



NATIONAL SCIENCE FOUNDATION

Date: April 15, 2015
From: Assistant Director, MPS
Subject: **Response to the Division of Physics Committee of Visitors Report**
To: MPS Advisory Committee

Please find attached the MPS Response to the Committee of Visitors (COV) report from the 4-6 February 2015 COV review of the Division of Physics. The review was thorough and insightful, and the findings will be very helpful to me and to the Division of Physics in fulfilling our responsibilities to the scientific community and to the nation.

The Division of Physics drafted the attached Response, and I concur with its content. I therefore adopt it as the official Response of the MPS Directorate. I hope the full MPS Advisory Committee finds this COV review and the MPS Response useful and acceptable.

Sincerely,

A handwritten signature in blue ink, reading 'F. Fleming Crim', is positioned below the word 'Sincerely,'.

F. Fleming Crim
Assistant Director, National Science Foundation
Directorate for Mathematical and Physical Sciences

Attachment: Response of the Division of Physics to the 2015 COV Recommendations

Response of the Division of Physics to 2015 Committee of Visitors (COV) Recommendations

The Division of Physics (PHY) wishes to thank the members of the 2015 COV panel for the time and effort that were devoted to an extremely in-depth and detailed review of the activities of the division during the period FY 2012 through FY 2014. We realize that there was a great deal of material to work through, and we appreciate the care that was taken in examining the material and in asking many probing questions over the three-day period. We also especially thank Dr. Eric Cornell for agreeing to chair the panel and for bringing the report to a final conclusion in so brief a time.

We are pleased that the Committee awarded the division such high marks in all aspects of the operations that were under review. We regard the support given in the report as an expression of confidence that the division is serving the community well. At the same time, we are sensitive to the points that the Committee has raised in which it believes the division could do better, and we will endeavor to respond to the request made by the Committee that its recommendations be taken as guidance and implemented to the fullest extent possible.

There are many comments and suggestions in the reports of the individual subcommittees, and we will take these under consideration. In what follows, we outline the steps that the division will undertake to address the recommendations in the executive summary.

COV SUMMARY RECOMMENDATIONS AND *RESPONSES*

COV: NSF processes for collecting and analyzing of demographic data on funded programs are in such a dire state that the data are not useful for informing efforts to broaden participation. The Committee recognizes that there are a number of obstacles presented by privacy laws and regulations; however, a mechanism to solicit this information directly from the participants exists. This is done via an email sent from the Foundation to the individual as named by the PI as participating in the awarded program. The level of participation is low, perhaps due in large part to the timing of the distribution of these emails, weeks after the program is completed.

Recommendation: Make the triggering event to submit a participant's name and email address for demographic data collection be when the person starts on the project, instead of the end of the project. We expect this will lead to significantly higher response rates.

The Committee discussed with program officers and directors opportunities for gaining access to NSF participant demographics. It soon became apparent that existing tools for this task are inadequate. This is due to a variety of reasons, including database systems not being connected adequately and lack of readily available software.

Recommendation: Make improvements to the data acquisition, transfer and display systems to facilitate easy and rapid retrieval of data on diversity for funded programs. This should help NSF and other stakeholders analyze and identify best practices that enhance the participation of underrepresented groups, potentially providing a positive feedback mechanism to build upon success.

We do note that this topic was addressed in the 2012 COV report. The response to this was written in the response from the division (*PHY_Response_to_1012*

PHY_COV_report_FY13_update.pdf, p. 11) and is as follows:

With regard to data collection and sharing, the division appreciates the comments from the panel but is not in a position to undertake any action beyond passing the comments on to the Division of Information Systems, which is the NSF body responsible for maintaining the NSF database.

In retrospect, this answer has not proven to be a very effective strategy. The Committee urges the division to take a leadership role in driving this issue to completion with the division of Information Systems, perhaps by getting aid from high-level administration to make this a priority. We encourage an effort to find creative solutions in the face of an urgent national need.

Response: The division has set up a working group to address these concerns, with the goal of establishing practices that the division can employ right away. We have also initiated contact with the Policy office to explore options about both the wording and the timing of the request that is sent to investigators and their collaborators.

COV: The new PHY leadership has been presenting the diverse PHY-funded activity in terms of portfolios. The COV likes this concept-based (rather than program-based) framework and believes it will have real value for organizing the division, for setting internal priorities and for tying PHY activity to the framework of national priorities and initiatives.

The division's programs are scientifically broad and complex from a funding perspective, including individual investigator research grants, long term operational responsibilities, frontier centers and facilities. With the portfolio concept in place, the next logical step is to assess the funding balance within the division, a process which has begun in many areas.

Recommendation: We strongly encourage the use of all available mechanisms to assess the funding balance with proper emphasis on forward-looking activities, even if this requires a higher level of justification for historical funding levels on long standing programs.

Response: The Physics Division appreciates the need to maintain an ongoing fresh perspective with respect to funding across its programs. It uses many avenues to assess the scientific priorities of the various subfields, including proposal reviews as well as input from national advisory committees. Program funding levels are adjusted from year to year on the basis of science opportunities and national priorities. These adjustments can have cumulative effects. Through this mechanism, several programs have seen substantial budgetary increases that have affected the balance across programs in the division. The division plans to regularly assess that balance and make adjustments during the appropriate point in the budget cycle.