

**Response of the Division of Astronomical Sciences  
to the Committee of Visitors 2005 Report  
December 2006**

The FY2005 Committee of Visitors for the Division of Astronomical Sciences met in February 2005 and produced a thoughtful and thorough report and helpful input to Divisional planning. Below we provide an update to our initial responses to the Committee's recommendations.

**AST Division Management**

- *The COV recommends that the Division be given positions for additional scientific personnel in order to decrease the workload currently imposed on Division staff, to ensure adequate oversight and program management, and to allow progress on new programs and projects being generated in the community.*

The Division agreed that the workload on AST staff has been, and continues to be very high. The previous two COV's also recognized the heavy workload and recommended additional staff for the Division. Fortunately, the Division was granted 3 new FTE's beginning in FY2006. Two of these are primarily for oversight and management of astronomical facilities and large projects and one is primarily for support of the individual investigator grants program. These positions were filled early in CY2006. These new positions, and some realignment of responsibilities among existing staff, has led to a significant improvement in AST's ability to exercise its oversight responsibilities and to meet proposal dwell time goals.

Nevertheless, the workload remains very heavy, particularly due to the activities associated with carrying out the Senior Review of AST facilities portfolio and the development of an implementation plan based on the review committee's recommendations.

**Strategic Planning and Implementation**

- *The COV strongly supports the planned Senior Review as the proper next step in the planning process.*
- *The COV recommends that the Senior Review focus on establishing a sustainable balanced program that is driven by science inquiry rather than the current wavelength-based structure.*

The Division appreciated the thoughtful, substantive discussion with the COV concerning the background, goals, and process for the Senior Review and welcomed their support for our taking this major, but necessary, step in planning for and implementing the

recommendations of the Decade Survey. Our goal is, indeed, a sustainable, balanced program that is not driven by a wavelength dependent structure.

In October 2005, the Senior Review Committee was constituted as a subcommittee of the MPS Advisory Committee and charged with producing a report by 31 March 2006, if possible. However, the Committee was urged to take as much time as necessary for their deliberations and they did so. The Committee held 4 face-to-face meetings and 6 plenary telecons over the period October 2005 to July 2006, and AST held 7 town meetings across the country from September 2005 through January 2006 to provide opportunity for community input. The committee delivered their report to the MPS AC in October 2006 and it was accepted by the MPS AC at its meeting on 3 November 2006. AST is now considering the recommendations and formulating an implementation plan in consultation with the facility managers and the community.

The report enumerates the 6 basic criteria on which their recommendations are based, the foremost of which was “optimizing the science” without regard to wavelength-based technique or administrative structure. The committee further called out the need to “bridge artificial divisions” in the community, recognizing that the tendency to look at the field in terms of wavelength-based techniques has led to inefficiencies, missed scientific opportunities, and, at times, unproductive tensions among astronomers. Their report goes to great lengths to avoid just these divisions.

- *The COV recommends that the Division continue to identify and lead development of appropriate joint interagency initiatives.*

Following on the successful interagency task force on Cosmic Microwave Background Research, the Division has led in the establishment of two others – the Dark Energy Task Force and the ExoPlanet Task Force. All of these task forces have been constituted as subcommittees of the Astronomy and Astrophysics Advisory Committee, a joint NSF-NASA-DOE committee. The report from the DETF was accepted by the AAAC at its May 2006 meeting, and has become a standard for researchers comparing techniques and project capabilities in dark energy research. The ExoPlanet Task Force has just been established and its membership being finalized. Its report is requested by October 2007.

NSF and NASA continue to plan for a joint solicitation for the operation and management of a national Virtual Observatory. Staff changes at NASA have delayed this process. We continue to work with our NASA colleagues to resolve differences in practice and policy to finalize the MOU. A draft program solicitation has been prepared at NSF, and is ready to start through clearance when the MOU is finalized. The continuing resolution for FY2007 has prevented the start of any new programs, including that for the VAO. In the meantime, AST has provided funding to the NVO team to keep the key project personnel in place and working on core capabilities and functions that will enable a smooth transition from the development project to an operating Virtual Observatory.

## **The Challenge of New Facilities**

- *The COV endorses the Division's new strategic plan to build a sustainable program using a community-based process that considers the scientific merits of extant facilities and programs as well as the advances that can be realized with new instruments and other initiatives.*
- *The COV strongly concurs with the recommendation of the AANM report and the conclusion of the Division that the AST grants program (AAG) should be maintained at or above its current funding level despite the severe budget pressure presented by ALMA and other proposed large facilities.*
- *The COV recommends that the Division continue to aggressively pursue its approach to the priority initiatives of the AANM report with a flexible, balanced response. This response should both advance the development of facilities and take advantage of opportunities associated with the scientific goals of those facilities to increase support for grants by means articulated in the AANM Decadal Survey and appropriate to the Division.*

As the Division proceeds with the formulation of the program for the coming years of the decade based on the report of the Senior Review and other community reports, we will take care to retain the touchstone of a healthy and growing grants program. The Senior Review committee recognized its importance in formulating their first recommendation, that "The Division of Astronomical Sciences should anticipate that pressure on the grants program will intensify over the next five years and should be prepared to increase its level of support to reflect the quality and quantity of proposals." We will consider this advice as we watch the evolution of the grants program and adjust the balance, as necessary, between our existing programs.

## **Programs**

- *The COV recommends that the Division continue and expand its leadership role in fostering the next generation of scientists poised to take full advantage of new facilities.*

The Division continues its efforts to ensure that students and early career scientists become experienced users of new tools and are enabled to take full advantage of new facilities. As an example of this kind of activity, the Division continues to support the National Virtual Observatory project annual summer school and to provide research support to those developing new data archives and tools for the Virtual Observatory. Both activities are designed to introduce students and early career scientists to the capabilities of the VO and develop experienced future users within the community. AST-supported REU programs continue to grow in number and diversity.

- ***The COV recommends that the Division continue to explore ways to unify and expand the EPO efforts within and across observatory enterprises.***

The EPO and PIO offices of our national observatories (NOAO, NRAO) and Gemini Observatory continue to be in frequent contact through informal correspondence of key personnel and through more formal annual meetings and workshops of their staff and the staff of interested private observatories. AST, along with the other MPS divisions, has participated in several joint EHR-MPS working groups to identify common interests and explore ways in which the two offices can work together to foster activities within their communities. Among the recommendations to come from these activities are ways in which the leaders of EPO and PIO activities within the facilities can interact more with education professionals participating in EHR-sponsored programs. Although no actions have yet been taken on these recommendations, AST expects to be active in ensuring that AST-sponsored projects participate in these activities as the opportunity arises.

- ***The COV encourages the Division to aggressively defend the spectrum allocations for scientific research and to expand efforts to keep the astronomical community apprised of critical issues.***

The Division agrees that the activities of NSF in the area of Electromagnetic Spectrum Management are critical and has increased the number of staff in AST responsible for addressing these issues. With the addition of new FTEs in FY2006 and the reallocation of some responsibilities among staff, the Division expects that it will be able to expand its activities to educate and inform the astronomical community of critical issues in spectrum management.

- ***Additional information to PIs regarding context of funding decision is desirable. There were some cases of disconnects between the individual reviews and panel summaries as documented.***

The Division now uses the ‘context statement’ in the electronic jacket to provide a more complete discussion of the review process and anticipated success rate in all of its grants programs which review proposals by panel. The Division also continues its policy to make every attempt to contact PI’s personally with notification of the funding decision before the official declination letter goes out, and program officers use these phone calls or emails to provide information on the rationale for the funding decision that may not be included in individual reviews, but that often appears in the program director’s analysis.

***The COV found that the processes used to solicit, review, recommend, and document proposal actions were done with the highest level of integrity, both with respect to the sensitivities of the proposers and to the merit of the science. The committee took special note of the care with which thorough summaries of proposal evaluations and decisions were documented by the Program Officers. {However}***

- ***There are concerns with respect to the consistency with which merit review Criterion II (i.e., “broader impacts”) is being applied in the review panels. COV***

*members found examples in their review of the jackets of reviewers who injected broader impacts rationale where this rationale was not provided explicitly in the proposal.*

- *Broader impacts criterion sometimes not explicitly addressed in individual reviews.*

The Division continues to work with the astronomical community to help them understand the “broader impact” review criterion and to address it in their proposals and to incorporate consideration of it in their reviews. It is now standard practice to instruct all AST review panels to consider both review criteria as well as to remind panelists to not assume the PI will undertake activities that are not explicitly stated in the proposal. A number of review panels included in their panel summaries suggestions to the PI for improving their response to the broader impact review criteria. We hope that these messages, coming directly from the reviewers, will help inform PI’s of the importance of addressing both review criteria. The Division will also continue its efforts to educate the astronomical community with regard to NSF review criteria.

#### **Response to the 2002 COV report**

- *Continued education within the astronomical community of opportunities to apply for NSF-wide programs is needed. To this end, utilization of the Division’s website for providing information about these programs is encouraged. At the same time, the astronomical community must assume greater responsibility in making fuller use of the Division staff for education about these opportunities.*

AST agrees that the astronomical community could take better advantage of NSF-wide funding opportunities, and will continue to foster more understanding of these opportunities. The Division uses its regular town hall discussions at the American Astronomical Society meetings and regular contributions to the AAS newsletter, to disseminate such information, and will work with the Society to identify other vehicles to do so.