# ***12GeV Trigger meeting notes:***

7-June-2013: C. Cuevas, B. Raydo, A. Somov, J. Gu,N. Nganga

31-May-2013: No meeting

24-May-2013: C. Cuevas, B. Raydo, A. Somov, J. Gu,N. Nganga

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## *1. Trigger/Clock/Sync – TI/TD*

**7-June-2013**

→Conversion rework for TI Masters is complete for Hall B boards. (10) The Hall D folks need four boards converted from TI to TI Masters. The TI Master boards will require a few days to test before distributing to the groups.
→TS production order needs an account number from Hall B

**24-May-2013**

→The PR for the production TS boards has not been sent but will be submitted next week.
→New front panels for master TI boards will be ordered.
→Secret TS meeting within the DAQ group and there will be firmware changes forthcoming.
→Review the Hall D layout and plan for grouping readout crates in order to come up with a count of required TI-Master boards.

**17-May-2013**

-->Final count for TS production modules for all halls is 7-10 boards. William is ready to submit the PR and will need signatures soon.
→10 TI boards have been sent (and received) to be converted to master TI mode. William is in the process of acceptance testing.
→The 12 crate CODA test setup in Hall D has produced firmware modification requests by Dave Abbott. These changes affect the trigger distribution hardware (TS, TD, SD, TI)

**3-May-2013**

→Next week begin the procurement and document review for more production TS boards. It is not clear if Hall A will use/need a TS but before the order is placed ALL the halls should consider the quantity for the production order.
→The production TS board has the addition of line receivers for the LVPECL signals from the DensiShield cables. These receivers prevent the increase of current on the drivers when the TS is powered off. At some point soon, the production TS will be moved to the Hall D CH for testing, so a pre-production TS will be used the Global Test Stand. Be aware that the pre-production TS in the off condition will cause extra current for the GTP DensiShield cable drivers.

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

**7-June-2013**

→Final firmware? This is a trick question but the Hall D SSP firmware is ready and there will be updates for the data streams coming from the Tagger crates. The specification document is in good shape, so the development work will continue whenever the Tagger CTP application is done.
Additional features for scalers and diagnostics are forthcoming.

**24-May-2013**

→SSP boards can be delivered to the hall groups, but further testing and firmware changes will be on hold for some time.

→SSP firmware has been modified so that the SSP can act a CTP generator so that the SSP to GTP data streams can be realistically delayed to simulate different front end crate data delays.
→Investigate transceiver laser class hazards and IF mitigation is needed.

## 2. CUSTOMERS

**7-June-2013**
→Discussion about boards NOT in the Level 1 trigger started, and there are some concerns. The basic trigger/sync/token functions should be checked for all of these boards in a full crate. The FCAT development for these boards is an activity in progress.
→Mode 6 will be tested on several detectors. Mode 7 (Raw and TDC only) has been stable for over a year, so we know it works.

**24-May-2013**
→FCAT developments for every full crate setup. i.e. F1TDC, FADC125, Discriminator.
→SBC that will be shipped to CEA Saclay is ready for loading the bootRom.

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

**7-June-2013**
→GTS testing with PLL can be started soon. Presently other projects take priority.

**24-May-2013**
→Test GTS with SD PLL enabled.

## 4. System Diagrams/Fiber Optics

**15-Mar-2013**
→No action until cable trays are installed in the halls.
**8-Mar-2013**
→No report.
**8-Feb-2013**
→Patch panels and patch cables are being checked in now, and will be distributed to the hall groups
→START procurement for trunk cables in D and B by May??

## 5. Global Trigger & Trigger Distribution Testing

**7-June-2013**
→No news is good news and the two production assemblies are still on track to meet delivery.
→Acceptance test routines ready for bench testing and then Scott can check it on the GTS.
→Advanced Trigger Processor – ATP is the new acronym for the CLAS12 trigger processor. Design concept and details presented at the HPS collaboration meeting and there is 'approval' to begin the board design to produce prototypes by end of 2013.

**24-May-2013**
GTP boards have been sent to Advanced Assembly in CO. Expect full assemblies by July.

**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 note dates for the list of items.**

## 6. Crate Trigger Processor (CTP)

**7-June-2013**

→Approval is ratified and delivery will begin end of July. 32 production boards will be delivered by 23Aug2013!!
→Acceptance testing will need to be added to the schedule.
→Hall D firmware is loaded and runs in FCAT
→Fiber transceiver link works properly and has been tested in the GTS with the SSP.
→Peripheral components can be ordered now!
→Development of firmware to manage the remote download of new firmware is the highest priority. Automatic acceptance testing firmware is the next priority, then the scalers, then the tagger application, and last but not least, is the diagnostic firmware.

**24-May-2013**

→Phone conference yesterday and the CTP is ready for production!
→Not ready for testing in the GTS but refinements to the automatic test code for production acceptance will be the focus.
→Production delivery schedule will be updated by the contract manufacturing.

***ACTION ITEMS***: **Next meeting - Friday 7 June 2013 @10AM in F226**