

Lab Status / AEM Meeting Notes

Monday January 29, 2018

<https://indico.fnal.gov/event/16298/>

Incidents:

- TD: Recently 2 MI quads baked to burn out epoxy. During the bake it was noted that one quad was on fire. Not normal. When the magnets were removed from bake, TD was going to use the magnet lifting fixture to pick one up. Before the fixture was attached a technician noticed welds on several tie plates were cracked.

Accelerator (Jan 22-29):

- NuMI: 2.01E19 POT. Running at ~710kW (w/o switchyard). Record day on Saturday (3.12E18).
- BNB: 7.13E18 POT.
- Muon: 126.1 hours.
- MTest: 39.5 hours.
- MCenter: 35.2 hours.
- PIP-II Injector test: 4 week shutdown continues.
- FAST: IOTA installation under way.
- Schedule: <http://www-ad.fnal.gov/ops/schedule.html>

MicroBooNE:

- POT weighted uptime 96.5%
- LAr pump #1 (with broken rotor) removed from pit.
- Problems with Near 1 and Event Builder machines crashing.

MINERvA (Jan 17 - 24):

- Uptimes: 97.7% (93.3% with MINOS ND)
- On Jan 19, one of MINOS's log files filled up the MINOS data disk. Was not caught & resulted in 6 hours downtime. Procedures updated to avoid this in future.

NOvA:

- Uptimes: ND/FD = 100%/99.4%
- Steady data taking.

Muon g-2:

- Commissioning continues. Last piece of equipment (plunging probe) installed on Thursday.
- Planning a production test run this week and anticipate physics running starts early/mid Feb.

CMS Monthly Report:

- Year-end technical stop ongoing
- Pixel tracker intervention for failing DC-DC convertors. Damage located in FEAST ASIC. About 30% of still-working convertors show abnormal I-V characteristics. Pixel modules left under HV with failed DC-DC convertors have broken pixels. Plan to replace all DC-DC convertors & most of modules in Layer 1 of Barrel Pixel detector.
- Installation of new photosensors & r/o electronics for Hadron End-Cap Calorimeter ongoing.

PPD:

- CMS: 3 out of 4 FPIX half cylinders repaired and ready for re-insertion.
- Mu2e: (i) Solenoids. GA: Machining of the inner diameter of Al shell now complete, ready for coil insertion. ASG preparing to ship first TS unit to Fermilab. (ii) Extinction System 1m AC Dipole 4.5 MHz test repeated. (iii) Straws from first pre-production panel installed and tensioned (iv) Calorimeter: completed program for measuring thickness of SIPMs. (v) CRV extrusion production in progress.
- Astro: Data taking for ADMX Run 1b started yesterday. DES observing continues. SuperCDMS SNOLAB had successful CD2/3 review at SLAC last week. SPT crew back from the South Pole. DESI: first of 10 petals is fully assembled.
- Test Beam: MTest busy with T1224 (ATLAS Pixel) & T992 (parasitic).

ND:

- Preparations for the DOE IPR underway.
- Finalized the design of support platform for SBN-FD Proximity Cryogenics.
- 35T high voltage test of the ProtoDUNE-SP field cage continued
- DUNE Collab. Meeting this week.
- APA#2 (PSL#2) at CERN ready to be moved into cryostat. APA#3 (UK#1) ready to move into Cold Box. APA#4 (PSL#3) scheduled to ship to CERN Feb 13. APA#5 (UK#2) has X-plane. APA#6 (PSL#4) frame being assembled. The 3rd (and final) Cathode Plane/Field Cage Unit is being assembled.
- The first parts for the ICARUS cold shields arrived at Fermilab last week.

LBNF:

- No report.

TD:

- **MAGNETS**
 - (i) HL- LHC, AUP – Producing coils:
 - (ii) LCLS II – test and qualification of the quadrupoles continues.
 - (iii) Mu2e – solenoids progressing.
 - (iv) AS – Parts for the biased cavity solenoid are available. Stacking the rectangular lamination stacks is in progress. Refurbishment of another two IQB magnets has started.
 - (v) MDP 15-17 T dipole R&D. Production of the coils continues.

- (vi) IB1 Infrastructure - Installing AC power feed to Klystron.
- **SRF:**
 - (i) Nb3Sn continues cavity preparation and coating. Nb/Cu equipment relocated to new location, installation is in progress. Quantum computing work continues.
 - (ii) LCLS-II: Cavity production progressing.
 - (iii) PIP-II: Spoke cavity work continues.
- **Cryogenic Sector:**
 - (i) Cryogenic module test facility: LCLS-II work in progress.
 - (ii) Engineering: PIP-II, LCLS-II and Mu2e procurements. HL-LHC AUP reviewing cryogenic designs.

Computing Operations:

- CCD: Good week. ESnet will be performing maintenance on 1st Feb., will affect the primary NoVA FD Circuits. We expect that traffic will switch over transparently to the secondary circuits.
- SCD: Dcache issues last week with queues overloaded with analysis jobs. Working on collecting requirements from experiments to better understand root cause and how to fix.

Office of Communication:

- Colloquium Wednesday: European Strategy update.
- Annual family open house on Feb. 11.

Directorate:

- No report.

AOB:

- None