**Division of Astronomical Sciences Response
to the Report of the 2008 Committee of Visitors**

29 January 2009

The FY 2008 Committee of Visitors for the Division of Astronomical Sciences met in February 2008 and produced a thoughtful and thorough report with a number of valuable findings and recommendations. Below we provide an update to our initial responses to the Committee's recommendations.

AST Division Management

- *NSF should thoroughly review the staffing requirements of AST to determine the level required for AST to adequately support its base program while playing a leadership role in the complex, international development of the next generation of world-class observatories.*

- *Double AST's travel budget to ensure adequate support for the Division's global oversight and management responsibilities.*

The Division appreciated and agreed with the COV's observation that the AST "program officers are overworked and that additional staff is required." At the time of the COV, the Division had carried out staffing analyses that led to the conclusion that we require two to three more FTE's or IPA's to meet the increased workload and continue to be responsible and responsive to the community. This continues to be the case. AST has not been provided any more FTE's, and, in fact, has been effectively reduced in staff since the COV met, with the reassignment of the AST Division Director to the MPS Office of the Assistant Director (OAD) in April 2008. The position of Division Director remains unfilled.

The Division also agreed that the lack of time and resources to carry out appropriate oversight of facilities and large projects poses serious risks to these projects. We noted, however, that just as critical is the need for program officers to monitor projects of smaller scope and grantee activities, to carry out community outreach, and to maintain their currency with the science that we support, and for all staff to undertake training and professional development. Funds for staff travel and professional development continue to be a critical need.

In our March 2008 response to the COV report, we noted that the practice of distributing travel and administrative funds in small increments through the year rather than in one or two large allocations, with no indication of what the total budget will be, frustrated attempts to plan and budget staff travel needs through the year. Fortunately, OAD has been quite responsive in FY 2009, with rapid decisions about and allocation of AOAM funds, which has aided appreciably in planning within the Division.

The Division continues to make known its needs for additional positions and funds for travel and oversight, to aid the Office of the Assistant Director in arguments to procure more funding.

Strategic Planning and Implementation

- *NSF (and the astronomy community) should treat the Senior Review report as a baseline which, when combined with the next NRC Decadal Survey, constitutes a disciplined and thoughtful path for the future of AST activities. When appropriate, NSF should use the Senior Review recommendations as a community-derived tool to resist non-competitive earmarking of the federal budget.*

- *AST should consider conducting subsequent Senior Reviews on a pro-active, regular basis rather than simply as a response to moments of crisis.*

- *As plans are being developed for the upcoming NRC Decadal Survey, AST should encourage the Survey committee to reexamine the priority of previously recommended projects that have undergone substantial cost growth.*

The Division continues to use the Senior Review's report recommendations to guide our future planning and prioritization. The Division fully expects that similar prioritizations across AST programs and facilities will be a regular event in the future, probably holding the AST senior review mid-way through a decade, phased with the decadal community prioritization.

The Statement of Task for the NRC Decadal Survey, developed in discussion between NSF, NASA, DOE and the NRC called for the examination and reprioritization of previously recommended projects, not only those that have undergone cost growth, but all those that have not yet begun construction. The Decadal Survey is now underway and is following that charge.

- *NSF should build sufficient flexibility into MREFC processes and practices to optimize the Foundation's ability to partner with private or public entities in the funding of the design, construction, operation and/or maintenance of large facilities.*

The Division continues to work actively with other parts of NSF in exploring the benefit of modifications to the current MREFC processes and practices to accommodate partnerships between NSF and private entities as well as other federal agencies or international organizations or institutions.

Individual Investigator Programs

- *AST should continue its efforts to ensure that the composition of review panels is as diverse as possible, including members with high levels of research activity.*

- *To further improve the efficiency and effectiveness of grant proposal processing, AST Program Officers should consider (a) including comments extracted from generally insightful PO summary analyses in the written responses sent to PIs; (b) providing information to PIs regarding the general ranking (e.g., quartile ranking) of their proposal; and (c) becoming less tolerant of non-compliant proposals.*

- *AST should work in concert with its community of researchers to assess how best to take advantage of the NSF's new, substantial Cyber-Infrastructure investments.*

AST program officers continue to make every effort to create panel membership that reflects the diversity of our scientific and educational community. We were especially sensitive to the issue

of including members with high levels of research activity in composing last year's panels, and were successful in bringing in a number of senior researchers of high visibility in the community.

The Division has considered carefully the suggestion that program officers include extracts from the review analyses in written correspondence to PI's regarding the outcome of funding decisions. We are concerned that the workload involved in doing so in all cases would be an unmanageable burden on program officers who are already hard pressed to meet dwell time goals. However, program officers are encouraged to, and most do, discuss with PIs the rationale for the recommendations and the general ranking of the proposal during phone conversations that follow from the original notification of a decision. PI's are also encouraged to contact program officers for more information about any funding decision.

Following the COV's advice, the Division is enforcing compliance on proposal submission requirements more strictly in FY 2009. The most serious and common violations of guidelines appear to be failure to include results from prior NSF support and to respect font size limitations. In consideration of the large numbers of proposals that fail technically to meet these requirements (up to 15% of proposals, or 70), we intend to return without review only those most egregious violations, and will issue strongly worded warnings to others noting that such proposals will not be accepted next year. We continue to notify the community of our imposition of requirements at AAS and community town hall meetings, newsletter publications, and in correspondence with individual PI's.

We also continue to work with the community to make best use of Foundation-wide cyberinfrastructure-related programs and investments. These programs are still under considerable evolution internally.

Instrumentation and Mid-Scale Infrastructure programs

- *AST should explore ways to optimize its approach to supporting astronomical instrumentation development, perhaps by restructuring its current set of instrumentation related programs.*

AST continues to consider the restructuring of instrumentation efforts of the Division. Due to staff limitations and rotations, we have not made much progress in developing specific plans. The suite of AST and NSF supported instrumentation programs, supporting efforts at the national facilities, universities and colleges, and non-federally funded private institutions, is extensive and complex, and uncertainty in the budget situation has complicated planning. We will consult with the community as we proceed.

- *AST should inform the astronomy community of NSF's general goals and expectations for mid-size projects and should notify the community that unsolicited proposals for mid-size projects may be submitted. However, the COV does not recommend that a formal "mid-size projects" program with pre-allocated funds be initiated at this time.*

Following the COV's advice, we have not initiated a formal program for mid-sized projects, but we have brought to the community's attention the possibility of submitting proposals for projects of this scale at AAS town hall meetings and in presentations and discussions with community user groups and individuals. We continue to receive and to fund subject to rigorous review proposals in this category.

- *Utilizing funds from an enhanced travel budget, AST should strengthen its oversight support of University Radio Observatories (URO) projects and their associated instrumentation development programs. As many new UROs are being planned, the COV recommends that NSF strive to maintain the proper balance of radio observatories —the radio system— while keeping in mind the need to develop new techniques and to train the next generation of radio instrumentalists.*

The lack of enhanced travel funds has not allowed us to expand our oversight visits as recommended. However, the FY 2009 plan for use of AOAM funds includes site visits to several of the UROs. The portfolio of URO awards made in FY 2009 meets the COV's recommendation of balanced support for existing, highly productive sites and for new projects.

National Observatories and Large Facilities

- *The COV strongly cautions NSF against instituting a routine, five-year re-competition of the management of large AST facilities as this would create an overwhelming burden of work for the Foundation and the astronomy community, and would likely result in a net decline in the scientific output of these facilities.*

The NSF stance on re-competition continues to be the subject of active discussion within the agency and the National Science Board. AST considers re-competition an important management tool for use at appropriate times. The management and operation of NAIC will be competed in FY 2009.

- *AST should complete the full course of action proposed by the Senior Review for the NOAO program.*

AST continues to work closely with NOAO in implementation of the recommendations of the Senior Review, pacing such activity with input from the community and with respect to budgetary constraints.

- *AST should make every effort to bring the ATST project into its construction phase as soon as possible.*

AST, working with the NSF Offices of the General Counsel and Legislative and Public Affairs, continues to make every effort to advance ATST to the point where it can be put forward for a construction start. Work to finalize the National Environmental Policy and National Historic Preservation Act continues, as well as consultation with the FAA and other bodies, with the hope that a Record of Decision will be written during this fiscal year, a fast-track goal.

- *NSF should consider moving responsibility for Electromagnetic Spectrum Management (ESM) to the MPS Directorate office, if not to the NSF Director's office, to increase the visibility of ESM within the Foundation and also to stress the Foundation's commitment to spectrum management to the global community.*

AST has explored elevating the ESM office and activity above the Division level with the Office of the Assistant Director for MPS. The decision has been made to maintain ESM within the Astronomy Division, although there is recognition that the program incurs significant travel

expenses and that this burden could be shared at the MPS or NSF level and not left entirely to be covered with AST funds.