Weekly Reporting

WBS 1.01.07 JLAB Management

Week of April 28-May 4, 2017

**Issues:**

**Accomplishments this week:**

Conducted CM and CP progress meetings.

Completed presentations for the Director’s Review.

Traveled to SLAC for Director’s Review.

Delivered the 2nd set of warm compressors to SLAC.

Cavities tested at FNAL from the restarted EZ production effort tested well.

**Upcoming Activities:**

International Particle Accelerator Conference 14-19 May

Collaboration Meeting 12 June 2017

DOE Status Review at SLAC 13-15 June 2017

SRF 2017 in China July 17-21, 2017

FAC at SLAC July 25-27, 2017 (Tentative)

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of April 28-May 4, 2017

**Issues:** Impact on cryomodule assembly schedule due to design changes and parts availability associated with microphonics. Insufficient quantities of PICs may lead to delays in shipments from cavity vendors.

**Accomplishments this week:**

Participated in Director’s Review at SLAC.

Prepared a BCR to fabricate 18-20 cavities at RI from material that EZ had on hand. Reviewed with Deputy SM.

Planning for an early coordination meeting at vendor that is producing HOM BLAs.

A planned CTF interruption for commissioning of the new CTF cold box beginning 22-May.

Cavity Status

Continuing with vendor on-site support at Zanon.

Next JLab shipment - CAV0087, CAV0088, CAV0089, CAV0090 – redirected to DESY for testing.

Next FNAL shipment - CAV0091, CAV0092, CAV0093, CAV0094 – shipped at the end of April.

DESY testing - Third set of four completed test as of 28 April: L2-059 (1st test); retests of L2-060, L2-056, L2-053. Preliminary results are that all passed.

Four bare cavities from Zanon were tested successfully at FNAL this past weekend. Three of four meet specifications and exhibit Qo > 3 x 10^10 and had gradient reach at ~ 20 Mv/m. The fourth cavity showed FE but after re-rinse is expected to pass.

pCM Status

pCM cooled down over 3 days. Full suite of tests is planned when pCM is ready. Good insulating, coupler and beamline vacuum. No frost on control valves with new stems indicating that TAOs are not present. Tuners and piezos are currently being evaluated. Qext will be verified for all eight couplers by Friday evening. High power testing to begin early next week.

Production Status

CM-02 (currently at WS5):

First two couplers are installed and leak checked. Downstream beam pipe reconfiguration for End Cap is done. JT stems in place. Preparing to do 320 PSI pressure test of pipe A prior to final welding and RT next Monday, May 8th. 2nd Bayonet box needs instrumentation finished to be installed on US end. Meeting with FNAL and VAT to discuss leaky gate valve. Major NCR written for the valve on J1.3-2.

Scheduled to go into CMTF in 4 weeks.

CM-03 (currently at WS3):

Magnet lead soldering is complete. Invar rod installation complete. Leak check of 2 phase piping complete. VV006 is waiting in place on cantilever fixture. Lollipops ready to go back to cleanroom for J1.3-5. Alignment of string starts tomorrow.

CM-04 (currently at WS12:

String assembly rolled out to CM Assembly on 2 May. Magnet and UCM are ready and waiting.

CM-05

Seven cavities are qualified for the string. Three tested qualified cavities (057, 061, 062) from DESY are due at JLab. Plan to start assembly on 8-May.

CM-06

Four cavities qualified at DESY are planned for string 06. These will arrive at JLab in late May.

**QUALITY**

Prepared and submitted the monthly SNCR Dashboard to the SLAC Project QA.

Participate remotely in the Director’s Review being held at SLAC.

**Upcoming Travel:**

E. Zanon Vendor Oversight May 6-19 (A. Palczewski)

HOM BLA Vendor Kick-Off Mtg – May 14-18 (H. Park, E. Daly, T. Peshehonoff)

E. Zanon Vendor Oversight May 16-26 (C. Reece)

E. Zanon Vendor Visit May 22 (K. Wilson, M. Laney)

E. Zanon Vendor Oversight May 30-Jun 10 (A. Palczewski)

SRF 2017 Lanzhou, China July 17-22 (A. Palczewski, C. Reece, N. Huque, L. Zhao, V. Bookwalter)

WXCX Vendor Visit July 24-28 (Cheng, Fischer)

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of April 28-May 4, 2017

**Issues:**

**Accomplishments this week:**

* No report.

**QUALITY**

Participate remotely in the Director’s Review being held at SLAC.

**Upcoming Travel/Reviews:**

Directors Review, SLAC, May 3-5th 2017

DOE Review, SLAC, June 13-15th 2017

2K Cold Box FDR Closeout, June 20, 2017

FAC Review, SLAC, late July 2017 - tentative

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of April 28-May 4, 2017

**Issues:** None

**Accomplishments this week at JLab:**

* LLRF Coordination/Documentation:
  + Heater: The FPGA board should be completed and sent out this week. The front and back panel design of the chassis has started.
  + LLRF Production: JLAB management has requested a more thorough estimate. We are waiting on SLAC for a vendor quote. Sent a detailed package for the power distribution board used in the PRC/RFS chassis.
* Resonance/Stepper Motor Board/Chassis:
  + Piezo control: The fiber communication link is working between FCC and the LCLS-II resonance control chassis. A basic PI controller will be tested on the bench in the next couple of days.
  + Test Bench: Procuring of parts (motors) for the test bench is ongoing. We are borrowing 4 motors because of the cost. Looking at encoders for stepper motor continues.
  + Making production modifications to the pc boards.
* Interlock Board/Chassis:
  + Test bench: Investigating using existing ADCs or looking for a commercial solution continues …slowly.
  + Making production modifications to the pc boards … 8 channels FEP.
* Common Power Supply/Chassis/Boards:
  + Power Distribution Chassis – The back plane is being modified for better power distribution. Several features have been added like blown fuse LED’s to the front panel, 2 wire power and commons, better labeling and redesign of the internal power planes. Will be ready for review next week.
  + Gun Power Distribution Board: The board is back and waiting to be stuffed. This will be completed by the end of the week and then tested out.
  + Gun/Buncher PS Chassis: Power supplies have arrived. Will start on the Power Distribution for this special chassis when we have completed the main PCB. We will use the same PCB design but different silkscreening and fuse sizes.
* CMTF
  + PRC/RFS chassis location has been finalized. Cables have been ordered to connect from the patch panel to the chassis. Still waiting on the cables to arrive. All of the chassis are installed in the CMTF and powered up.
  + Resonance and Interlocks ready for manual testing on the pCM.
  + LLRF to SSA operation was verified for all 8 cavities.

**Upcoming Activities:**

* Garth will visit JLAB next week.
* CMTF LLRF Tests start May 11??
* Prepare for DOE Review
* Internal design freeze meetings for JLAB designs May 15.