

Planetary Science Subcommittee Survey

US Planetary Scientists: Is Your Laboratory Adequately Supported?

The Planetary Science Subcommittee (PSS) perceives that laboratories supporting Planetary Science Division (PSD) research may be underfunded, and that support for laboratory technical staff is difficult to obtain.

PSS is conducting a survey of laboratories that will be used to inform discussions with PSD about the planetary community's capabilities and challenges, and to help formulate potential solutions.

Please take the online survey at: <http://tinyurl.com/psslabs>

61 responses, 52 of which are presently supported by PSD, but not in terms of technical support.

- Major innovations in analytical techniques have come out of NASA-funded programs driven by the need to analyze rare and precious samples. This has only been possible because of stable support for University-based laboratories. Viable funding mechanisms need to be found so that the analytical Cosmochemistry community can sustain the process of supporting and maintaining the complex laboratory activities.
- The development of state-of-the-art instrumentation and high precision, high sensitivity analytical techniques often takes many years of dedicated effort and thus requires a basic continuity in funding. Such facilities require highly trained personnel and operating budgets that are significantly higher than average grants for specific science investigations by individual PIs.
- State-of-the-art laboratory facilities require technical personnel and these positions cannot be regarded as ephemeral. They are critical for a sound and productive laboratory-based research program.
- It is wholly unrealistic to include technical support in NASA grants. Grants exceed >\$100k/yr for a PhD student, alone. There is strong pressure to make grants cost-competitive and this means that technical support gets reduced to preserve student/post doc labor. The tenuous nature of supporting staff on 3-year grants (particularly at the realistic 25 - 30 % level per grant) makes it difficult to retain good professional researchers and technicians. This is exacerbated by dilution of opportunities for sample research after the reorganization

- The consolidation of COS/OSS/LASER/EXO for lab work means that we are always competing with ourselves for selection. **The ROI for proposals is approaching zero.**
- Without a commitment from NASA for sustained support and further development of laboratory infrastructure, **competitive advantage and young talent will move overseas, and the specialized skills and capabilities are either greatly diminished or lost.** The **loss of national capability and leadership of the field** by the choking-off of the pipeline for training the next generation in technical excellence must not be unintended consequences of reorganization of research programs and the new funding models of PSD.
- **Labs are starting to accept Chinese PhD students paid by a CSC fellowship from the Chinese government.** Under the terms of this fellowship, the student has to go back to China for 2 years after completing his/her PhD. Those students, who will be trained in the US, may never return to the US after going back to China.
- **University labs do not have - and cannot build up - any reserves that would enable us to go through funding gaps.**
- A dedicated pot of money for laboratory technical support staff would be most welcome, especially as we work to acquire new and more complicated instrumentation that requires constant support and supervision of graduate students.