

**NSF Committee of Visitors Report
Instrumentation and Facilities Program
Division of Earth Sciences
Directorate for Geosciences
August 22-24, 2007**

RESPONSE TO SPECIFIC COMMENTS IN THE COV REPORT

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On August 22-24, 2007, a Committee of Visitors (COV) met at NSF to review the Instrumentation and Facilities (IF) Program in the Division of Earth Sciences (EAR). The review covered IF proposal and award actions for the Fiscal Years of 2004, 2005, and 2006 as well as more recent activities that reflect on the activities and development of the IF Program. We are very pleased with the overall results of the COV as outlined in the Executive Summary of their report:

“The EAR Instrumentation and Facilities (IF) Program supports world-class science across an astonishingly broad range of research and with a remarkable diversity of awards, ranging from temporary support for technical staff to long-standing support for major, national facilities (multi-million dollar per year budgets)...The IF Program excels in addressing NSF’s 4 strategic goals (Discovery, Learning, Research Infrastructure and Stewardship), and plays a special role in fulfilling NSF’s support of research having Broader Impacts, notably by sustaining – even creating – the equipment, databases, technical support and facilities infrastructure essential to education and research in modern society.”

While overall very positive and complimentary of NSF’s management of the IF program, the COV report contains some specific recommendations on IF Program areas that the COV believes could be improved:

1. The Instrumentation and Facilities POs should partner with PIs to communicate more effectively to the lay public – not just the scientific community – the excitement, quality and societal impact of the outstanding science coming out of IF-supported facilities and research.

This is a good suggestion and we agree. The primary process for doing this within GEO is to have PIs and POs alert the Office of Legislative and Public Affairs when a press release or a Nature or Science magazine article is forthcoming. This will result in a joint press release from NSF and the PI institution. IF will renew its efforts to alert its PIs to the importance of this public information mechanism. Another highly effective communication mechanism is through the IF-supported facilities such as IRIS and UNAVCO. These facilities sponsor well-attended

museum displays, public lectures, and teacher workshops that convey the excitement and societal impacts of the Earth sciences to large numbers of the lay public each year.

2. EAR should partner with its PIs and advisory bodies to communicate more widely throughout the scientific community the effectiveness of its programs in terms of Broader Impacts.

This is a good suggestion and we agree. This is a topic that will be taken to the Advisory Committee for Geosciences for discussion and suggestions.

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3. ~~EAR should more explicitly include evaluation of management in its panel and advisory structures, and partner with the research community to identify and disseminate best management practices for large scientific projects.~~

In response to the increased NSF emphasis on good management, GEO has instituted exactly this recommendation by means of a requirement of a management review midway in the life of an award for a large scientific project. The review is done in partnership with the NSF Large Facilities Office. Submission of a renewal proposal is contingent on a successful review, or a successful improvement of management utilizing NSF expertise and best practices within the scientific community. EAR has conducted a number of these management reviews in the last two years. Best-practice dissemination is routinely done through advisory review panels and a regular facility-director management meeting series is under discussion

4. The COV reluctantly concludes that – among other possible solutions – a uniform policy of requiring a specific amount of cost sharing (e.g., 30%), whether from the PI's institution or from other funding sources, would result in a larger and more balanced community receiving funds.

Cost sharing policy is now determined at the NSF-wide level by the National Science Board and, as the COV is aware, the policy is to not require cost share, with the exception of the NSF-wide MRI program. Your recommendation to reinstitute cost sharing in the IF Program will be forwarded to NSF upper management.

5. ...with the large fraction of the IF budget going to facilities the program officers should consider panel members with management experience to help evaluate the management review of the large facilities.

This is a good suggestion and we agree. This is already done when a special emphasis panel is formed to evaluate management specifically and for the renewal of a large facility, but the standing IF panel would also benefit from members with increased management expertise.

6. As noted in the 2004 COV report, the Broader Impacts (BI) criterion historically has not been as fully considered as the Intellectual Merit (IM) criterion in proposal evaluation. We noticed a trend toward improved consideration of the BI criterion for the proposals from the more recent fiscal years (e.g., FY2006 as compared to FY2005 or FY2004).

Program officers will work to continue to improve BI analyses in panel summaries and review analyses.

7. A positive suggestion may be made regarding the need to engage more panel review members from the community. Although we recognize many implicit pitfalls in this idea, we suggest IF consider experimenting with greater use of tele-conferencing technology and/or other means of electronic interaction to maximize panel member interaction prior to panel meetings in order to shorten face-to-face panel meetings but keep them productive.

While tele-conference panel meetings have been used under special circumstances, such as after 9/11, they are not commonly used at NSF because of the requirements under the Federal Advisory Committee Act requiring the presence of a federal officer as well as to monitor conflict regulations. Expanding panel review members is a desirable goal but the extra cost must be balanced with the use of the funds for grant support. EAR management and program officers have been increasing the size of panels in the past few years to broaden panel diversity and areas of expertise.

8. NSF should develop a mechanism by which PIs' final reports could be exported into a database, and could be amended up to several years after the end of the grant. This would greatly facilitate Program Officers' abilities to collect, document and showcase the long-term impacts of IF awards.

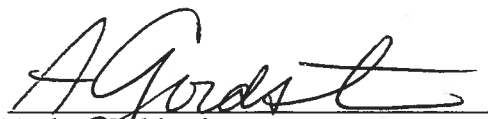
While such a capability does not exist presently in NSF's on-line reporting software, the ability to add later publications is currently under discussion.

We again would like to thank Professor Jeanloz and the members of the COV for their time and efforts in making these excellent recommendations that will improve the Instrumentation and Facilities Program of EAR.



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