

12GeV Trigger meeting notes:

30-May-2014: C. Cuevas, J. Gu, B. Raydo, B. Moffit, H. Dong, E. Jastrzembski

2-May-2014: C. Cuevas, J. Gu, B. Raydo, B. Moffit, H. Dong, E. Jastrzembski, A. Somov

18-Apr-2014: C. Cuevas, B. Raydo, B. Moffit, H. Dong, E. Jastrzembski, A. Somov

1. Trigger/Clock/Sync – TI/TD

30 May-2014

- > Bryan reports on successful testing in Hall D with TOF crate running at high trigger rate.
- 200KHz; 100 block events, playback mode, TS, GTP, TD, and the full suite of hardware needed for a single crate test in the hall.
- So far this is great news, and the tests have only been sustained for a few minutes. NO data stored to disk for these tests.
- What's next?
 - Add FCAL, BCAL and TOF crate for a long term (2 hour?) high trigger rate test? Verify trigger counters, etc. to make sure all crates in the test are in agreement.

2-May-2014

- Order for spare TI boards is proceeding. Need \$\$ from Hall A.
- Price increases for lower quantity and is approximately \$2K.
- TOF#1 and TOF#2 are connected to the TS and Global Crate.
- Performance measurements need to be defined.

18-April-2014

- What were the repairs for the 'TI Transceiver #5' issue?
 - This was determined to be a software problem and was fixed.
- Request for spare TI boards in progress and these requests will be consolidated.
 - Avago transceivers will be obsolete soon, so spares need to be purchased soon. Ben points out that the transceivers are available from other sources.

2. SUB-SYSTEM PROCESSOR (SSP)

30-May-2014

- No new report from Ben, but the SSP that interfaces to the TOF crate was part of Bryan's high rate testing.

2-May-2014

- Global testing is in progress with the TOF crate, TS crate and Global crate. 200 KHz or bust,
- SSP is being used to create the BCAL trigger. This bypasses the GTP for now, but allows detector testing with the latest BCAL trigger algorithms.

18-April-2014

- TOF CTP<->SSP full playback test is ready. All boards and optical cables installed.
- Dave and Bryan can run the DAQ testing on this crate for performance measurements. These tests will include all global and TS boards and functions.

2. CUSTOMERS

30-May-2014

→After the meeting I talked with Dan Carmen (Hall B FTOF) and he said that there are a number of other activities that have prevented them from a focused test of the “mode 6” firmware. In principle, the FTOF or PCAL groups can provide plenty of data to compare the mode 6 TDC readout values with the high resolution CAEN TDC values. It is just a matter of time before either Dan or Cole Smith will provide results.

18-April-2014

→Check the Hall B folks regarding test results using the latest FADC250 firmware.

--Last time I checked with Dan Carmen (FTOF) he said that they are close to finishing all their installation checks. They should be able to provide data from a long cosmic run to check the new “Mode 6” firmware performance.

3. “B” Switch - Signal Distribution Module (SD)

30-May-2014

→Ed and William report that the SD←→TI link firmware is close to a release version and at some point soon we can see the specifications and results of the transfer tests.

→Jeff submitted an order for (4) additional spare SD boards.

2-May-2014

→SD←→TI link firmware has been debugged and remains a work in progress. Ed and William have performed successful testing with the latest firmware. Performance measurements and determining what information to send will need to be decided also.

--What information can be transmitted? BUSY counters (16) as an example and there are 24 registers that can be sent from the SD to the TI.

--One way street presently and most likely forever, no problem though and info from SD to TI is all that is needed.

18-April-2014

→Ed and William have been working on the TI<->SD link firmware and there are a few issues to resolve.

→Several spare SD will be ordered soon. (Before end of FY14)

4. System Diagrams/Fiber Optics

30-May-2014

-->Installation of the Tagger FO trunk line was delayed, but installed last week. The Tagger electronics is missing, but the FO patch panel can be installed. The trunk line was installed in the Hall D Trigger rack patch panel. Testing the FO trunk cable with the power meter is the next step.

→A 3rd crate was added to the Trigger rack in Hall D to support the use of a second TS, SD and ROC. TD from the main distribution (TS) crate will be moved to this 3rd crate whenever the FDC and CDC folks want to run the DAQ in standalone fashion. This allows those groups the freedom to run the DAQ while the other TS crate can be configured to run BCAL, FCAL, TOF or other subsystem for testing.

2-May-2014

→Install the Tagger trunk line the week of 5-May-2014.

-->Interesting idea to add another crate in the U1-14 for the FDC/CDC horizontal cosmic setup with other TS. More details soon.

5. Global Trigger & Trigger Distribution Testing

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)

30-May-2014

→Hai has been busy with new firmware for the Tagger, TOF, PS and Scaler applications. The documentation has been updated.

→The procurement for the additional 4 CTPV2 is progressing and a status update is needed. The circuit boards were due to the assembler on 30-May, so a phone call is in order.

2-May-2014

→Lots of new firmware requirements and firmware has been developed for the CTP applications.

Tagger

PS

BCAL cosmic – Done

FCAL –Done

Scalers

ACTION ITEMS: Next meeting -Friday 13-June 2014@11AM in F226