**LCLS-II FEBRUARY PROJECT STATUS REPORT**

**DATE:** March 2, 2016

**LOCATION OF PROJECT:** Jefferson Lab

**SENIOR TEAM LEAD:** Joe Preble

**MONTHLY PROGRESS**

Summary

JLab continues to make good progress in all areas. The SRF cavity schedule continues to be delayed by the material delivery delays.

Management

Neil and Preble attended the Basic Energy Science Advisory Committee meeting on 11-12 February. STL and procurement staff participated in meeting at FNAL with LCLS II, FNAL, and SLAC customs consultant. Meetings with JLab freight forwarder, Team World Wide, to develop strategy for ensuring the remaining cavity procurement activities avoid delays due to customs or other logistical issues.

Cost, schedule, and scope are being managed. Inputs were provided for various BCRs: Cavity Parts in Circulation Cost, Cavity Tuning Machine Cost, Production Tuner Schedule, Cancellation Coils, CM Off-site Storage, EAC for Infrastructure and 4.5K cold box two-core heat exchanger design. Presented the results of the recent analysis and associated plan for an optimized cold compressor and 2K cold box design and procurement process.

JLab and FNAL colleagues visited tuner vendors: Phytron for stepper motors and PI for piezos. CMTF lead technician, CM assembly instrumentation technicians, production cryomodule lead and assembly lead technicians visited FNAL, to participate and learn from the FNAL pCM production activities. Excellent interactions with FNAL CM production team resulting in good info exchange, photos and detail for traveler/process development at JLab.

Antonio C. deLira, SLAC controls engineer started work 15 February 2016 at JLab to work on the LCLS-II cryoplant controls.

Cryogenic Plant

JLab completed the 2K cold compressor specification changes per SLAC comment request and released for signatures. Specifications for the warm helium oil removal vessels, gaseous helium storage vessels, and final charcoal vessel were circulated for approval.

The major warm helium compressor equipment was placed on order by the assembly vendor. The CDR is planned for April 2016.

4.5K cold box preliminary design review was scheduled for 9-10 March 2016.

Cryomodules

RI and Zanon both passed Phase I, vendor qualification for nitrogen doping cavities, of the SRF cavity phase contract. Manufacturing drawings for cavities from RI and Zanon were reviewed by JLab and FNAL SOTRs. Both vendors have started first article production activities.

JLab is working the cavity production schedule to recover delays due to material availability.

The pCM assembly has started with the cavity string assembly. Continue to receive components from FNAL. Continue assembly work on the pCM cold mass subassembly, welded Invar rod, inspection of modified 50K thermal shields from FNAL ongoing. Pressure testing of GHRP end caps is on-going. Once complete, a set will be sent to FNAL to support testing.

CMTF: End cap fabrication and testing was completed. Installation of coax lines and cable tray is ongoing. LLRF digital boards went back to assembly house for repair and were returned to JLab where chassis assembly was started. The network connection for the SSAs is ready and installed Modbus software.

LLRF:

Prototype hardware is advancing well. Components (i.e., resonance/stepper motor boards) are being tested. All the channels were tested. The voltage monitor for the common power supply was tested. Phyrotron stepper motor was tested with driver board. Modified (fuse) break out board.

ESH - QA

We are reviewing the recent NCR communication from the project QA manager. ACS package for the JLab RF All Metal Gate Valve was completed, approved, and copy sent to Mike Skonicki.

The Documentation Team has created a sub-directory on the M:drive for permanently storing certain vendor supplied documents. This is the final storage location whereby the files are protected and backed-up regularly by the JLab Computer Center. A document describing the usages of these new folders was created for the staff members.