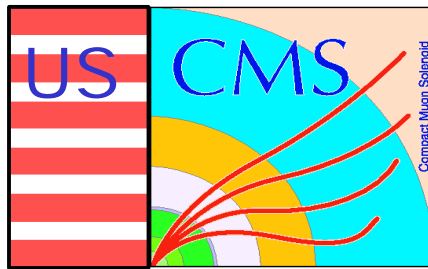


OSU EMU Electronics Status Update



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*CMS-EMU Meeting, UCLA
10 January 2003*



CFEB Status

- **Production on schedule**
 - 1450 boards shipped, 550 more ready to ship
 - Production is proceeding ahead of schedule
- **Returns to OSU**
 - Early CFEB Rev. 8 problems resolved (125 boards affected)
 - Ben goes to CERN next week to finish board cleaning
 - No significant problems now
- **Cables**
 - All CFEB input cables are done
 - Skewclear cables:
 - Stations 2 & 3 are done and delivered to CERN
 - Station 1 production in progress



DMB Status

- **“Final Prototype” bench tests complete**
 - UCLA requested modification for ALCT readout
 - Firmware update for new TMB/ALCT format completed
 - Hardware change made on 2 DMBs
 - DMB changes for TMB/ALCT to be tested next week
- **Test Preparation**
 - Updated software to include many FAST site functions
 - EMU needs to standardize Reset functions for every board
 - Expert discussion required later, clarify reset procedures
 - Resets must conform to CMS protocol
 - Hard reset, soft reset, resync, event_count reset?
- **New TMB firmware not yet ready**
 - We must have multi-event-buffering for any realistic rate test
 - The agreed deadline has come and gone! When will it be ready?



DDU Status

- **First Prototype bench tests complete**
 - **Fiber clock sensitivity to CCB and FPGA-DLL effects**
 - Clock problems were found on DMB-DDU fiber links
 - Fiber links require small clock jitter and consistent frequencies
 - FPGA-DLLs create a lot of jitter!
 - Different CCBs have different clock frequencies!
 - Our current solution uses on-board oscillators for fiber clocks
 - Works well with older CCBs (the first 5 batch)
 - Look for a better long-term solution
 - Still have a low-level problem with newer CCBs (Rev A)
 - Clock related? Requires more investigation...
 - **DDU Firmware update for new TMB/ALCT format completed**
 - Includes new CRC-22 check for TMB/ALCT
 - Online DDU info: <http://www.physics.ohio-state.edu/~cms/ddu>
- **Test Preparation**
 - Updated software functions for DDU in CFEB Control
 - Added “Run Control” features to CFEB Control
 - Data-to-disk option, plus basic unpack for error monitoring