

# COUPP 60 Veto/Shield WBS 1.3

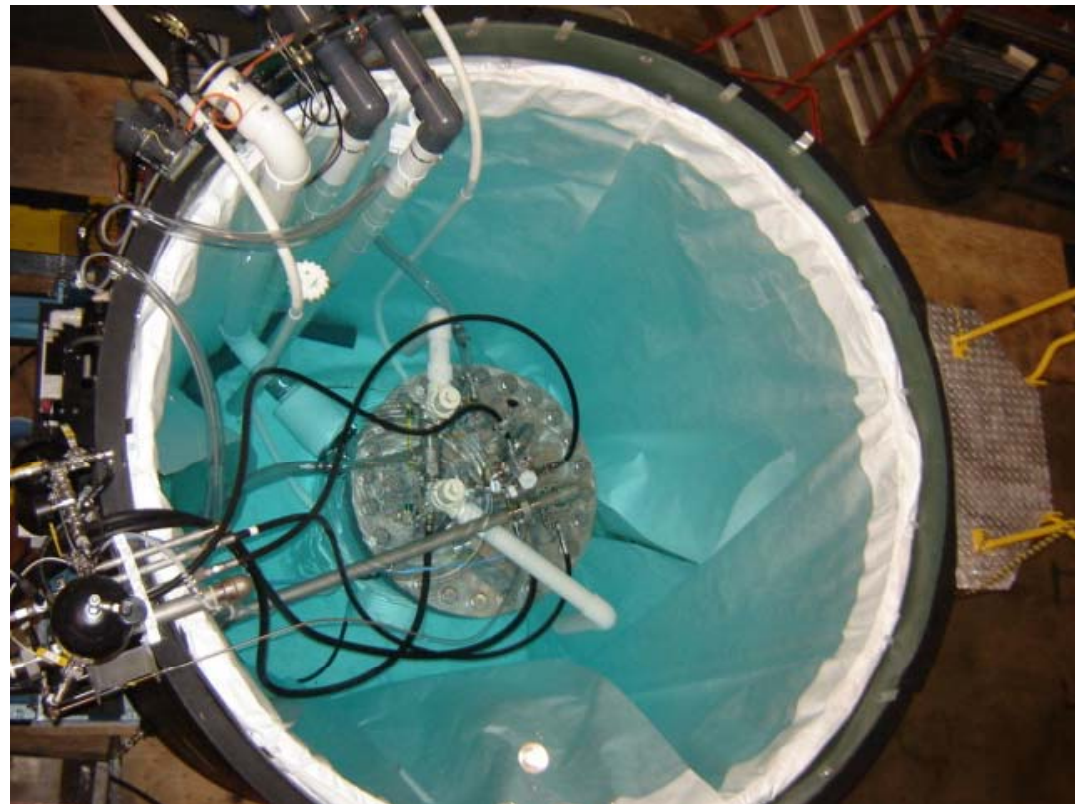
Jeter Hall

COUPP 60 Installation Readiness Review

8 December 2009

# Veto Detector

- Water Cherenkov
- 12 8" PMTs
- Doubles as 1 MWE neutron shielding
- Triples as thermal control
- Detector underwater for 1.5 months



# Veto Filtering

- Spa Guts™
  - Pump
  - Heater
- Chlorinated
- Rust issues identified and solved (1-2 Week Delay)



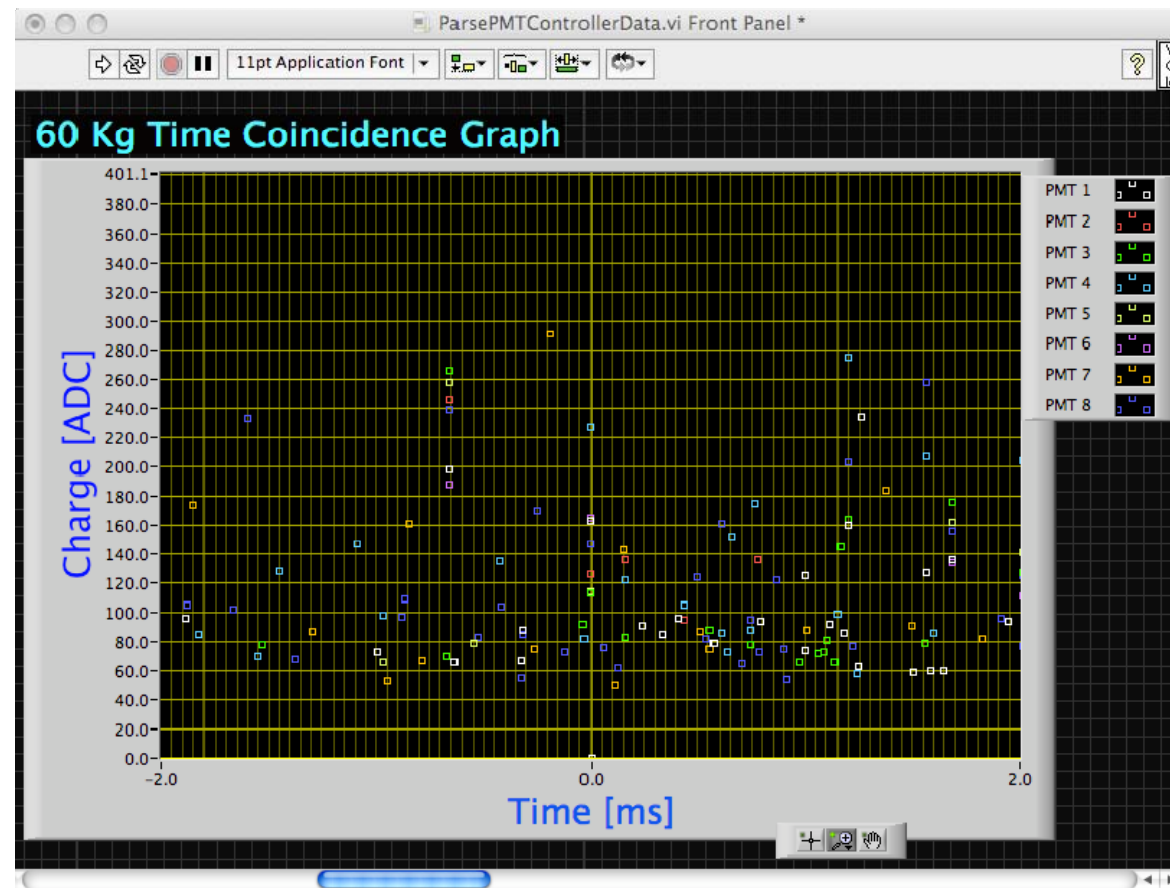
# Veto Electronics

- 8 PMTs installed
  - 4 R5912
  - 4 R1408
- On Base HV CW Generator
- On Base Amplification, Timing, and Digitization
- TCP/IP Readout
- Electronics programming effort underestimated (schedule uneffected)



# Veto DAQ (WBS 1.5.4.11)

- 8 PMTs installed
- DAQ information
  - 40 MSPS digitizer
  - 1.5 ns TDC
  - Monitoring
- Muon coincidences observed
  - $\sim 40$  ns TDC spread
  - Few kHz event rate at D0



# Veto Remaining Issues

- On Track for NuMI Install and Operations
- DAQ Integration Needed
  - 1 Man-Week Postdoc
- 8 More Bases Needed
  - Parts in hand
  - Stuffing order in purchasing
  - 1 Man-Week Technician
  - 1 Man-Week Engineer

# Veto NuMI Resources

- Space
- Detector inserted in top of veto tank (need shaft crane)
- Nitrogen
- Water
  - 4000 Gallons Filtered
- Electrical
  - ~10 kW
    - Heater
    - Pump
  - ~60 W
    - HV/DAQ

