

June 28, 1999

To: LBL STAR Trigger people
From: Leo Greiner
Re: System Test in 1999

Hi all,

Here's a diagram and list of materials that I believe that we need to complete a system test here at LBL before moving the final trigger out to BNL for installation.

From the diagram;

Crate 1: Small carry around crate 9U with P1 and P2, needs P1 type backplane in P3 location.

- 1 x VME processor MVME 167 or 162 or any processor that allows us to talk to the RCC.
- 1 x RCC.
- 4 x RCF.
- P2 overlay at least 4 slots wide.
- PDC.
- 2 x TCD.
- 2 x TCD cable drivers
- 2 x individual P2 overlay/connector.
- Level adapter card

Crate 2: 9U CDB Crate with P1, P2, P3 and 18 9U slots.

- 1 x VME processor MVME 167 configured to talk to >17 CDB boards.
- 17 x CDB Board
- 17 x DIB Board

Crate 3: 9U Main Crate with P1, P2, P3 and 14 9U slots.

- 1 x VME processor MVME 2306 for talking to the DSMs, TCU, etc.
- At least 4 DSM boards.
- At least 4 DSMIs.
- TCU.
- TCUI.
- At least 1 MWC receiver
- At least 1 DIB

Test room / additional materials:

- MWC FEE
- MWC Sector controller Board
- Power Supplies
- Workstation to talk to VME processors and control code.
- All shown cables.
- Ethernet hub + cables.
- Control software
- FPGA algorithms
- Testing software.
- Logic analyzers and oscilloscopes.
- Pulse generators

The goals, as I see them, of this test include:

- The combined operation and data flow through the various subsystem boards.
- The setting of the internal timing of the trigger system.
- The test of our control software.
- Measuring the various trigger latencies and timing such that we can fill in the timing diagram.

- Medium term lifetime test.
- Creation of a test station for troubleshooting trigger components with problems.