



Introduction from the Laboratory

Joe Lykken Deputy Director for Research DOE CD-1 Review of HL-LHC CMS Detector Upgrade Project October 22, 2019



Recommendation 10: Complete the LHC phase-1 upgrades and continue the strong collaboration in the LHC with the phase-2 (HL-LHC) upgrades of the accelerator and both general-purpose experiments (ATLAS and CMS). The LHC upgrades constitute our highest-priority near-term large project.

- Fermilab is committed to the success of the P5 plan
- Fermilab is committed to the integrity of the P5 priorities
- In particular, Fermilab is committed to, and takes responsibility for, the success of the U.S. CMS HL-LHC Upgrades, both as a DOE project and as an essential contribution to an international scientific endeavor



Directorate and senior management support of the HL-LHC CMS Upgrade Project:

Fermilab Director Nigel Lockyer

and Deputy Director for Research (DDR) Joe Lykken (CMS collaborator)

- Fermilab Director and DDR meet weekly with FNAL CMS team and convene additional briefings as needed
- Director directly involved, as needed, in redirection of lab resources/infrastructure, and reinforcing lab priorities
- Fermilab Director directly involved, as needed, in recruiting additional strength to the HL-LHC CMS upgrade project effort
- Director interfaces with international CMS and CERN management, as needed



Directorate and senior management support of the HL- LHC CMS Upgrade Project:

Chief Project Officer: Doug Glenzinski

- Fermilab Chief Project Officer engaged directly with IPT
- CPO and OPSS supports and mentors Project Team
- CPO supports/ensures best practices for project management

Chief Research Officer: Luciano Ristori (CMS collaborator)

- CRO monitors and anticipates Fermilab resources needed for the project, enforces lab priorities accordingly
- Fermilab CRO engages with leaders of the U.S. and international CMS community to solicit/address any concerns



Reinforcing lab-wide capabilities to increase support for HL-LHC CMS upgrades

- Following a Lab-wide review of requirements/scope/cost, Fermilab is upgrading the FNAL Test Beam program to include an Irradiation Test Area
- During the past 15 months Fermilab has recruited key personnel to strengthen the HL-LHC CMS Project Office and the MTD timing project.
- Monthly Project Management Group meetings monitor current progress and anticipated resources needs/gaps/conflicts across projects



There is no substitute for project performance

Cost and schedule performance on Fermilab projects is of critical importance for

- The success of the the P5 plan for U.S. HEP
- The success of Fermilab as a national laboratory
- The future prospects for our field

We must deliver



Welcome and best wishes for a successful review

