of opportunity, **the PSS recommends that NASA ask CAPS to consider the extension of the candidate mission list to include those proposed in the decadal survey for the next two cycles.** This broader menu will allow those engaged in these mission studies to have an opportunity to propose and to participate in their realization within their career lifetimes.

## PSS April 2013 Meeting Findings (5)

6. The PSS notes that the welcome \$75M appropriation in FY13 for pre-formulation/formulation of a Europa mission is good news but no clear path forward has been defined, i.e. there is no specific language from NASA committing to an actual mission. Thus there remains uncertainty about the future of planetary flagships in the projected political and budgetary environment. Such uncertainty can introduce delays that compromise the value of the studies that are being invested in (e.g. as technologies change).

**The PSD needs to document and pursue specific next steps toward the realization of the Europa Clipper mission.**

7. Mars 2020 mission planning activities within NASA SMD and the PSD should continue to be responsive to the Decadal Survey with regard to sample return. This mission also serves as an opportunity to further develop our interaction with HEOMD. Continuing to take advantage of the AGs is one way to accomplish this, but related joint efforts involving HEOMD and PSD could be better defined and any opportunities advertised to the community-at-large.

## PSS April 2013 Meeting Findings (6)

8. The planned NEO survey B612/Sentinel mission is a potentially important element of the small bodies enterprise of PSD, but the SBAG and PSS alike are insufficiently informed about the mission plans and activities. As B612 represents a possible new direction for future missions of scientific value carried out under private sources of funding, it is important for the PSS and the larger community to understand more about the logistics and role of NASA in this effort, and to appreciate how the planned mission relates to science targets within the PSD purview. Additional open discussion and documentation of this and similar activities is needed.  
Similarly, there is occasionally NASA SMD-related news concerning agency activities in planetary exploration or science that surprises essentially the entire planetary science community. PSS encourages the PSD and SMD to make more use of the community's expertise, e.g. through PSS and the AG's, as a resource and advisory arm (including SBAG for recently announced NEO exploration plans as an example). The investment the Nation has made in educating the PSD workforce can be put to better use in some of the areas the agency is considering, leading to the most informed decisions and media communications.