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To: Dr. Joel Butler, Particle Physics Division, Fermilab

The LHC@FNAL Committee requests a review of LHC@FNAL requirements on July 21, 2005. The purpose of this review is to assess the scope and requirements that have been identified for LHC@FNAL, and to review the preliminary LHC@FNAL Requirements Document prior to submission to Fermilab's Director, Pier Oddone, on July 29, 2005.

LHC@FNAL is a new facility that is to be built at Fermilab to support work on the CMS experiment at the Large Hadron Collider (LHC) at CERN, and to support active participation in LHC accelerator activities. The purpose of LHC@FNAL is to facilitate communication between CERN and members of the LHC community located in North America, and to help members of this community contribute their expertise to accelerator activities and the CMS experiment.

For the review it helps to keep in mind that requirements for CMS and LHC are different. However, LHC@FNAL will be used for both the experiment and the accelerator, and commonality between the two is reflected in the structure of the requirements document. One section in the document is devoted exclusively to requirements for CMS, the second section for LHC requirements, the third section includes requirements that involve both CMS and LHC, and the final section includes requirements based on constraints such as safety and computer security.

Reviewers are asked to assess the scope of LHC@FNAL as defined by the requirements document, and are asked to address the following specific items:

1. Will LHC@FNAL, as defined in the preliminary requirements document, allow experts located at Fermilab to participate actively and effectively in CMS detector and LHC machine studies as well as other maintenance and operations activities at CERN when they are unable to travel to CERN?
2. Do the requirements provide adequate support for members of the LHC community in North America, such as members of US-CMS and US/LARP.

3. Do the requirements define the scope of LHC@FNAL to support effective remote participation in CMS and the LHC?
4. Do any of the requirements imply possible violations of CERN or FNAL safety or security standards?
5. Do any of the requirements suggest that significant resources from CERN may be needed for LHC@FNAL?
6. Are the requirements sufficiently developed to serve as a basis for developing cost and schedule estimates for the LHC@FNAL facility?

Erik Gottschalk is Chair of the LHC@FNAL Committee, and will serve as the contact person for the review.

Erik Gottschalk
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