



# MINOS+ Status Report



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All Experimenters' Meeting  
July 6, 2015



# Near Detector

## DAQ



- Leap second change on Tuesday June 30
- DAQ Timing issues on Thursday morning, July 2 : details in dedicated slide

### Electronics/Detector issues

- Wiener power supply in crate U10 died on Tuesday morning ~ 4:30 am
  - Made access, put in spare, no go
  - Found blown fuse in back of chassis; replaced fuse, ok
  - Then issues with reading back Wiener voltages
  - All OK by 12:00 am
- One cold/hot channel
- A few other intermittent bad channels
- Low Gain in Plane 28 (Calorimeter)
  - LED problem ? Bad fiber connection ?
  - Planned extensive investigation during summer shutdown



# Far Detector

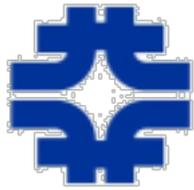
## DAQ news

- 1s power glitch at Soudan on Monday June 29
  - DAQ kept running thanks to new UPS
- Network disconnection on Wednesday afternoon:
  - cause was a cut fiber cable south of Tower (MN)
  - service was restored ~19:30 pm
  - had NO effect on data collection, by design
- Leap second/timing issues (details in dedicated slide)



## Electronics/Detector news

- That *one* usual flat charge injection channel
  - May be looked up during the summer shutdown



# Leap second change on Jun 30



**Leap second change on Jun 30, at 23:59:60 UTC**

- We stopped running at both sites around 18:50 pm
- Notified MINERvA
- Changed the NTP config file (tpc.config) to add the extra second
- Restarted all Timing processes at both sites around ~19:15
- Timing processes finally re-synched with the GPS around 19:37
- Restarted RunSequences at both sites: all running fine .
  
- Note: MCR were having problems distributing the leap second change across ACNet.
- Some devices changes timely, others much later
- Data in IFbeamDB will need to be fixed for the time offset devices
- IFbeamDB meeting today to discuss a plan of action



# Timing issues on Thursday July 2



- Got GPS error messages at both ND/FD sites ~9:00 am
- Restarting all timing processes was sufficient to restore data taking at ND
- BUT at FD it was necessary to power cycle the TrueTime GPS interface in order to restore communications
- Not clear yet what caused this timing glitch
- Looking at GPS websites to hopefully find a root cause



# 2015 summer shutdown work



## **ND**

- This week: usual maintenance of ND magnet power supply by Walter Jieskerney
- This and next week: work on LCW skid to include valve control to maintain resistivity  $\sim 6$  MOhm.
- Upgrade three DAQ servers computers (including one for DCS)
- Upgrade kernels in all computers
- Replace Master crates fan packs filters
- Cycle and test some spares MVME cards: if OK, leave them in place

## **FD**

- Clean all electronic rack filters and do system checks (fan checks, voltages, RPS systems, etc.)
- Test all detector UPS's
- Replace one DAQ rack UPS and replace batteries in second one.
- Cycle in the 3 spare MVME cards: if OK, leave them in place
- Annual maintenance on Ling coil power supplies
- Test and repair spare RPS electronics
- Test and reload spare TRC cards



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Start Date/Time	End Date/Time	Near Detector		Far Detector	
		POT Fraction	Live Time Fraction	POT Fraction	Live Time Fraction
3/23/2015 00:00:00	3/30/2015 00:00:00	99.6%	99.6%	99.4%	99.1%
3/30/2015 00:00:00	4/6/2015 00:00:00	96.2%	96.1%	99.9%	99.6%
4/6/2015 00:00:00	4/13/2015 00:00:00	94%	95%	99.9%	99.6%
4/13/2015 00:00:00	4/20/2015 00:00:00	90%	90%	98.7%	98.4%
4/20/2015 00:00:00	4/27/2015 00:00:00	98.4% (*)	96.7%	98.4% (*)	99.2%
4/27/2015 00:00:00	5/04/2015 00:00:00	99.8%	99.4%	98.2%	98.3%
5/8/2015 00:00:00	5/11/2015 00:00:00	99.6%	99.4%	99.8%	99.5%
5/11/2015 00:00:00	5/18/2015 00:00:00	99%	99.1%	97.3%	94.1%
5/18/2015 00:00:00	5/25/2015 00:00:00	98.8%	99.3%	98.8%	98.9%
5/25/2015 00:00:00	6/01/2015 00:00:00	99.5%	99.5%	99.3%	97.7%
6/01/2015 00:00:00	6/08/2015 00:00:00	99.7%	99.7%	99.85%	99.85%
6/8/2015 00:00:00	6/15/2015 00:00:00	70.8% (**)	98.2%	71.4% (**)	99.2%
6/15/2015 00:00:00	6/22/2015 00:00:00	0% (**)	99.6%	0% (**)	99.6%
6/22/2015 00:00:00	6/29/2015 00:00:00	0% (**)	99.4%	0% (**)	99.7%
6/29/2015 00:00:00	7/3/2015 00:00:00	0% (**)	93%	0% (**)	98%

(\*) ACNet devices off 1s: two hours period still under investigation

(\*\*) POT fraction affected by DQM good beam definition during horn off runs: Raw POT Fractions ~99.5%-99.8%



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ND POT fraction and Live Time Fraction



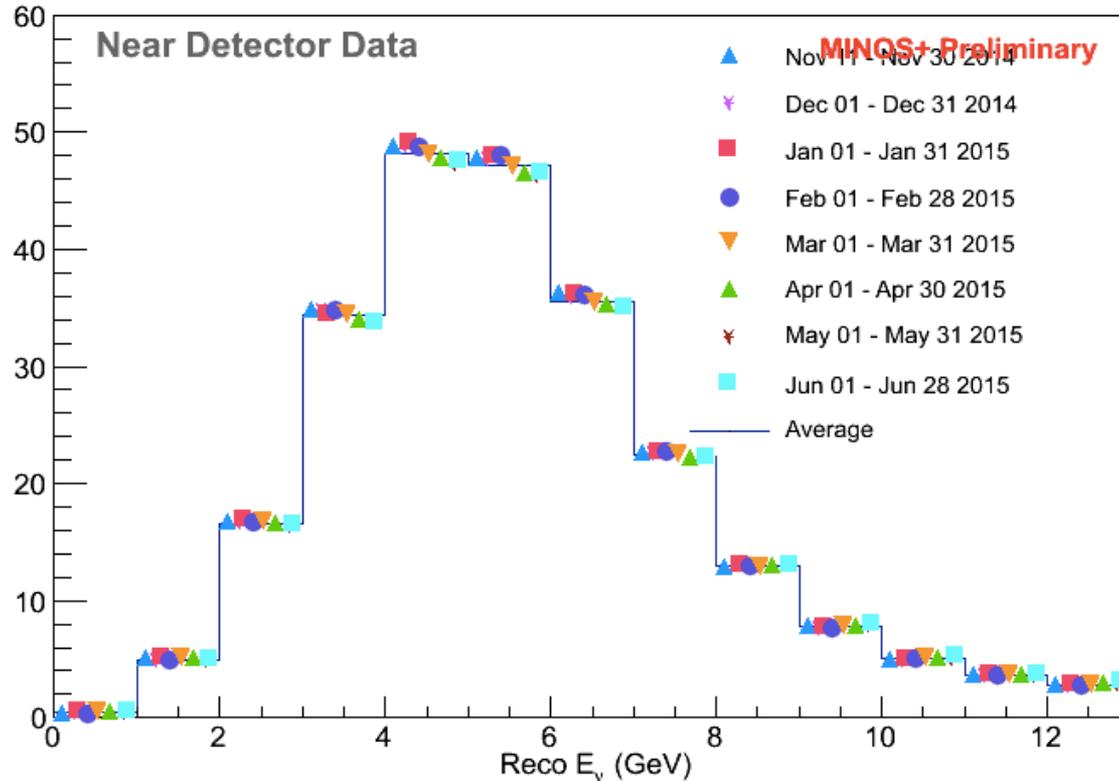


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## Neutrino Energy Spectrum Stability (PQ and NQ)



### Congratulations to AD for last week's achievements!!

- > 520 kW beam avg. for an hour
- 6+6 slip-stacking
- **and for the overall successful run.**

