

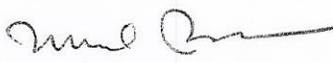


Department of Energy

Washington, DC 20585

MAR 27 2012

MEMORANDUM FOR: BRUCE STRAUSS
LARP PROGRAM MANAGER
FACILITIES DIVISION
OFFICE OF HIGH ENERGY PHYSICS

FROM: MICHAEL PROCARIO 
DIRECTOR
FACILITIES DIVISION
OFFICE OF HIGH ENERGY PHYSICS

SUBJECT: U.S. Large Hadron Collider Accelerator Research Program
(LARP) Annual Technical and Management Review

This memorandum is to request that you organize and conduct a Technical and Management review of the U.S. Large Hadron Collider (LHC) Accelerator Research Program (LARP). This review should appropriately involve the input and participation of related programs in the office of High Energy Physics (OHEP).

LARP, encompassing research and development activities in superconducting materials and magnets, accelerator systems, beam instrumentation, and LHC accelerator commissioning efforts, plays an important role in the nation's high energy physics program with its strong participation in the experiments at the LHC at CERN. It is important for OHEP to understand the progress and future plans of the research program, the effectiveness of its management and whether resources and planning are being directed optimally to support the scientific goals of the nation's high energy physics program. At present it is most important to ascertain how this program will evolve into efforts for the LHC luminosity consolidation plans as well as follow on upgrades.

It is requested that your review evaluate:

- The effectiveness in strategic planning, development appropriate core competencies, implementing a prioritized and optimized program for potential participating in future accelerator upgrades at the LHC at CERN; specifically, are these LARP activities well aligned with the present and anticipated LHC schedule;
- The quality and significance of the LARP scientific and technical accomplishments, and the merit, feasibility and impact of its planned research program;
- The effectiveness and appropriateness of the laboratory interactions to maximize the leveraging of existing infrastructure and expertise available at those laboratories;
- The strength and relevance of any new proposed research activities, to enable OHEP to make more fully informed decisions on this new scope of work.



In the context of these general review criteria, there are special circumstances that the nation's high energy physics program is facing where additional information at this time would be helpful for this office in its planning. In particular, with respect to the most current LHC schedules and plans, what should be the priority and levels of activity and organization for LARP to undertake in the superconducting magnet and accelerator systems that would be most effective and optimum in positioning the U.S. for participation in the LHC upgrades? Is the multi-year plan developed by the LARP management consistent with these goals? What is the time line and the resources needed to mount this program? What are the scientific and technical risks associated with the proposed program, and are the available resources for LARP being optimally used to achieve the planned goals?

The review should also comment upon what progress has been made towards addressing action items, if any, from previous LARP Reviews.

I should appreciate receiving the review reports, suitable for transmission to the laboratories, within 45 days after the review.

cc: Eric Prebys, FNAL
Stuart Henderson, FNAL
LK Len, SC-25