

## Lab Status / AEM Meeting Notes

Monday April 30, 2018

<https://indico.fnal.gov/event/16967/>

### Incidents:

- None reported.

### Accelerator (April 10 - 16):

- NuMI: 1.51E19 POT. Running at >720kW (w/o switchyard).
- BNB: 0.70E19 POT.
- Muon: 4.31E18 POT.
- MTest: 96.7 hours.
- MCenter: 0 hours.
- Booster & MI tuning continues.
- MI-8 domestic water repair completed.
- PIP-II Injector test: starting up. Up to 5mA, 3.5ms, 20Hz.
- FAST: IOTA installation under way.
- LCLSII: Cryo-plant repairs on schedule.
- Schedule: <http://www-ad.fnal.gov/ops/schedule.html>

### MicroBooNE:

- POT weighted uptime 94%
- Analysis mini-retreat followed by Collab. Meeting last week.

### MINERvA (April 18-23):

- Uptimes: 89.6% (89.2% with MINOS ND). Note: estimates low because of large backlog of files.
- MINOS magnet power supply failed Monday morning, back Tuesday afternoon.

### NOvA:

- Uptimes: ND/FD = 100%/99.8%

### Muon g-2:

- 5.5 days production running, 3 trolley runs, 0.5 days of absolute calibration measurements.
- Uptime: 88%

### PPD:

- CMS: running well. Phase-1 upgrade: key procurements for HB in next 6 weeks. HL-LHC upgrade: preparing for CD-1 IPR (June 5-6).
- Mu2e Solenoids: Progress on solenoids continues.

- Mu2e Detector: Tracker - UMN started to build first panel .. sending FNAL expert to help resolve problems. CRV – production extrusions completed one month ahead of T1 milestone. Will continue extruding 5km spares.
- Mu2e Beamline: Completed mini-CRR for low intensity beam commissioning production target.
- Astro: (i) DESI – 14 papers being reviewed for SPIE conference on telescopes & Instrum. (ii) LZ: LXe tower fabrication drawings approved.
- Test Beam: (i) sPHENIX calorimetry test in beam. (ii) “Studies of uniformity of 50  $\mu\text{m}$  low-gain avalanche detectors at the Fermilab test beam” published in NIM.
- Custom Detector Technologies: Work on CMS optical fibers, Mu2e scintillator ARAPUCA coatings R&D for protoDUNE g-2 multi-wire planes.

#### **ND:**

- SBN: First two ICARUS cold shield panels completed, leak tested, and installed on the south wall of warm vessel.
- SBN: Upgrade of far detector building cranes to 33 tons started.
- SBND: Anode plane wire installation progressing. Cathode plane has been completed at Liverpool and will be shipped to Fermilab in May.
- protoDUNE-SP: All six APAs are now in the cryostat. Cryostat was turned over to the CERN team for closing of the temporary construction opening. This work is expected to take 6 weeks.

#### **TD:**

- **SRF**
  - (i) R&D: 5 GHz single-cell performed well. Breakthrough with 1-cell high-Q0 R&D: 39 MV/m with  $Q_0 > 2E10$ .
  - (ii) LCLS-II: CM06 autopsy showed failure not only BPM but also coupler bellows cracked.
  - (iii) PIP-II: Spoke cavity S107 successful test.
- **MAGNETS**
  - (i) HL- LHC, AUP – Coil fabrication for LHC inner triplet quads continues.
  - (ii) LCLS II – test and qualification of the quadrupoles continues.
  - (iii) Mu2e – work on solenoids continues.
  - (iv) G-2: winding of inner and outer coils for new inflector complete.
  - (v) MDP 15-17 T dipole R&D - Coil fabrication for 15 T dipole continues.
  - (vi) Accelerator Support – Coil winding for leaking MDCC resumed.
- **Cryogenic Sector**
  - (i) PIP-II, LCLS-II and Mu2e procurements. LCLS-II procurement – DOE review scheduled for May 8-10 at SLAC.
  - (ii) Various sub-kelvin cryogenic activities for SuperCDMS, ADMX, Nexus & Quantum Lab. SuperCDMS operations review June 19 in Germantown.
  - (iii) Cryomodule Test Facility: plant under repair.  
VTS: One single-cell 1.3GHz & one 5GHz cavities tested.

#### **Computing Operations:**

- CCD: Good week.

- SCD: Good week.

**Office of Communication:**

- Coffee/cookies open house for employees and users on Wednesday at 1pm.

**Directorate:**

- Nigel in DC.

**AOB:**

- None