

## ***Final PAC Findings, from meeting June 21-23, 2022***

1. **Decadal Survey Finding:** The PAC thanks the committee members of the Planetary Decadal Survey for their significant contribution in researching and generating the consensus report, “Origins, Worlds, and Life: A Decadal Strategy for Planetary Science and Astrobiology 2023-2032” (OWL). While the PAC is still digesting the full content of the OWL, we express our support for the excellent roadmap it provides for NASA in the coming decade. In particular, we express strong support for the OWL recommendations regarding:
  - a. minimum R&A funding as a percentage of PSD total budget,
  - b. the Recommended Program,
  - c. actions to benefit the state of the profession,
  - d. development and timely launch of NEO Surveyor,
  - e. Uranus probe development start by FY24,
  - f. development of sufficient RPS supply for the Recommended Program, and
  - g. expanding commercial providers for CLPS and taking CLPS beyond the Moon.We look forward to NASA’s upcoming response to the OWL.

2. **Workforce Information Finding:** The PAC endorses the recommendation from the Decadal Survey State of Profession chapter for the collection of information about the planetary science community workforce.

**Recommendation:** The PAC encourages PSD to explore creative ways to obtain and analyze these data, within NASA’s legal confines; for example, working with professional societies and cross-AG forums. Such efforts should also be done in collaboration with social scientists with expertise on writing and administering such information collection. In future PAC meetings, the PAC requests to hear presentations from those who have successfully run past planetary science workforce surveys and other relevant information collections, to explore potential solutions and collaborations to fulfill this need.

3. **Code of Conduct Finding:** The PAC recognizes the need for inclusion of a code of conduct (CoC) in all NASA-supported activities and encourages CoC standardization to ensure that best practices are being followed, which include a reporting and accountability structure—as also recommended by the Decadal Survey. The PAC commends the Astrobiology program for now requiring a CoC-type policy for field site use and the AGs for implementing CoCs for their steering committees and events.

**Recommendation:** The PAC recommends that NASA provide a code of conduct (CoC) template for all NASA-supported activities, which includes a reporting and accountability structure. For each activity, the CoC should be introduced at the beginning of the event and posted where appropriate, in order to encourage all participants to be both mindful and accountable.

4. **NSF Collaboration and ANSMET Finding:** The PAC recognizes the critical role of NASA’s interagency collaboration and coordination with NSF. For example, over four

decades, the U.S. has annually performed meteorite recovery through ANSMET (the Antarctic Search for Meteorites Program). The meteorites recovered by ANSMET are vitally important for planetary research, providing scientists from around the world with samples of planetary bodies not easily obtainable by other means and at relatively low cost compared to sample return missions. Meteorites motivate and provide key information to preparations for, analyses during, and context following current and planned missions to small bodies, moons and planets. ANSMET is funded by NASA but relies on logistical support of Antarctic field activities by NSF. Due to the ongoing COVID-19 pandemic, the 2020-21, 2021-22, and 2022-23 ANSMET field seasons have been canceled, halting meteorite collection and field work on analogs in Antarctica.

**Recommendation:** The PAC encourages NASA to pursue conversations with NSF to prioritize support for critical work funded by NASA but requiring NSF coordination and support. In particular, the PAC encourages resumption of ANSMET field seasons as soon as practical.

5. **Ground-based Radar Finding:** The PAC recognizes the importance of ground-based radar observations for both planetary science and planetary defense and continues to recognize the impact of the loss of Arecibo Observatory planetary radar system. The PAC supports ongoing cross-divisional discussion to replace the capabilities lost at Arecibo Observatory and supports the Decadal Survey recommendation, highlighted by many AG findings, to “develop a plan for ground-based planetary radar capabilities comparable to or exceeding those of the Arecibo Observatory necessary for achieving planetary defense objectives”.

6. **R&A Finding:** The PAC commends PSD for their general successes in R&A trials (NoDD and DAPR), and related community presentations, intended to improve equity, efficiency, and transparency. Such transparency continues to build support and trust in the community for the R&A program.

**Recommendation:** The PAC recommends continuation of the NoDD and DAPR programs in the future. The PAC also recommends including a line in the selection letter to “selectable” proposals in NoDD programs with targeted response time. The PAC encourages PSD to continue to provide detailed communication about the R&A program to the planetary science community, specifically the high-fidelity data on proposal pressures, selection rates, community statistics, and assessments of the NoDD and DAPR programs presented to the PAC.

7. **H2O Finding:** The PAC commends the accomplishment of the organizers and student participants for the first year of the Here to Observe (H2O) program. We were very impressed at the activities and level of inspiration and passion displayed, as well as the great ideas from the student participants for improving the program.

**Recommendation:** The PAC recommends continuing to develop this program, especially in directions that will lead to lasting and authentic connections with the partner universities and following the advice of the student participants. This development

should also include definition of ways to assess impact of the program. Additionally, the “co-creation” premise of this program was key for its success and should be continued, and perhaps should serve as a model for other NASA IDEA and outreach efforts; the importance of relationship building was also discussed in Planetary Science & Astrobiology Decadal Survey white papers, such as that by [Gardner-Vandy, Scalice, et al. \(#471\)](#).

8. **IDEA Finding:** The PAC commends NASA’s support for the recent [Advancing IDEA in Planetary Science conference](#) (IDEACon), and the usefulness of the detailed report of recommendations from IDEACon. The PAC emphasizes that there remains a need for improved and intentional coordination for IDEA efforts within and outside of NASA SMD. While the Cross-AG IDEA working group helps with some of this coordination outside of NASA, the coordination is not yet sufficiently happening with the inside NASA efforts and between internal and external efforts.

**Recommendation:** The PAC endorses the recommendations from the IDEACon report and requests from NASA a response to the report’s top recommendations for funding agencies at the next PAC meeting. The PAC urges further coordination between NASA and community efforts, with one option being the outward-facing IDEA-coordination position as well development of a centralized repository of relevant resources, as recommended in the IDEACon report. An existing model that may inform efforts to address this is the Planetary Data Ecosystem (PDE), where a paid, non-civil servant Chief Scientist has a mission to engage the community, is supported by an internal NASA group, and provides institutional support for a central information repository.