



May 13, 2009

Mr. James Krebbs
SLAC National Laboratory
2575 Sand Hill Road
Menlo Park, California 94025

Dear Jim,

Thank you for agreeing to participate in the Integrated Final Instrument Design Review (FIDR) for the Coherent X-ray Imaging (CXI) Instrument for the LUSI Project on June 3, 2009. The purpose of the LUSI Project is to expand upon, and utilize, the unique scientific capability of the LINAC Coherent Light Source (LCLS) by building instruments that use the LCLS ultrafast x-ray beam for research. To this end, the objective of the LUSI Project is to design, build and install three instruments at LCLS. The capability, technical performance parameters, and full description of CXI are described in project documents that will be available prior to the review. The LUSI Project achieved its Critical Decision-2 (CD-2), Approval of Performance Baseline on October 28, 2008. The LUSI Project is now preparing for Critical Decision-3 (CD-3). The Final Instrument Design Review is intended satisfy the requirement for a Final Design Review as a predecessor to the CD-3 milestone. This milestone is a requirement of DOE Order 413.3A. Critical Decision-3 is needed for the start of construction, implementation, procurement or fabrication activities on a project.

The purpose of this review is to evaluate the CXI design readiness to begin implementation, procurement and fabrication activities. To carry out this charge the review committee should evaluate the instrument's readiness by responding to the following questions:

- 1) Technical Scope
 - a) Is the design of instrument mature and technically sound to enable effective scientific experiments at LCLS
 - b) Have all the major interfaces been identified and incorporated into the design
 - c) Have design reviews been performed
 - d) Is the design likely to meet performance expectations
- 2) Management
 - a) Is the instrument team organized and staffed to successfully complete the project
 - b) Have all of the major risks been identified and managed
 - c) Are procurements appropriately planned

- 3) Cost and Schedule
 - a) Is the CXI cost and schedule reasonable to achieve the planned scope
- 4) ES&H
 - a) Are all related ES&H aspects being properly addressed
- 5) Overall Readiness
 - a) Is CXI ready to begin procurement and fabrication

I would appreciate receiving the committee's findings and recommendations by the close of the review and the final report within two weeks of the review

Thank You,



Tom Fornek
LUSI Project Manager

Cc:

Nicholas Kelez, LBL – Review Committee Member
Stefano Marchesini, LBL – Review Committee Member
Oliver Schmidt, ANL – Review Committee Member
Sebastien Boutet, SLAC, LUSI/CXI
Paul Montanez, SLAC, LUSI/CXI
John Galayda, SLAC, LCLS
Henry Chapman, DESY – Team Leader Member
John Miao, UCLA – Team Leader Member
Janos Hajdu, UPPSALA U. – Team Leader Member