



Department of Energy  
Office of Science  
Washington, DC 20585

Office of the Director

JAN 6 2011

Professor Melvyn Shochet  
Chairman, High Energy Physics Advisory Panel  
Department of Physics  
University of Chicago  
5630 S. Ellis Ave  
Chicago, IL 60637

Dear Professor Shochet:

I am writing to convey the Office of Science's response to the recent High Energy Physics Advisory Panel (HEPAP) report on extending the operation of the Tevatron at Fermi National Accelerator Laboratory. As you know the Office of Science received in the summer of 2010 a widely supported proposal to extend operation of the Tevatron through FY 2014. At our request, HEPAP and its subpanel, Particle Physics Project Prioritization Panel (P5), responded quickly and analyzed both the physics merits of the proposal and the potential impacts on the rest of the field. HEPAP and P5 provided valuable and timely advice to the Office of Science that informed our FY 2012 budget request. I thank HEPAP and P5 for these efforts.

In summary, P5 found the proposed physics program had significant scientific value and would complement what can be accomplished at the Large Hadron Collider (LHC) in the same time period, but recognized that without additional funding the extension of Tevatron operations would delay progress on the development of the Intensity Frontier program by HEP. P5 therefore recommended that extension of the operation of the Tevatron be approved only if additional funds were available to HEP, and encouraged the funding agencies to find the necessary resources. Unfortunately, the current budgetary climate is very challenging and additional funding has not been identified. Therefore, based in part on the P5 recommendation, operation of the Tevatron will end in FY 2011, as originally scheduled.

The strategic plan for the U.S. particle physics program, developed by P5, attacks the most important scientific questions in three broad areas of the field: the Energy, Intensity,



and Cosmic Frontiers. The Energy Frontier has passed to the LHC, where the first year of data collection recently was completed. Accelerator performance at the LHC improved dramatically during 2010, achieving increases of several orders of magnitude in instantaneous luminosity. U.S. scientists play a major role in the ATLAS and CMS collaborations at the LHC, with both experiments publishing early physics results that clearly demonstrate the impressive capabilities of these detectors. Given the LHC performance to date, it appears likely that experiments at the LHC either will rule out or discover a standard model Higgs boson by late 2012, addressing this pressing topic in particle physics in a timely manner. Support for activities at the LHC continues to have high priority in the HEP program.

The HEP program also calls for a world-leading program centered at FNAL to probe the Standard Model using a complementary approach of high intensity beams. This program aims to measure the fundamental properties of neutrinos and to develop a new high intensity proton source. In evaluating the proposed Tevatron extension, the P5 committee emphasized the importance of developing this Intensity Frontier program and we have made implementation of this program a cornerstone of future HEP activities.

In conclusion, I want to personally thank you and the members of HEPAP and P5 for your prompt and thoughtful response to our request for advice.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'W. F. Brinkman', with a long, sweeping flourish extending to the right.

W. F. Brinkman  
Director, Office of Science  
U.S. Department of Energy