

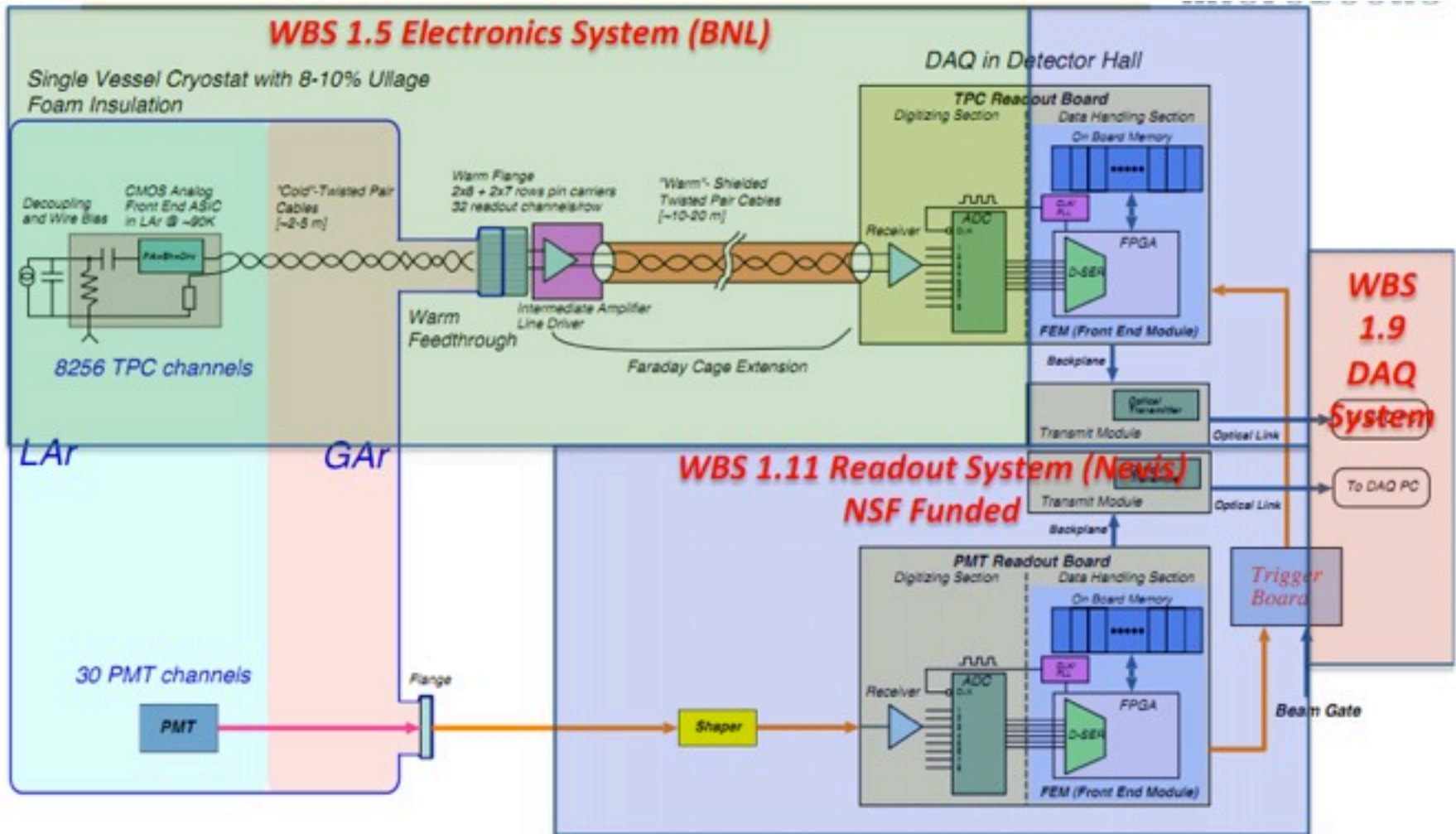


MicroBooNE DAQ

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Electronics, ReadOut, DAQ



January 18-19, 2012

MicroBooNE CD3b Review

Outline



- DAB Test Stand
- PAB PMT Test Stand
- Equipment arriving!
- Short-term Work
- Mid-term Work

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PAB Test Stand



❑ SuperMicro 2U server

- To replace Teppei's ghetto 1 GB RAM, 1-2 core box
- To hold at least one PCIe card (Controller) and take data.
- To run EPICs/CSS HV controller, ...

❑ Future use

- Either it remains and lives with the PMT (or other) test stand, or
- It becomes **the** Slow Mon/Control machine out at LArTF

DAB Test Stand



- new SuperMicro 3U server
 - To hold three PCIe cards (Controller, Trigger, XMIT).
 - This will be configured as the PMT/Trigger SEB server

- Future use
 - Either it remains and lives with the DAB test stand, or
 - Becomes **the** PMT/Trigger SEB server at LArTF

DAB Test Stand



- ❑ In addition, the whole LCC setup as is will go wholesale over to DAB: the 4U eventbuilder and the 2U TPC SEB server ... and ... the switches to define the network(s)
- ❑ A Service Ticket is in to allow this (simple to the outside admins) network at DAB.
- ❑ We'll move a Glomation and fanpack and digital thermometer over there. (I promised in the service ticket the Glomations would be kerberized.) We need to gain understanding of how to elegantly boot/admin these too.

DAB Test Stand



- ❑ A pop-up monitor/keyboard in a drawer is coming. Will put it on the IPMI network to see all the machines there.
- ❑ A GPS PCIe card (loaner for 30 days) also arriving. Will be installed in event builder.
- ❑ We've bought the Jungo license. Need to install it on the event builder server and add users.
- ❑ Yale Oscilloscope, a borrowed trigger pulser, data fibers are in hand, ready to go to DAB.
- ❑ All the calibration hardware: AFG3252, the ASICs config board, NI6501 Digital I/O board, USB hub, ...
- ❑ Wiener pl508 PS for crate rails.
- ❑ Wiener pod PS for wire bias, on-detector

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DAB Test Stand



- ❑ Nevis crates with cards
- ❑ BNL chimney with ASICS, cables, ... ADC cards

Software for DAB Test stand readout



- ❑ Nevis will get us going with DMA code.
- ❑ Gennadiy has re-factored lots of the DAQ code and made a new repository branch. (See Gennadiy's slides?)
- ❑ We're working on a full fake data mode: from fake DMA'd data through event builder. This is a significant step beyond past fake data work: testing threading, etc. Defining data format for disk, etc.
- ❑ Event building, streaming to file. Writing, reading it back up.
- ❑ **Calibration Run**

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Software for DAB Test stand



- ❑ Glenn's EPICS-based Alarming/Status/ Archiving slow monitoring/controls system is ready to read PV values.
- ❑ We need to work on the IOCs specific to each device/mechanism (Wieners/Glomatics over ethernet, Data from shared memory,...) to populate Glenn's PV tables.

Software for DAB Test stand (later)



- ❑ Merging with beam data
- ❑ Run controls
- ❑ Beam data process
- ❑ Online process: LArSoft instances
- ❑ Uncompress, checksums
- ❑ Interprocess data shipping to connect tasks, instead of using files if feasible.
- ❑ Ship to SAM/Enstore for back-up
- ❑ Supernova trigger, read and event build
- ❑ Granite block events trigger, read and build

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