

**Response of the Division of Astronomical Sciences
to the Committee of Visitors 2005 Report
31 October 2005**

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 agrees that the current workload on AST staff is very high. The previous two COV's also recognized the heavy workload and recommended additional staff for the Division. The increased number of proposals coming from the community, the increasingly complex projects underway, and the future projects being planned in the community have stressed our current scientific staff to an unreasonable level. The lack of time and resources to carry out appropriate oversight of facilities and large projects poses serious risks to these projects and the Division's ability to perform the review of proposals in a timely and responsible way.

Fortunately, the Division has been 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. As of October 2005 we are in the process of hiring into these positions and hope to have them filled before the first of the calendar year.

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 welcome 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.

As of October 2005, the Senior Review Committee had been constituted as a subcommittee of the MPS Advisory Committee and charged with producing a report by 31 March 2006, if possible. The Committee held their first meeting 19-21 October, and plans at least two more meetings. In recognition that extensive community input to the process is key to the success of the review and the development of a sustainable set of recommendations, the Division has scheduled a series of 'town meetings' around the country to speak to and hear directly from the community. Five town meetings have been held to date, and several more are scheduled.

The first meeting of the Review Committee focused on reviewing input from the AST-supported facilities and meeting with the facility managers. The Committee is developing criteria for evaluating the facilities and providing a basis for their recommendations on rebalancing the AST program. In keeping with the COV's recommendation, these criteria include factors such as scientific impact, training and educational opportunities, and providing a solid infrastructure to enable a diverse program of scientific research, rather than a wavelength-based approach.

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

The Division is leading two interagency task forces – one on Cosmic Microwave Background Research and one on research on dark energy. Both of these task forces are constituted as subcommittees of the joint NSF-NASA-DOE Astronomy and Astrophysics Advisory Committee. The CMB task force has produced its report, which was accepted by the AAAC at its October 2005 meeting. The DETF expects to produce a report by the end of 2005.

NSF and NASA continue to plan for a joint solicitation for the operation and management of a national Virtual Observatory. A draft MOU and program solicitation are undergoing final revisions before starting through the official clearance processes in both agencies.

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 Senior Review and the formulation of the program for the coming years of the decade, we will take care to retain the touchstone of a healthy and growing grants program. The Senior Review committee recognizes its importance and all community input the Division has received reinforces the need for a balanced approach and response that the COV recommends. We fully agree and pledge to continue working closely with the community to consider, and trade if judged appropriate, the merits of the elements of our existing program in comparison to the value of new instruments or approaches.

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 has recently awarded the National Virtual Observatory project several supplemental grants to support their 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.

- *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 suggestions for ways in which the leaders of EPO and PIO activities within the facilities can interact

more with education professionals participating in EHR-sponsored programs. 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 help of this additional staff, particularly when other positions are filled, 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.***

This past fiscal year, based on the COV's recommendation, the Division began using the 'context statement' in the electronic jacket to provide a more complete discussion of the review process and anticipated success rate in the Astronomy & Astrophysics Research Grants program and specialized programs such as the Program for Research and Education with Small Telescopes (PREST). The Division expects to extend this practice to its other grants programs in the future. The Division will also continue its policy to make every attempt to contact PI's personally with notification of the funding decision before the official declination letter goes out. 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. In this past proposal season, the Division took special care to instruct all of its 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 suggestions to the PI for improving their response to the broader impact review criteria. We hope that these messages, including those coming directly from the reviewers, will help inform PI's and the reviewers 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. AST continues to look for ways to populate the newly designed NSF web site to include information on NSF-wide programs as well as Divisional opportunities.