

## Lab Status / AEM Meeting Notes

Monday December 18, 2017

<https://indico.fnal.gov/event/15946/>

### Incidents:

- None reported.

### Accelerator:

- NuMI: 1.80E19 POT
- BNB: 9.34E18 POT.
- Muon: 132.4 hours.
- MTest: 87.6 hours.
- MCenter: 102.1 hours.
- LINAC: Investigating LRF3 Marx trips. Booster: Tuning. NuMI at 640 kW with SY120. BNB: Stable operation at 5Hz.
- There will be a 4 hour access Tuesday to fix MI compressed air leak.
- PIP-II Injector test: Studies ongoing.
- FAST: IOTA installation under way.
- LCLSII Cryomodule F1.3-05 testing complete. Warm-up and deinstallation in progress.
- Schedule: <http://www-ad.fnal.gov/ops/schedule.html>

### MicroBooNE:

- POT weighted uptime: 97%.
- Cryo maintenance work completed after replacing recirculation pump.
- Added new software trigger & lowered light collection threshold.
- Data Management: Successful retreat on validation of reduced event size.

### MINERvA:

- Uptimes: 98.2% (86.3% with MINOS ND)
- Dec10: fan failure problem caused power loss for MASTER crate. Dec 13: DAQ stopped with error pointing to MASTER Card. Problem fixed when MINDER card replaced next day – but not clear why.

### NOvA:

- A fraction of a percent of events are “incomplete” ... seems to be associated with events processed by buffer node that is in a temporary “disconnected” state.
- Uptimes: ND/FD = 99.8%/100%

### Muon g-2:

- Kicker & Quads: timing scans, alignment, kicker strength scan. Quads operated stably at 20.5 kV.
- Trolley took partial field map.

- Beam tuning work progressing.
- Main focus of the coming week: Cryo pump commissioning, more beam tuning with 8-bunch trains, new trigger system commissioning.

**PPD:**

- CMS: (i) Phase 1: Installation of HE Upgrade commenced. 36 readout boxes in total, one updated last year, one updated this year - process took about a day or two, in line with expectation (or perhaps a bit faster). Post-installation checkout shows readout box performing as expected. Installation should complete by end of Feb 2018. (ii) HL-LHC: Project continues to progress towards CD-1. Project CD-1 date now early June. NSF Preliminary Design Review successfully passed last week. Very few recommendations. Committee was impressed by technical, management and cost/schedule information. Should get final report by end of next week, but executive summary was "reviewers were unanimous in passing us on the PDR" and we were commended for doing great job. This was a baselining exercise, next step will be going to NSB and subsequent congressional approval to include project in budget. The ATLAS PDR review is second week of January. Both ATLAS and CMS form a single MREFC request. (iii) HGCAL: SiDet Precision Metrology completed final draft of measurement program for characterizing numerous copper plates. (iv) Tracker: Finished testing method for automatically detecting defects in CMS pixel detectors using vision inspection system.
- Mu2e: (i) Solenoids. PS/DS progress at GA (Tupelo). Model coil VPI'd last week and cooled down over weekend. Next steps are coil inspection, electrical tests and shell insertion, which requires measuring and machining coil and shell. Analyzing results from the PS splices made with curved splice tooling to determine if superconductor degraded during welding. No degradation seen. This information has been transmitted to GA. (ii) TS. ASG successfully inserted coils into shell for first TS unit. Axial supports and wedges being put in place. Bus-work routing will take place this week. First unit scheduled to be completed before holidays and shipped after break. TS inner cryostat fabrication underway. TS outer cryostat CRR scheduled for Jan 30, 2018. (iii) HAB. Cooldown and testing of prototype coil successful. Facility also used to test curved splices. Second dish-head still to be commissioned. (iv) CRV: Extrusion facility prepped equipment and has supplies on hand to begin production next week. Will be starting with short lengths. (v) Calorimeter: Finished measuring first batch of crystals from SICCAS
- Test Beam: Both MTest and MCenter running smoothly, taking data. Plan to continue data taking through rest of the week.
- Scintillator Development: (i) Winding Facility: continue repairing PWCs and other chambers (ii) Work for others: Extrusion facility recently completed work for Los Alamos, 13 km for KIT, 1.5 km of Minerva triangles for TRIUMF. (iii) Chemistry facility: continue work on tests of different oxides for improved reflectivity of paints, glues or coatings

- SIDET: (i) SPT 3G: Completing last of Squid boards. (ii) DESI: Started another CCD package (iii) SENSEI: Cutting silicon for R&D lamination evaluation. Setting up work area.

**ND:**

- DUNE: APA#2 was moved into the cold box last week. Warm tests will be conducted prior to the CERN holiday shutdown.
- LBNF/DUNE Interface meeting at Fermilab, 18-19 December.
- SBND: Cold stress tests of commercial ADC for the SBND TPC cold electronics continue to make good progress.
- SBN-FD: Review of ICARUS rigging proposals continues. The next major shipment of ICARUS equipment will depart CERN by Dec 22 with expected delivery to Fermilab at the end of January.
- LArIAT continues progress on two papers that should be completed soon: a detector paper that will be submitted to JINST, and the charged pion cross section paper that will be submitted to PRD.

**LBNF:**

- No report.

**TD:**

- No report.

**Computing Operations:**

- CCD: Good week.
- SCD: Busy week.

**Office of Communication:**

- All-hands meeting on Dec. 19 at 9:30 in Ramsey Auditorium.
- Next week the anniversary panels will be taken down.
- News publication hiatus from Dec. 23 - Jan 2. Employees/users can continue to submit announcements and classified ads as usual.

**Directorate:**

- No report.

**AOB:**

- None