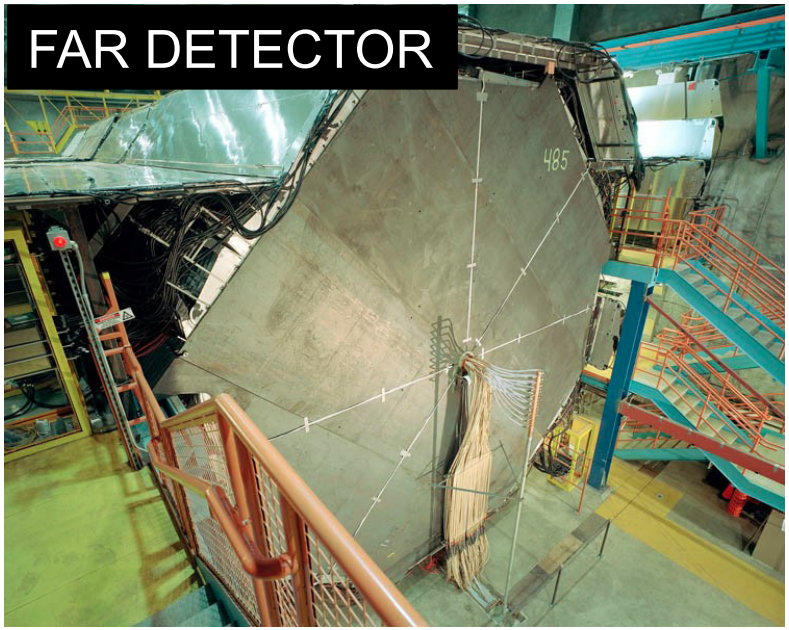
MINOS Status Report

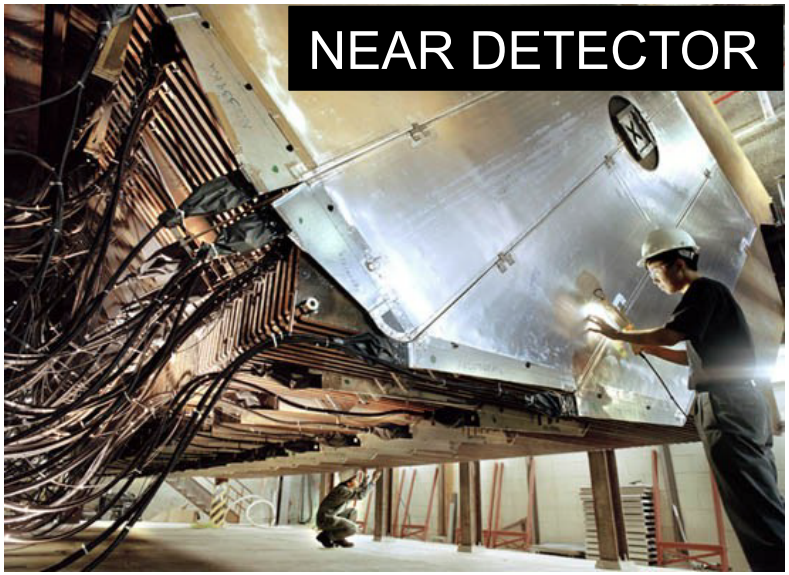


Live Time: 99.61% good physics data
POT Fraction: 99.38% good physics data

- Overall very good running
- A few hot channels, these are addressed quickly thanks to Soudan crew

MINOS Status Report

Aria Soha



Live Time: 49.8% good physics data

POT Fraction: 48.3% good physics data

- Several problems in one crate
- Total ~80 hours downtime
- Will give some details in next few slides
- Heroically fixed.

Near Detector Problems this Week

Monday 11/7/2011:

- ND DAQ crashed around 10:15 am
- Problem narrowed down to crate 4 master cards 15 and 16, which were swapped.
- Still couldn't run the DAQ
- Attempts to re-calibrate the masters met with errors
- Powercycled crate 4, rebooted all Read Out Processors (ROPs) twice, no success

MINOS Status Report

Aria Soha

Tuesday 11/8/2011:

- Replaced two front-end cards associated with master 15
- Further confusing errors, addressed with swaps of various hardware.
- Not able to eliminate errors.

Conclusion: not a problem with the master or minder cards

- Noticed that one of the minder power supply channels was reading 0 amps
- Replacing the power supply did not correct the problem

Continued on next slide…

MINOS Status Report

Aria Soha

- Found two open fuses which control connection from PS to crate
- One of the fuses was intermittent but otherwise appeared normal
- The other fuse was badly burned with the entire center section gone

Why did the fuse fail?

- One of the fuses was faulty. It had a manufacturing defect with the connection between the fuse element inside and the fuse end metal pieces.
- As a result the intermittent connection caused more or all of the current to flow in the other fuse
- Crate current levels are around the 30-33 Amp level which is within the range of the fuse rating of 25 Amp

MINOS Status Report

Aria Soha

Wednesday 11/9/2011

- After crate repair, unable to initialize the optical PVIC network.
- Reseating, swapping, and replacing the PVIC cards didn't resolve the problem .
- Neither did moving the card from PCI slot 4 to slot 3; in this case the problem moved with the card.

MINOS Status Report

Aria Soha

Thursday 11/10/2011

- Placed the optical PVIC into a different readout PC with successful reboot
- At this point it was clear the issue was with the PC

- Decision One replaced the power supply in this machine and we were able to see PVICs

- After some more work we were able to initialize the whole detector (input and output)
  - Confirmed a state of good running.
  - Running successfully since late Thursday evening.

MINOS Status Report

Aria Soha

Thanks to near detector experts (apologies if anyone missed):

- Joe Walding
- Donnatella Torretta
- Howard Budd
- Cesar Castromonte
- Nick Graf
- Leo Aliaga
- Dave Huffman
- All others for suggestions