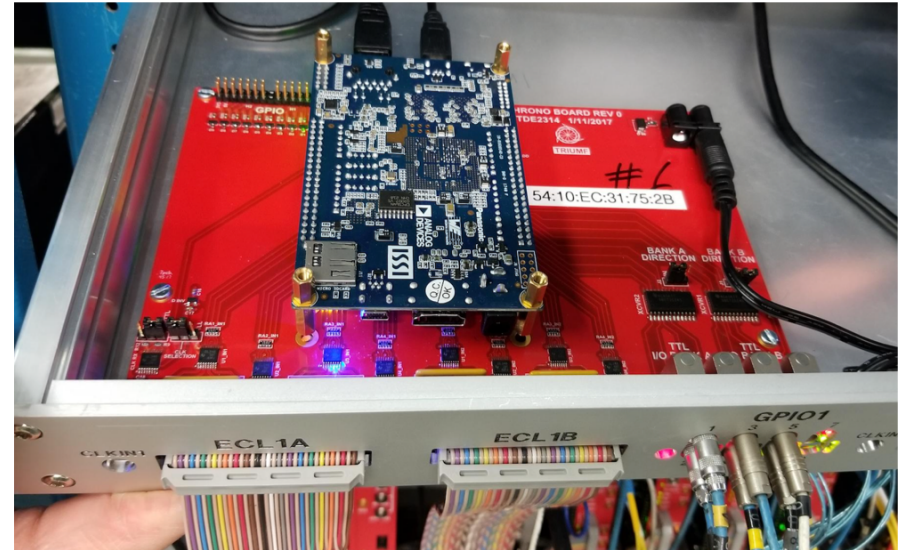
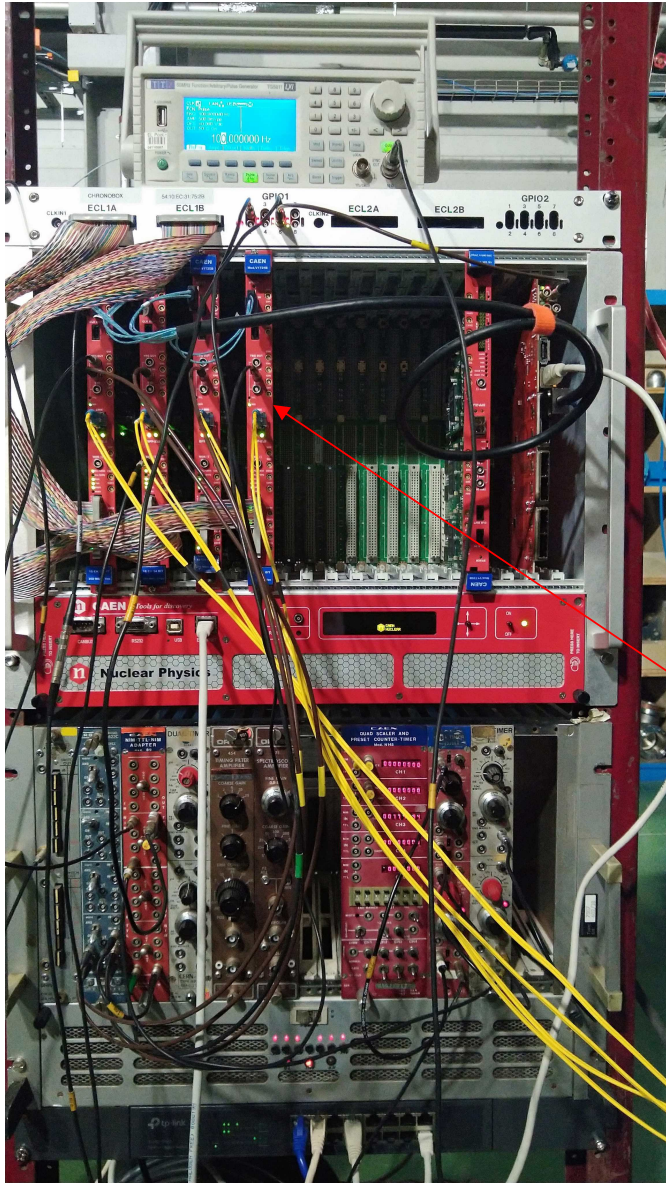


DS-Proto DAQ Update

T. Lindner

V1725 and Chronobox: Hardware Setup at CERN building 182



Chronobox = trigger board

V1725 digitizers

- Got system fully running again.
 - Some small bugs fixed.
- Replaced VME crate with spare from e-pool
 - Original crate fan tray to be fixed by CAEN
- Tested trigger module (=chronobox) scheme.
 - V1725 configured to produce trigger primitives when channels go above threshold.
 - Chronobox allocates trigger primitives to either 'TOP' or 'BOTTOM'.
 - Trigger condition is based on N trigger primitives satisfying either
TOP AND BOTTOM
or
TOP OR BOTTOM
conditions.
 - Injected pulser into two different V1725 channels and tested that
- Installed new clock distribution module with better firmware (can be remotely updated).

- Offsite access to DAQ possible:
<https://m-darkside.web.cern.ch>
 - Need to be added to 'DarkSide-daq' CERN e-group; can self-sign to this group from e-groups page
<https://e-groups.cern.ch/e-groups/EgroupsSearchMember.do>
- ***Please don't change things without discussion with experts.***
- If you do make changes, they should be reported with elog
<https://m-darkside.web.cern.ch/elog/DS+Prototype/>
 - Can add extra logbooks
- Can look at live waveforms with online display:
<https://m-darkside.web.cern.ch/CS/webdisplay>

- Long discussion and tutorial for folks at CERN on the DAQ.
 - People attending: Marco, Claudio, Valerio, Yi, Xiang, Luca, Simone, Sam (remotely)
- Mostly just following through DAQ documentation:
https://bitbucket.org/ttriumfdaq/dsproto_daq/wiki/Home
- Good lots of good feedback on limitations with current DAQ and trigger.
- Discussion about developing offline processing software using MIDAS files.
 - Hopefully others can start developing more sophisticated data processing using these tools.

- Overall, DAQ is ready for data taking for proto-proto.
- Some relatively minor things to do for next months:
 - Fix small bugs in trigger functionality.
 - Get offline software processing working.
- Develop scheme for automatically copying data to second server machine.
- Discuss with CAEN about limitations in their ZLE data suppression firmware.

