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MPSAC Cover Letter to MPS Assistant Director Tony F. Chan

June 21, 2007

Dr. Tony Chan
Assistant Director for Mathematical and
Physical Sciences National Science Foundation

Dear Tony,

I am enclosing two brief reports from the MPS Advisory Committee. The full committee discussed these documents at our teleconference on May 30, and we developed final versions based on changes suggested as part of that discussion.

The first report is "Research and Education Opportunities in the Mathematical and Physical Sciences." Three sections of this report describe compelling research opportunities that bridge multiple divisions within MPS. The fourth section addresses some aspects of developing the scientific workforce that we think need more attention.

I would like to put this report in context, based on our discussion of May 30. Each of the five divisions within MPS has a well-developed program of research that advances the frontier of disciplinary science. Every year, we hear from Committees of Visitors and other experts about how compelling these scientific programs are and how much excellent science goes begging because of insufficient money to fund it all. The report we are submitting concentrates on some specific opportunities in compelling cross-disciplinary research that should also be given attention.

The NSF is now receiving annual increases that are somewhat beyond inflation, with a special emphasis that includes mathematical and physical sciences. We hope that over time these increases will make it possible to fund more of the compelling science that is receiving high priority within the divisional review process, and at the same time take advantage of opportunities such as those identified in our report. We are submitting this report of exciting interdivisional opportunities to complete the broad spectrum of research that we believe should be supported. We are not doing it

to displace the strong programs coming forward from the divisions. We understand that the important management challenge is to get the right balance between strengthening the core programs and building the new capabilities.

I am also enclosing a document called "Comments on Outreach from the Mathematical and Physical Sciences Advisory Committee." The committee wanted to make a strong statement about the importance of outreach activity to NSF and the need for new approaches. It is somewhat different from our other reports in that it addresses programs that are not the sole responsibility of MPS.

I hope that these documents provide valuable input to you and all of the people within MPS that are developing the research and education directions for the future.

Sincerely,

A handwritten signature in black ink that reads "Michael Witherell". The signature is written in a cursive style with a small dot above the 'i' in "Michael".

Michael Witherell
Chair, MPS Advisory Committee