

Update: Division of Physics Response to the Report of the 2009 Committee of visitors

The present update to the Physics Response to the Report of the 2009 Committee of Visitors reflects the long-term nature of the planning within the Division and remains essentially unaltered from the update given in December of 2009. This document is repeated below with slight alterations to reflect the passage of the year.

The Report of the 2009 Committee of Visitors (CoV) highlights six items that the Committee felt deserved attention. (A seventh item relates to suggestions for improvement in the 2012 Committee of Visitors review and will be addressed at that time.) This document is an update to the response provided by the Division of Physics at the time the Report was presented to the MPS Advisory Committee.

The overall assessment of the 2009 CoV of the Division's performance in all areas identified in the charge was positive. In its response to the six specific comments that were highlighted, the Division outlined an approach to addressing the issues that relied upon constant oversight and monitoring to effect a gradual adjustment to needs and funding levels rather than specific one-time adjustments. The present update reaffirms that original approach.

Item 1: Instrumentation and Equipment

The Division still does not have sufficient resources to implement a full-scale, open competition for instrumentation and equipment through the Accelerator Physics and Physics Instrumentation (APPI) program. However, the Division has continued allocating funding to support special equipment needs for projects that have reviewed well in the disciplinary programs. This allocation has adhered to the definition of equipment as that whose cost would greatly exceed the resources of the disciplinary program but is essential to the proper carrying out of the project.

Item 2: Large Projects

The Division continues to operate according to the Master Funding Plan that projects needs for large projects and assesses their impact on the individual investigator programs. The Plan maintains percentage funding levels for these programs at more than 50% of the budget and funding for centers and institutes at no more than 10%.

Item 3: Interdisciplinary Research

The Division has continued the practice of designating the primary Program Director responsible for the disciplinary scientific program closest connected to the science feeding into a given cross-disciplinary activity to represent the Division in all aspects of that activity. This is the case on a small scale, involving only one other unit within NSF, or on a larger scale, when the activity is part of an NSF-wide priority area. In the former case, Program Directors are free to establish the interactions as they see fit, consistent with NSF policy, in order to best serve their own communities and the advance of the science at the interface. For example, the Physics of Living Systems program and the Biomolecular Systems Cluster in the Division of Molecular and Cellular Biosciences now conduct a joint review panel for all proposals at the interface between these two programs. The Particle and Nuclear Astrophysics

program and the Office of Polar Programs share responsibility for the Ice Cube facility. Oversight of several of the Physics Frontiers Centers is shared between the Physics Division, the Division of Materials Research, and the Division of Molecular and Cellular Biosciences. In the case of NSF-wide activities the Division representative serves on the working group that writes the solicitation, selects reviewers and monitors panels, and participates in final funding recommendations.

Item 4: Portfolio Balance and Changes

The individual sub-programs within the AMOP and PIF umbrella continue to be too small to warrant separation into major disciplinary programs within the Division. As part of the FY2010 review process, the Division confirmed its earlier assessment that the proposals submitted to the individual programs did receive full consideration. Assignment of the proposals for processing is divided among the Program Directors in order that the review and funding recommendations for each separate area is carried out by someone who is expert in that field. This person has full responsibility for his or her part of the umbrella as if it were an individual stand-alone program.

Item 5: Education and Workforce Issues

Each year the Physics Division asks the Program Directors to select up to ten awards that they believe best fulfill the goals of the CAREER program. These awards are identified in a lengthy discussion at the time the award recommendations are made. It is this process that establishes the approach of the Physics Division as a whole to the definition of what constitutes a CAREER activity as opposed to an award to a beginning investigator who has not applied through the CAREER program. The meeting of FY 2010 reaffirmed the understanding reached earlier that incorporating interaction with existing units in the university would be considered suitable for a CAREER activity as long as the applicant clearly identified his or her principal contribution to that activity. The expectation still remains, however, that the applicant must identify an educational component that goes beyond the normal expectations of a faculty member and describe the plans for this activity in sufficient detail that the reviewer can be convinced that the activity is as well-thought-out as, for example, an experiment would be.

Item 6: The Review Process

The Division still considers the option of including parts of the Review Analysis within the PO Comments section of a proposal in order to provide additional guidance as to how a funding recommendation had been arrived at as desirable, but at the same time considers that requiring this for every proposal would add to a workload that has already been identified by the CoV as excessive. All Program Directors in the Division are always available to discuss recommendations by telephone, and Program Directors are encouraged to prepare a brief paragraph as part of the Review Analysis that summarizes the considerations leading to the recommendation in a form that could be easily read to or mailed to the PI. This mechanism provides the input that would be in a PO Comment upon request while at the same time keeping the workload at a manageable level.