

MuSTARD + PC setup

99/10/07

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You can read a little about it by going to the "module TestDAQ" site on the SCT web page, although there is still much documentation to be added.

The kit I list below supports 6 detector modules simultaneously provided there are sufficient power supplies and support cards.

Essential:

- MuSTARD 12-stream ABC(D) readout module
- SLOG 12-channel ABC(D) clock and command distribution module
- late-model PC with at least 96MB RAM
- NI VME-MXI-2 interface kit

Highly desirable:

- CLOAC master clock, trigger and reset module
- Prague 2-channel prototype SCT LV power supplies
(caveat: unsolved switching noise pickup in ABCD2NT modules ... needs to be fixed in power supply and/or support cards)
- Melbourne 6-module slog/mustard patch panel
(I have one of these aside for the KEK testbeam: can send it to you shortly... very simple)
- Melbourne SC99 support cards, one per module.
(We are redesigning these in the light of the noise problem: I can send the current design at any time, but we really want to sort out the pickup problem. Unfortunately, I really need a module to test these.) If module is mounted in a QMW box, you need the sc99-qmw version.
- ROOT version 2.22 (free download form CERN: <http://root.cern.ch>)
- sctdaq software package (distributed by me or Peter)
- some simple cables... for the testbeam you will need to make new long cables as we have abandoned the 50-way twist and flat cable due to attenuation problems.

You can see some photos of these objects at Jo Pater's page...

<http://home.cern.ch/~paterjo/systemtest/systemtest.html>.

The picture 07 shows an SC99 in a simple Melbourne module box, as used in the recent testbeam: note the cables. The large cable goes directly to the SCT power supply (which also distributes detector HV) and the small cable (a truncated version is shown) carries just the fast signals to my patch panel.

The picture 06 shows a barrel module in a QMW box connected to an

SC99-qmw version. The cables are the same.

The picture 09 shows a patch panel removed from the VME crate. It connects signal cables from up to 6 modules to one SLOG and one MuSTARD.

Regards, Gareth







