

Lab Status / AEM Meeting Notes

Monday April 16, 2018

<https://indico.fnal.gov/event/16870/>

Incidents:

- None reported.

Accelerator (April 10 - 16):

- NuMI: 1.84E19 POT. Running at >720kW (w/o switchyard).
- BNB: 1.07E19 POT.
- Muon: 1.36E18 POT.
- MTest: 63.3 hours.
- MCenter: 0 hours.
- Booster & MI tuning continues.
- Muon g-2; Li Lens replaced.
- SY120: Test beam off due to power supply (HP3DS) bus duct fault ... should be repaired tomorrow.
- PIP-II Injector test: starting up. Up to 5mA, 1.2ms 120Hz.
- FAST: IOTA installation under way.
- LCLSII Cryomodule F1.3-09 testing complete.
- Schedule: <http://www-ad.fnal.gov/ops/schedule.html>

MicroBooNE:

- POT weighted uptime 96.4%

MINERvA (April 5-11):

- Uptimes: 96.7% (96.0% with MINOS ND).

NOvA:

- Uptimes: ND/FD = 99.4%/99.8%

Muon g-2:

- Data production rate maxed out at 10% data taking rate.
- Turned on Thursday after Li Lens replacement.
- Kicker HV increased ~20% and flux went up by ~60% !
- Uptime: 88%

PPD:

- CMS: ttH observation > 5sigma [arXiv:1804.02610](https://arxiv.org/abs/1804.02610) Operations: First Stable Beams expected tomorrow.
- Mu2e Solenoids: Progress on TS continues.
- Mu2e Detector: Tracker - UMN PO. UMN has restarted work. CRV – Module & electronics production Construction Readiness Review scheduled May 21st.

- Astro: New result for dark matter using skipper CCDs submitted as part of SENSEI. New limit between 500keV and 4 MeV.
- Test Beam: CMS Timing (T1409) finished data taking. ATLAS Pixels (T1224) taking data.
- Custom Detector Technologies: 86% of scintillator now extruded for Mu2e. Continue ARAPUCA coatings R&D for protoDUNE.

ND:

- SBN: CERN, DOE & INFN have settled on language of ICARUS loan agreement. DOE has lifted work hold on welding and rigging the cold vessels.
- SBN – ICARUS: Assembly of cold shields begun in MINOS Service Building. Scaffolding being installed around cold vessels
- SBN – Joint DAQ Development: Latency measurements of White Rabbit system as installed ongoing.
- protoDUNE-SP: 4th US APA in clean room at EHN1. APA#5 is in the cold box.
- ProtoDUNE-SP Data Challenge 2 was a success: 300TB (mostly simulated MC data) transferred from EHN1 to EOS to FNAL last week.
- LArIAT: Several students presenting in-progress work at APS this week.

TD:

• **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 – Warm tests of first TS production module proceeding.
- (iv) G-2: outer winding for new inflector in progress.
- (v) MDP 15-17 T dipole R&D - Coil fabrication for 15 T dipole continues.
- (vi) Accelerator Support – Coil winding for the Booster biased solenoid will be completed this week.

• **SRF**

- (i) R&D: Quantum Computing measurement. High Q studies and Plasma processing continues.
- (ii) LCLS-II: Retro-fit BPM procedure still in SLAC review. CM09 tests completed. CM11 WS2 started.
- (iii) PIP-II: Spoke cavity work continues.

• **Cryogenic Sector**

- (i) PIP-II, LCLS-II and Mu2e procurements.
- (ii) HL-LHC AUP: working on stand 4 upgrade tasks.
- (iii) Various sub-kelvin cryogenic activities for SuperCDMS, ADMX, Nexus & Quantum Lab.
- (iv) 3.9 GHz LCLS-II cavity testing in HTS and spoke cavity testing in STC completed last week. : VTS stands: Six R&D cavities tested last week, Stand 3: One LCLS-II magnet tested.

Computing Operations:

- CCD: Good week.
- SCD: Had a similar problem as intensity frontier last weekend where tissue alerts were ready to block dCache head nodes for CMS. Delays put in last week protected the caching system as sys. admins. were alerted before the block and mitigations implemented.

Office of Communication:

- U.S. – India sign “Annex 2” agreement opening way to jointly advance LBNF/DUNE.
- All Hands Meeting April 27.
- Fermilab FAQ event on April 18.
- STEM Career Expo April 18.

Directorate:

- No report.

AOB:

- None