

# EED Report

PPE Engineering Customers Meeting

Bob DeMaat

June 26, 2006

# Fire at AFEII PCB assembly house

- After having delivered the first 33 AFEII production boards, Millennium Electronics had a fire on the evening of Sunday, June 18 in their production area
- We visited on Tuesday, June 20
- Our boards appear to be in good shape
- We have sent a board to an independent lab for evaluation
- Production resumed on Thursday, June 22

# In-Line Aqueous Cleaning System



June 26, 2006

PPD Engr Customers Mtg  
Bob DeMaat

# AFEII board assembly schedule

- Planning to deliver balance as follows.
  - 40 by 6/28
  - 40 by 7/19
  - 40 by 8/2
  - 21 by **8/16**
  - 
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  - Right qty 175
  - 
  - 175 Right boards are currently solder side complete.
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  - Planning to deliver as follows.
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  - 40 by 7/5
  - 40 by 7/12
  - 40 by 7/26
  - 40 by 8/9
  - 15 by **8/16**
  - 
  - (Essentially 40 per week starting Weds 6/28.)
- LEFT HAND:
  - 40 by JUN 28
  - 45 by JUL 19
  - 45 by AUG 2
  - 6 by **AUG 11**
  - total: 136 (plus the 34 already on hand)
  - 
  - RIGHT HAND:
  - 40 by JUL 5
  - 40 by JUL 12
  - 45 by JUL 26
  - 45 by AUG 9
  - 
  - total : 170 boards

# Covering for Stan Orr while he is recuperating from an illness

- Steve Chappa will cover for Stan Orr on the Electrical Subcommittee of the Fixed Target ES&H Review Committee and on the Electrical Subcommittee of the CDF ES&H Review Committee
- His first task is to review the hardware and documentation for an ORC for the CMS Forward Pixels Burn-in Box

# Covering for Stan Orr while he is recuperating from an illness (cont.)

- Single Line Electrical Drawings
  - Ongoing laboratory ES&H work
  - Accessible and up-to-date drawings of AC power distribution for entire the laboratory
  - Used to calculate available fault current at points within the AC distribution system
  - Hector Leon is a summer student who has been assisting Stan Orr
  - Hector and I have met with Joe Pathiyil of FESS

# Covering for Stan Orr while he is recuperating from an illness (cont.)

48-volt power distribution system for the MINERvA electronics low voltage power needs

- Required for CD-2 review in August

# D0 request for FPGA debugging

The task is to help debug and document the FPGA code that controls D0 calorimeter readout. D0 estimates that the calorimeter readout has about 3% event loss rate due to a bug somewhere in this firmware and this substantially reduces the D0 experiment data set and reduces data quality. D0 would also like to develop enhanced diagnostic tools to reduce calorimeter electronics repair time.

# ILC Muon

## ILC Muon Prototype Testing Electronics Support

- testing of photodetectors (64-channel MAPMTs and, later, SiPMs, also known as MPPCs (Multi-pixel Photon Counters),
- development/monitoring of an LED pulser system
- production/testing of Minerva boards for reading out photodetectors.

# Sci-Fi Tracker proposed by TC

- Small-Area Planar tracking stations are useful for testbeam and general purpose beam-line instrumentation
- At Fermilab, “Fenker” MPWC's and SWIC's are the instruments of choice. They were designed in the 70's, and typically use custom electronics.
- While gaseous technology works, scintillating fiber-tracking technology potentially offer much more elegant solution.
- A sci-fi tracker can replace MPWC's, SWIC's, and scintillation counters. The Beams Division has expressed interest in a planar sci-fi tracker for Switchyard.
- EED is interested but cannot provide effort at this time