

**Minutes of the Meeting of the
Astronomy and Astrophysics Advisory Committee**

**3 November 2003
Arlington, VA, via teleconference**

Members attending:	Dr. Robert Gehrz (Chair) Dr. Neta Bahcall Dr. Alan Dressler Dr. Robert Kirshner Dr. Barry LaBonte Dr. Angela Olinto	Dr. Rene Ong Dr. Bradley Peterson Dr. Catherine Pilachowski Dr. Abhijit Saha Dr. Mark Sykes
Agency personnel:	Dr. Wayne Van Citters, NSF Dr. Eileen Friel, NSF Dr. Dana Lehr, NSF Dr. Craig Foltz, NSF	Dr. Michael Turner, NSF Dr. Anne Kinney, NASA-OSS Dr. Jeffrey Hayes, NASA-OSS Dr. Jennifer Wiseman, NASA-OSS
Other participants:	Dr. Dana Backman, NASA-Ames Dr. Nick Devereux, Embry-Riddle University Dr. Alyssa Goodman, Harvard-Smithsonian Center for Astrophysics Dr. Joel Widder, Lewis-Burke Associates	

MEETING CONVENED 11:00 AM EST, 3 NOVEMBER 2003

The Chair welcomed the members, and all participants introduced themselves.

Dr. Van Citters summarized the circumstances leading to the formation of the AAAC and, in the interest of new committee members, described the nature and composition of the committee as defined in the recent NSF Authorization Bill, now public law Pub. L. 92-463. The election of a new committee Chair and the establishment of membership rotation terms were postponed to the next face-to-face meeting.

Dr. Bahcall asked about the relation of the AAAC to the National Academies' Committee on Astronomy and Astrophysics (CAA). Dr. Kinney explained the different natures of the two committees and offered that, while the CAA provides assessments of the status of ground- and space-based astronomy and assists the federal government in strategic planning, the AAAC is charged with tactical implementation of the decadal surveys and other panel reports. Dr. Van Citters added that the AAAC specializes in advising on potential areas of cooperation among NASA, NSF and DOE. Dr. Kinney noted that several AAAC members were selected because they participate on NASA advisory committees, particularly Dr. Saha (Origins Subcommittee) and Dr. Peterson (Structure and Evolution of the Universe Subcommittee). Dr. Peterson reported that he recently rotated off of SEUS.

Dr. Kinney presented an overview of NASA organizational structure, the status of major science missions and significant events since the last AAAC meeting. The James Webb Space Telescope (JWST) is undergoing aggressive technology development at the beginning of its mission. Dr.

Kinney reviewed 2003-04 planned OSS launches, including SIRTf, GPB and Swift. Keystones included the delay of the GPB launch, the delay in the fourth servicing mission for HST, and the delay of the Swift launch. Dr. Kinney also highlighted NASA's Space Science Updates, which have been particularly successful in increasing press coverage for the SEU theme. While questions from the committee focused on potential areas of cooperation among NASA, NSF and DOE, Dr. Kinney emphasized that astronomy and astrophysics that is funded by NASA must be in direct service to NASA missions.

Dr. Van Citters presented a parallel overview of NSF organizational structure and astronomy and astrophysics programs, which are supported in the Division of Astronomical Sciences (AST) and in other NSF divisions such as Physics, Atmospheric Sciences and the Office of Polar Programs. Dr. Van Citters reviewed AST's support of national astronomy facilities, research and instrumentation and highlighted future projects such as the Advanced Technology Solar Telescope (ATST), the Large Synoptic Survey Telescope (LSST), and a Giant Segmented Mirror Telescope (GSMT). The committee members and agency representatives discussed how the AAAC might assist in formulating scientific areas that may be prime projects for collaboration among the agencies.

Dr. Van Citters announced the arrival of new Assistant Director Michael Turner in the NSF Directorate for Mathematical and Physical Sciences (MPS). He also described the recent (7-8 October) NSF symposium, "The Universe From the Ground Up", which was organized by the NSF Office of Legislative and Public Affairs.

The Committee approved the minutes from the April 2003 meeting with no revisions.

Dr. Van Citters summarized the joint NSF-NASA response to the 23 April 2003 report of the AAAC, and subsequent discussion focused on the agencies' efforts to meet the committee's recommendations. Dr. Foltz overviewed the Adaptive Optics Development Program (AODP) competition, which supports technology development critical to telescopes such as GSMT.

The committee and agency representatives also discussed the potential collaboration among NSF, NASA and DOE in support of the LSST project. Dr. Kinney reiterated that NASA can contribute to projects directly in support of its mission science and that all agencies must develop collaboration plans that utilize their areas of expertise. For example, NASA may best contribute to LSST in the development of its data archiving, and DOE might contribute expertise in the development of LSST detectors. Agency representatives suggested that they can provide suggested delineations for LSST collaboration at the next AAAC meeting.

In response to the committee's recommendation to explore interagency collaborations in the investigation of the polarization of the Cosmic Microwave Background Radiation (CMBR), agency representatives offered that an Interagency Working Group is developing a roadmap for CMBR science. The IWG will be asked to report at the next AAAC meeting.

The committee members and agency representatives identified agenda items for the next meeting, including the selection of a new Chair and a membership rotation schedule; a report from the agencies on potential LSST collaborations; a discussion of agencies' support of laboratory astrophysics; a review of planetary programs and of astronomy and astrophysics supported by NASA and NSF programs in polar regions, with an emphasis on gaps and overlaps in each program area; an overview of DOE support of astronomy and astrophysics; and the development of the committee's 15 March report.

MEETING ADJOURNED AT 1:10 PM – RECONVENED AT 1:30 PM

AAAC members and agency representatives identified mid-February as an appropriate time to schedule the next meeting, and 19-20 February was selected as a target date. NASA representatives offered to host the next meeting. A teleconference was also tentatively scheduled for 8 March to allow discussion of the committee's draft report before the 15 March deadline.

Dr. Goodman joined the committee via videoconference to present a discussion of large projects (and large collaborations) that span the programs supported by NASA and NSF. She briefly overviewed the science of the COMPLETE project, which has been proposed to both agencies with no success in receiving support. Dr. Goodman suggested that large, multi-wavelength studies that require both ground-based and space-based observations have the potential to fall between the cracks.

The committee postponed the remainder of their discussion with Dr. Goodman to welcome Dr. Turner's arrival and to accommodate his constrained schedule. Dr. Turner greeted the members and stated that MPS and AST are looking forward to the advice from the committee. Dr. Ong asked Dr. Turner how NSF might collaborate in building instruments for space missions. Dr. Turner replied that NSF's emphasis will remain on ground-based astronomy and offered that CMBR studies are a good example of how ground-based instrument development was crucial for the consequent development of a space-based mission (i.e. WMAP). Dr. Turner explained the competitive process of NSF's Major Research Equipment and Facilities Construction (MREFC) program after the members inquired about several large telescope projects. He offered that the community should continue to propose new ideas and that NSF is developing a priority-setting process that will enable the strategic implementation of the decadal survey. NSF will look to NASA and DOE for models of funding large projects, but will develop an appropriately agency-specific approach.

Dr. Goodman continued her presentation to the committee and noted that the COMPLETE project requires significant observing time that intertwines with key projects for several facilities. She explained that the review process at each agency seemed to abrogate responsibility to the other, and at the committee's request she described the review process and reviewer comments in detail.

After Dr. Goodman left the discussion, the committee discussed the potential for large projects to receive coordinated review and support from NASA and NSF.

Dr. Backman and Dr. Devereux joined the committee to inquire about potential funding for support of undergraduate research experiences associated with the SOFIA mission. NSF and NASA representatives responded that the project is appropriate for submission to the NSF Research Experiences for Undergraduates (REU) program for consideration under merit review. The committee members advised NSF and NASA to communicate to their communities that principal investigators may submit proposals for joint agency review.

MEETING ADJOURNED AT 2:50 PM, 3 NOVEMBER 2003