

PAC Findings/Recommendations

Meeting: November 13-14, 2023

Submitted: December 5, 2023, by Serina Diniega (PAC Chair)

1. SRB Process Updates

Finding: The PAC recognizes that the Standing Review Board (SRB) serves a critical process in mission development and appreciated hearing about the large effort within NASA to improve the SRB with regards to both procedures and cultivation of a large and diverse pool of qualified individuals to potentially serve on future SRBs.

Recommendation: The PAC encourages SMD to have more transparency in sharing the planned changes to the SRB processes with the relevant disciplines' science and engineering communities. Towards that end, the PAC recommends sharing the final developed plans and actions within public forums, not just internal NASA forums and memos. Additionally, the PAC agrees with the importance of developing a broad and diverse base of potential SRB members and encourages (1) open calls for nominations and self-nominations for potential SRB members and (2) that opportunities for mentoring/training on the SRB processes and roles are made appropriately open so that many folks, with a range of relevant expertise, can develop the skills needed to serve on future SRBs.

2. MSR and NASA Budget Concerns

Finding: The PAC recognizes the extreme challenge of decision-making in the current uncertain budget environment and expresses our sincere appreciation for the level of transparency shown with respect to PSD budget priorities and the development of NASA's response to the MSR IRB. The PAC continues to support the Decadal recommendations/priorities and the PSD funding priorities laid out by Lori Glaze (initially endorsed in the PAC June 2023 Finding).

Recommendation: The PAC reaffirms support of both the Decadal's prioritization of MSR and the need for balance across the planetary portfolio and community support. The PAC recommends continued focus on both those aims as the MSR budget and NASA's plan become better defined and looks forward to hearing the full NASA response to the MSR IRB in the spring.

3. Mental Health within the Planetary Science Community

Finding: The PAC recognizes the impact of mental health on science products and composition of the planetary science community. Studies of the type that Dr. David Trang has undertaken and presented to the PAC are important, especially if contributing to regular monitoring of the health of the community.

Recommendation: The PAC recommends that any NASA workforce survey include an assessment of mental health and that NASA continue to make progress towards addressing the Decadal Survey recommendation for regular workforce assessment¹.

¹ PS&A DS/OWL, Chap. 16: *"Recommendation: NASA PSD and NSF ... should make it a priority to obtain currently lacking evidence about fundamental aspects of the state of planetary science and astrobiology*

4. Astrobiology Programs

Finding: The PAC appreciated hearing about the developing new SMD/PSD Astrobiology leadership division of labor and are glad that the leaders are working well together. Some challenges may remain in leadership organization and implementation of the Astrobiology Research Coordination Networks (RCN) structuring. The recent reorganization of leadership and community structure are sources of uncertainty in the Astrobiology community.

Recommendations: The PAC recommends that:

- (1) the Staff Scientist for Astrobiology Strategy present more concrete goals and related plans by the Spring PAC meeting. The PAC suggests a movement from 'broad ideas' to specific goals and pathways for achievement, in order to supply the Astrobiology community with useful guidance in this period of restructuring.
- (2) the Staff Scientist for Astrobiology Strategy develop metrics to assess whether the RCNs, as a whole, are meeting the goals of broadening community involvement and belonging vs. further dividing the community into selective groups.
- (3) that lessons from the NExSS assessment and other discussions be used to improve the community-building and -connecting results of the RCNs, and that those plans and actions be shared with the community.
- (4) the Astrobiology program consider centralizing some administrative support for the RCNs so as to more efficiently spread some lessons learned between RCNs and alleviate that effort from the RCN leads, thus also mitigating differences in home-institution-provided support.

5. R&A Updates

Finding: The PAC learned of the intent to merge Emerging Worlds (EW), Solar System Workings (SSW), and Solar System Observations (SSO) into a new Solar System Science (SSS) program, with rationale for this change. However, the PAC and Decadal Survey raised concerns about merged programs versus smaller, individualized programs (the DS discussed the newly formed SSW program²). The PAC raised additional concerns about impacts of the merger on the available reviewer pool and generated reviews.

Recommendations: The PAC recommends that:

- (1) PSD should delay making this change until (A) the broad community can be informed of the planned change and provide adequate feedback and (B) PSD completes its assessment of

communities. NASA PSD and NSF should engage with experts to undertake data collection on 3-to-5-year cycles with a focus on obtaining accurate data on ...")

² PS&A DS/OWL, Chap. 17: "Unsurprisingly, the nature of SSW as the amalgamation of multiple antecedent programs means that it has received a plurality of all PSD R&A proposals each year since its inception: ... This has, in turn, posed a considerable logistical challenge to PSD program officers as they organize multiple review panels and work to avoid often complex conflicts of interest that can limit reviewer availability. Given these constraints, and that SSW review panels are typically grouped by science theme, the value to NASA of a single, expansive program—instead of multiple, thematic programs that together are just as responsive to the NASA's Science Plans as SSW—is not self-evident."

the no due date (NoDD) program and determines if NoDD will continue. When informing the community, PSD should very clearly share the rationale, including expected enhanced science value, for merging these programs with the planetary science community.

- (2) PSD should include an explanation for how they will maintain standards for conflict of interest in reviewer pool and quality of reviews.
- (3) following the merge, PSD should maintain a consistent level of opportunities for proposers to the original individual programs, such as maintaining appropriate funding levels within SSS for the individual programs, relative to inflation and to each other. PSD should communicate transparently with the community on this point, such as showing selection rates/funding within SSS by topic in future R&A reports.

6. Accessibility and Inclusion for NASA-Supported Meetings and Facilities

Finding: The PAC heard significant and continued concerns from the community regarding workforce accessibility and inclusion issues for both NASA-supported facilities (such as the MSR sample handling facility) and NASA-supported meetings/workshops. The PAC also heard some great ideas with regards to pertinent considerations for site selection, timing of meetings, and values/issues that come with options such as rotating meeting locations between years. The PAC encourages PSD to continue to listen and consider options for including accessibility and inclusion within facility site selection and meeting/workshop development, within legal bounds and with consideration of the needs of historically underrepresented groups.

No recommendation attached.

7. Lunar reference frame

Finding: The PAC recognizes NASA's potential influence over planetary mapping standards and that the relevant planetary science communities have weighed in on the question of lunar reference frames. The PAC endorses the MAPSIT/LEAG white paper³, including their reasoning and findings (i.e., use of ME over PA lunar reference frame for mapping).

No recommendation attached.

³ https://www.lpi.usra.edu/leag/reports/ME-White-Paper_Final.pdf