

## 12GeV Trigger meeting notes:

20-Dec-2013: C. Cuevas, B. Raydo, A. Somov, E. Jastrzembki, C. Hewitt, Jie Chen

13-Dec-2013: C. Cuevas, W. Gu, B. Raydo, A. Somov, B. Moffit, E. Jastrzembki, H. Dong

6-Dec-2013: Canceled

29-Nov-2013: Thanksgiving holiday

---

### 1. Trigger/Clock/Sync – TI/TD

#### 20-Dec-2013

-->No update except that the Hall D FCAL has been configured with the two TI "Masters" that control the 12 FCAL crates. DAQ readout for cosmic testing has started.

-->Noted that there will be specific Hall D L1 Trigger meetings in the near future that have been organized by John Leckey. May be a good idea to overlap meetings to cover all the issues.

#### 13-Dec-2013

Discussion on implementing the FCAL cosmic test. The production SSP and CTP should be tested in F117 before moving these boards to the hall.

→TS -->TD crate is ready to move to the hall. Firmware for TD <-> TI ID information is ready. Not implemented in CODA3.

### 1. SUB-SYSTEM PROCESSOR (SSP)

#### 20-Dec-2013

-->Need to continue the discussion regarding the specific information and implementation plans for the CTP --> SSP link.

#### 13-Dec-2013

-->Define registers for ID information between CTP → SSP links. Presently this ID info is not implemented. Lower priority, but from my understanding of the discussion this ID info should not be too difficult to define, implement and test.

### 2. CUSTOMERS

#### 20-Dec-2013

-->No update and hopefully the new firmware that includes the updated 'Mode 6'(TDC) feature can be deployed to the hall detector groups for further testing with detector signals.

#### 13-Dec-2013

-->Modifications are still pending for the 'Mode 6', bugs identified and further testing will be required before final version released. Firmware modifications should not require any library(driver) changes.

→I believe the PCAL folks (Hall B) could still be the 1<sup>st</sup> detector group to use this Mode 6 with a full crate of FADC250.

#### 22-Nov-2013

→Continued work on the Mode 6 modification and testing.

#### 8-Nov-2013

→I believe Ed has produced several playback waveforms that reproduce the errors with the high resolution timing mode. (Mode 6) Hai will need to use the playback data from Ed to verify his Mode 6 firmware changes.

→After Mode 6 firmware verification is complete, the new applications (see notes from 27-Sept) will need to start.

### **27-Sept-2013**

→Priorities:

CTPV2 testing

Mode 6 repair

BCAL cosmics

Tagger Hit bit application

TOF application

Pair Spectrometer

CTPV2->SSP ID

## **3. "B" Switch - Signal Distribution Module (SD)**

### **20-Dec-2013**

-->Revision A4 is the SD firmware that has been distributed(supported) with CODA3. There were a few minor changes that Nick completed before leaving the lab, and the A5 version will need to be fully verified before release.

### **13-Dec-2013**

→Revision A5?

### **22-Nov-2013**

→(757) Northrup Gruman! We cannot afford Nick's consultant fee. Congratulations Nick!

## **4. System Diagrams/Fiber Optics**

### **13-December-2013**

-->5 of the 11 fiber trunk lines have been installed. (Thanks Armen!) Will need to test each one when we return from the holiday break.

--> The long fiber lengths from the Trigger rack to the FCAL, and to the Tagger tunnel area have been measured by Tom's group. Will order upon returning from holiday break.

### **8-Nov-2013**

→It has finally happened,,,5 of 11 fiber trunk cables have been ordered!! Will need to coordinate installation with Tom Carstens (Hall D) and will also need to measure lengths for the FCAL and Tagger tunnel areas. Fortunately the cable is a stock item, and it will not take long to install and test the short lengths.

## **5. Global Trigger & Trigger DistributionTesting**

### **20-Dec-2013**

-->Ben has ordered and received another GTP assembly. Final hardware assembly will be needed but testing can proceed soon.

-->Chris Hewitt presents his latest work on the embedded development for the existing GTP. (Presentation is posted to the wiki). The embedded Linux OS is running on the Altera NIOS processor and Chris has a bit of documentation to complete that will be added to a subsection of the GTP manual.

### **8-Nov-2013**

→I do not have notes from the meeting for this section. May be a good idea to invite Chris Hewitt to a meeting for a brief presentation on the embedded Linux project.

**25-Oct-2013**

→Chris Hewitt can begin work for the embedded Linux on the GTP.

**20-JAN-2012 (Keep this date to reference full DAq crate procedure)**

**3-June-2011**

→ *Successful testing with the two crates each with a single FADC250-V2, CTP, TI, SD and one SSP!!*

**16-July-2010 (Keep this note because it needs to be implemented and tested at some point)See older notes for the list of items.**

## **6. [Crate Trigger Processor \(CTP\)](#)**

**20-Dec-2013**

-->MTEQ returned all 8 boards and several of these boards had to be reworked at a sub-contractor location for removal/reballing/reflow for several FPGA on several boards. Hai and Jeff have been working hard to fully test the eight boards and preliminary results show that 4 units are restored to working order. More details after the holiday break.

**13-Dec-2013**

-->8 boards delivered to MTEQ on 9-Dec-2013 and we already have a rework plan from them and several of the boards have been sent to a sub-contractor for 3D Xray. We estimated that these boards should be back to JLAB by 17-Jan-2014.

**8-Nov-2013**

→25 of the 33 production boards have passed acceptance testing and are loaded with the latest firmware. Hai has completed testing of the remote firmware download feature, and the working boards have been delivered to Hall D. (Alex)

→Preparations to send the boards that need rework back to MTEQ are underway and by 9-Dec-2013 we will ship these CTPV2 boards using a new RMA. Round 2!

***ACTION ITEMS: Next meeting -Friday 10-January 2014@10:30AM in L210A***