Lab Status/ AEM Meeting Notes

Monday March 13, 2017

https://indico.fnal.gov/conferenceDisplay.py?confId=14038

Incidents:

- None.

Accelerator Operations:

- Weekly integrated intensities: NuMI 1.71E19, BNB 3.39E18, NMuon 3.99E16 (146 hours), MTest 7.35E13 (45.6 hrs), MCenter Off.
- NUMI running at 625 - 690 kW with SY. One hour record: 715.88 kW.
- Future schedule: http://www-ad.fnal.gov/ops/schedule.html
- PIP-II Injector test: Performed maintenance. Operational readiness check expected today.
- FAST: 300 MeV beamline construction continues. 300 MeV Quads roughly aligned. 3 more weeks of cable pulls. Majority of beam tube installed. 6 of the 7 transverse profile monitors vacuum certified.
- CMTS1: Prototype Cryomodule moved from CMTF to ICB last week. Installing Solid State Amplifier for cavity #8. Cryomodule testing late March/early April.
- Please look at the slides available at the agenda link at https://indico.fnal.gov/conferenceDisplay.py?confId=14038

MicroBooNE:

- DAQ uptime 94.2% for week of March 6; Friday 90.4% due to CRT panel install. BNB uptime 61.2% (Beam coming back on Wednesday.)
- POT delivered: 3.4E18; recorded: 3.2E18.
- Collaboration meets in Cincinnati for annual offline software/analysis retreat.

MINERvA:

- Uptime 93.4%, with MINOS 92.4%.
- Computing job success rate good at 97% but overall CPU efficiency low ~65% due to high memory usage in user analysis job. Working to improve this.

NOvA:

- NOvA paper on “Constraints on oscillation parameters from nu_e appearance and nu_mu disappearance in NOvA” submitted to PRL. (arXiv:1703.03328.)
- Observed 750kW max beam power for ~20 minutes on Friday March 10. Beam power ~690-700 kW through the weekend.
- POT-weighted Uptimes: 99.1% for both FD and ND (Last 4 weeks)
- Computing: job success rate 83%, CPU efficiency 87%; ND data processing complete. MC generation kickoff has been slow but hope to start soon.

SeaQuest:

- Delivered protons: 3.72E16; Not vetoed Proton sum: 1.47E16.
- Both LH2 and LD2 targets filled last week.
- Station 1 has a short, will be pulled for repair tomorrow; will run with old St. 1.

PPD Operations:

- Muon g-2:
  - Ring cool-down finished on Friday. No sign of vacuum flashlets in 3 days. Before the Helium leak repair and charcoal removal we would have expected about a flashlet per day.
  - The first Blumlein kicker now tested on a dummy load. Safety cages and fencing added to prevent access to the Blumleins when operating.
  - Beam vacuum tests were successful at the 10^{-6} Torr level. Opened up for detector installation.
  - The first pair of Fiber Harp Monitors installed.
  - Trolley drive installed last week.
  - Final installation of quad extensions has begun; 1 of 8 completed.
- CMS
  - FPIX was installed last week. Warm checkout of electronics and cooling channels successful. Other detectors being installed behind.
  - Upgraded endcap front end HE17 will stay in this year's run.
  - HF installation is ahead of schedule
- Mu2e
  - Working on the Tracker replan. The plan is to move Rice's panel construction work up to Minnesota.
  - New parts for General Atomics winding machine scheduled to arrive in Tupelo later this week. PS and DS solenoid winding should be back on track soon.

ND Operations:

- DUNE/protoDUNE:
  - Analyzing protoDUNE construction and installation sequencing to understand P6 schedule accurately reflects current plans and timeframes.
  - Multiple visits made to PSL in UW Madison to discuss APA construction and quality verification.
  - The Project office will have a follow-up meeting this week with export experts (through FESS) to discuss issues/plans for delivery of ProtoDUNE components to CERN.
- SBN:
  - Still awaiting completion of the CERN-DOE neutrino protocol addendum. The planned date from shipping of ICARUS from CERN was in 5 weeks. CERN (and INFN) technical teams who were supposed to arrive at Fermilab by Monday March 20; this is now delayed to May 1.

TD Operations:

- Tested 7 SRF cavities last week, mostly LCLS-II production, but also LCLS-II R&D and general R&D.
- The Mu2e splice test magnet had a problem with one RTD (resistive temperature detector). It could not be fixed. Tests will be done this week without it.
- Installation continues on the Mu2e TS (Transport Solenoid) test stand at HAB. The dished heads for the test cryostat, which must support the TS modules during testing, were successfully load tested last week, and one has passed leak checks. Work on documentation for the system continues, but having difficulty finding reviewers with available time. This makes meeting the goal of cooling down at the end of the month problematic. Vendors continue to require constant attention.
- The prototype cryomodule will be returning from CMTF (CryoModule Test Facility) to ICB for a few adjustments and preparation for shipment to SLAC. LCLS-II first production cryomodule is in its cryostat and will be buttoned up in a couple of weeks for testing at CMTF.
- TD and AD are actively working on the details of merging the AD Cryo department into TD, as previously announced.
- All the other balls are still in the air. LCLS-II, LARP, g-2, Mu2e, PIP-II, accelerator operations, magnet and SRF R&D, multiple partnerships.

Computing Operations:

CCD:

- The "Service Now" automated paging had been down from March 10, but now fixed. No serious impact.
- ReadyTalk (RT) will be turned off this Friday. 20 RT users yet to move to ZOOM.

SCD:

- FIFE operation had a couple of low performance events early last week. GPGrid usage saturated and ~170K jobs in the queue. Only MARS jobs run for a test beam project got affected.
- CMS production jobs for winter conferences done. So much of farm available for OSG use, but even the OSG demand didn't fill available slots. LPC running fine.

Office of Communication:

- The 50th anniversary Science Symposium is scheduled for June 7th followed by a one days users meeting on the 8th. Reminder to all to register.
- First Spanish language Ask-a-Scientist was last Sunday. About 80-100 people showed up. It was very successful.

Directorate:

- No report.