



MINOS+ Status Report



Donatella Torretta
All Experimenters' Meetings
December 2, 2013



Near Detector



- **Magnet Tripped on Monday, Nov. 25**
 - When in the Hall, we immediately saw that the expansion water tank's level had dropped from 24 inches (*morning shift's readout) to 18.5 inches in a few hours, and water on the floor
 - It was not immediately clear where the water had come from but it was immediately clear there was a leak in the system
 - Called Dave Pushka who came to look at the LCW system
 - He found that the DI bottle had a water leak from the top end cap
 - We determined the bottle must have been replaced in the morning by looking at the values of the water resistivities
 - Dave closed the isolation valves connecting the DI bottle and the LCW system so no more water would escape
 - In the evening, John Voirin and I went back in the Hall and John was able to tighten the connector on the DI bottle and reopened the valves
 - Both MINOS and Minerva shifters have been watching the values of the water level & the water resistivities
 - Values have been stable the whole week



Near Detector



- **Magnet Tripped on Monday, Nov. 25**

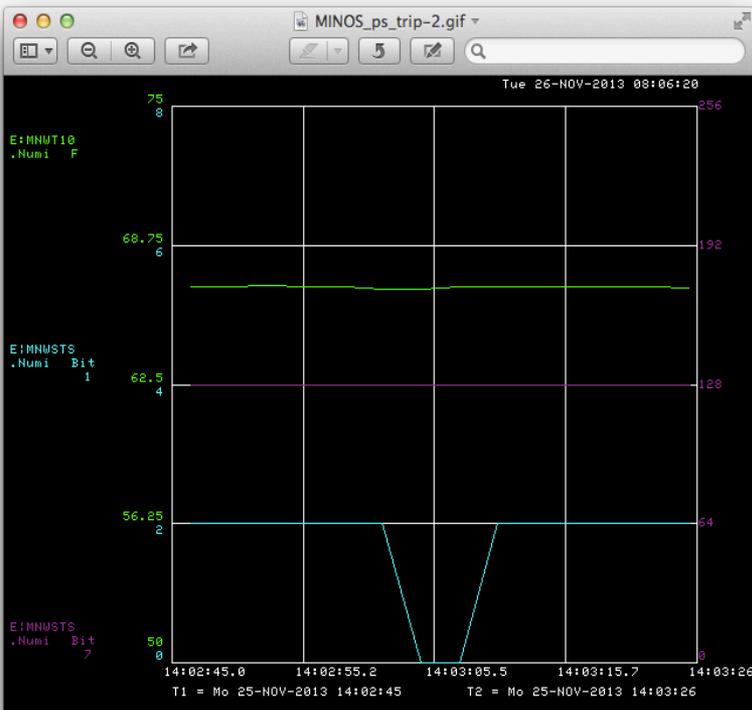
* Currently the LCW PLC reading of the expansion tank's water lever is bypassed after water damaged the transmitter circuit and the reading is done visually by the shifters looking at a web camera pointing to the water level indicator * (we are expecting the parts this week)

Since the reading of the water tank was disabled, the cause of the trip must have been something else

Indeed, Tom Zuchnik found that there was a glitch in the reading of the digital status for pumps on/off and this caused to drop the magnet permit

He could add a delay on the status read by the permit logic so that it has to be bad for T seconds before the permit is dropped.

He can do this while the LCW repairs are underway





Near Detector



- CAPID errors
 - While the magnet was off, we swapped the Minder corresponding to high error rate channel 2-11-2-4 and calibrated it
 - This fixed the errors
- RPS Fan Failure warning in M4 rack
 - We are unable to clear the warning in rack M4
 - It looks like a real fan failure problem
 - Plan to replace it during Wednesday's beam downtime
- Some low rate strips in Plane 96
 - Appeared during Low Intensity run
 - Cleared by themselves
- ND DAQ running very well



Far Detector



- FD DAQ running very well last week
 - Power cycled a LI box
 - Took a CI special run
- Secure ESNET tunnel went down between Soudan FD and FNAL on Monday, 11/25
 - Outage lasted from 08:04 am – 15:30 pm
 - UMN reported TelecomB-GR-01 had a hardware problem, and no spares were going to be available until the following morning
 - The problem was actually fixed earlier than expected moving Soudan traffic on a different router with lesser load
 - During the outage, Spill and Beam Servers could not connect to Fnal
 - It may be possible to recover spill data from the database later
 - But the problem had little impact on the low intensity special run, since less one neutrino event was expected during 48 hours



MINOS+ Status



Start Date/Time	End Date/Time	Near Detector		Far Detector	
		POT Fraction	Live Time Fraction	POT Fraction	Live Time Fraction
9/2/13 00:00:00	9/9/13 00:00:00	66.9%	98.8%	0.2%	1.6%
9/9/13 00:00:00	9/16/13 00:00:00	93.5%	92.7%	47.7%	46.8%
9/16/13 00:00:00	9/23/13 00:00:00	92.7%	92.3%	84.7%	81.0%
9/23/13 00:00:00	9/30/13 00:00:00	96.2%	95.3%	93.5%	94.1%
9/30/13 00:00:00	10/7/13 00:00:00	94.7%	94.4%	98.0%	98.3%
10/7/13 00:00:00	10/14/13 00:00:00	99.1%	85.0%	99.5%	87.4%
10/14/13 00:00:00	10/21/13 00:00:00	79.7%	89.7%	86.9%	99.9%
10/21/13 00:00:00	10/28/13 00:00:00	70.3%	58.5%	99.8%	95.8%
10/28/13 00:00:00	11/4/13 00:00:00	98.8%	97.8%	99.9%	99.5%
11/4/13 00:00:00	11/11/13 00:00:00	98.4%	95.5%	95.7%	96.9%
11/11/13 00:00:00	11/18/13 00:00:00	91.8%	92.7%	99.9%	99.8%
11/18/13 00:00:00	11/25/13 00:00:00	92.4%	92.2%	99.5%	99.6%
11/25/13 00:00:00	12/02/13 00:00:00	93.6%	98.6%	93.6%	99.5%



MINOS+ Status



- We took 48 hours of Low Intensity beam data (6 batches and 2 turns, $3.3E12$ protons/pulse)
- Thanks AD & Program Planning Office
- Detectors are running great
- Two institutions have started the ROC certification process last week:
 - College of William and Mary, Williamsburg, VA (in progress)
 - University Minnesota, Twin Cities, MN (***completed***)