Sci-Fi Tracker Update

March 2nd, 2013

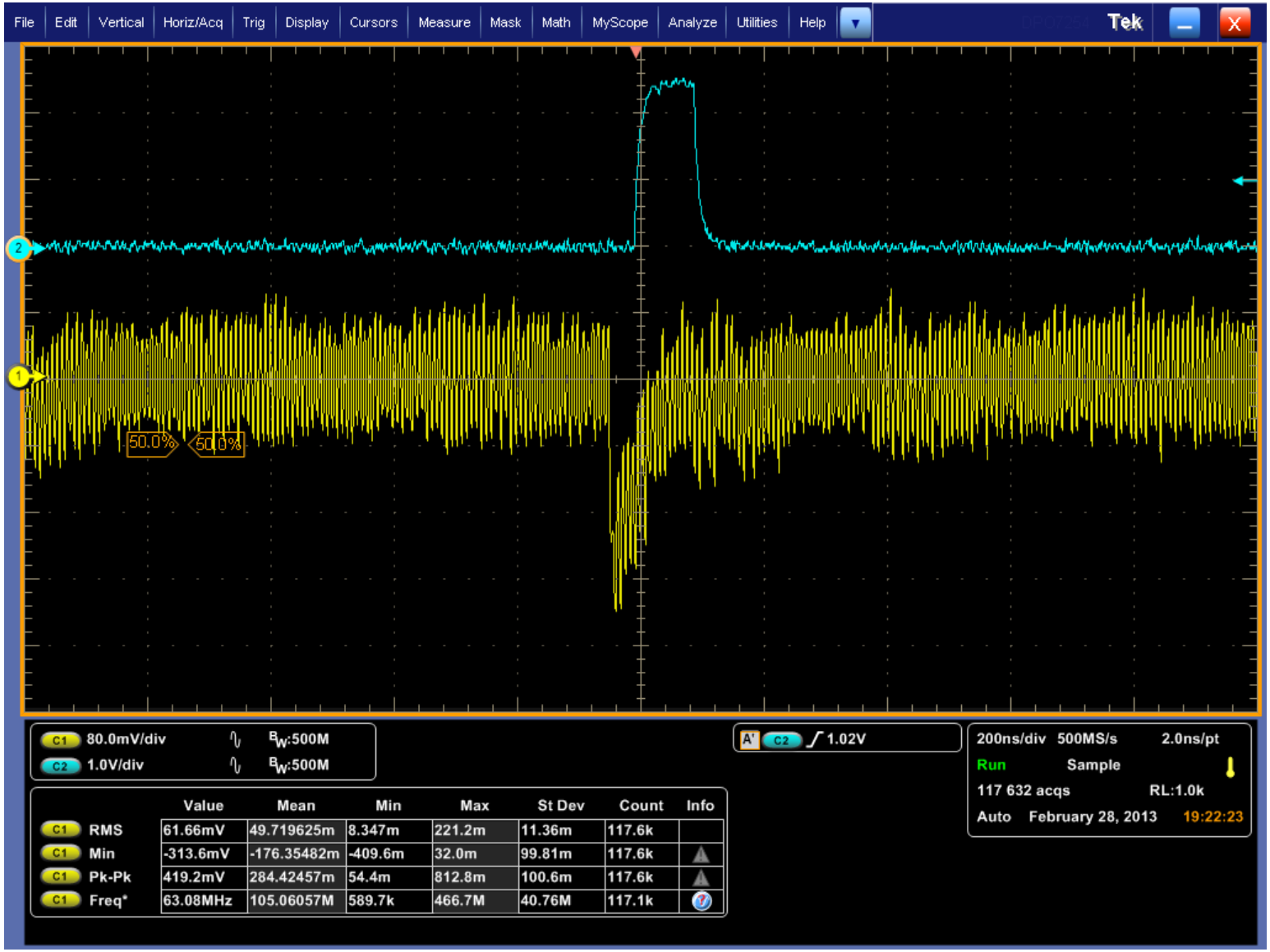
- Moved racks + SciFi detector into CRT assembly area
  - Ribbon cables are sufficiently long for detectors to be moved around

SciFi Module 2 needs to be suspended above quartz shelf, method TBD

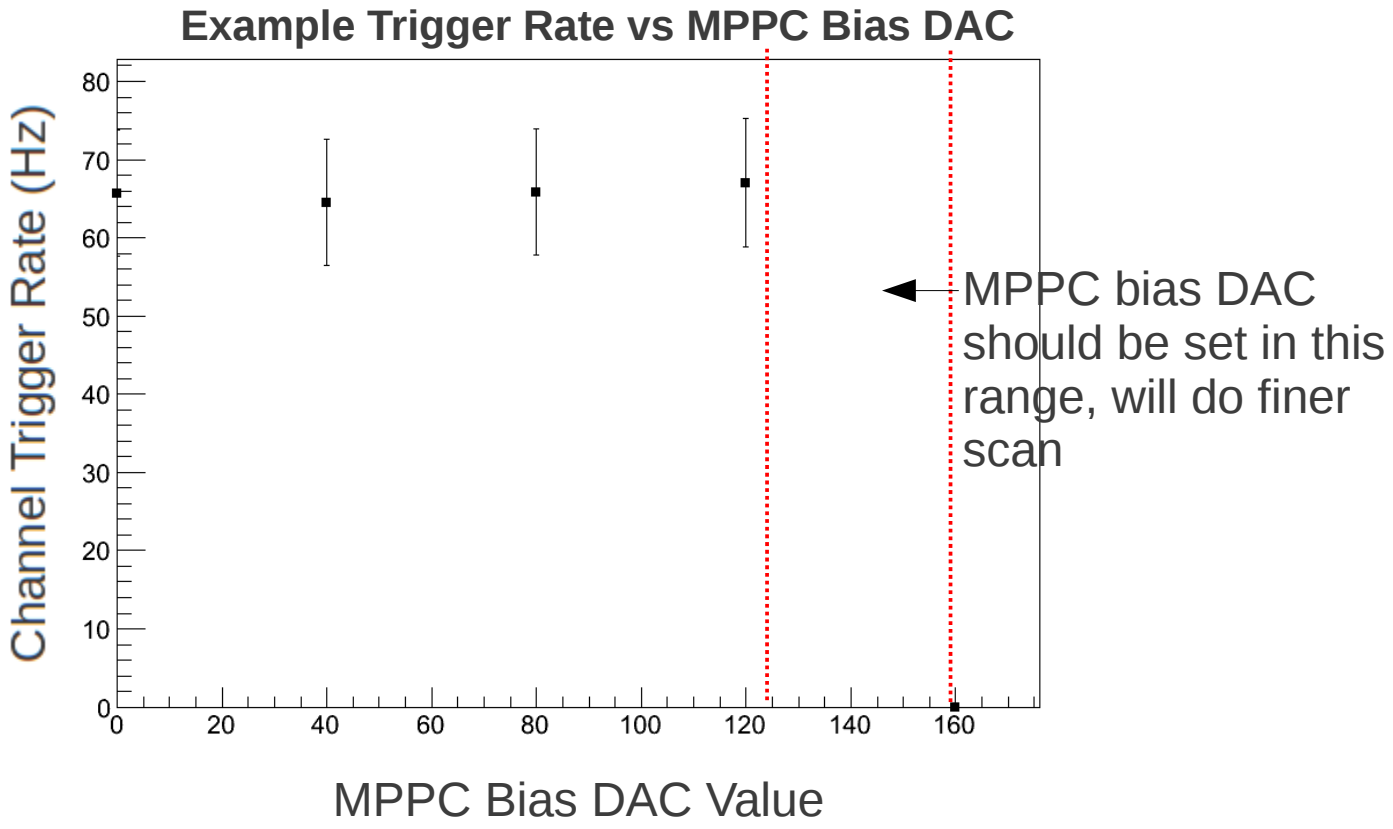
Platform protects ribbon cables

SciFi Module 1 will stay on surface

- Very high frequency noise observed occasionally, example below
  - Removed by adjusting ribbon cable position
  - Ribbon cables should be left alone after SciFi is installed and working.



- SciFi calibration method defined
  - Test each channel individually (to avoid trigger bit decoding issues)
  - Set the channel trigger threshold DAC to 0x6FF (~1.09V)
  - Set the MPPC HV to 74V
  - Vary the MPPC bias DACs between 0x00 to 0xA0 (0 to ~3V)
  - Measure the trigger rate at each DAC setting
  - Obtain what is effectively a trigger threshold curve, select DAC value that results in trigger rate between 0.2-1 Hz
  - Need to modify code to scan over smaller DAC value ranges, but can identify rough operating voltage



- Ran in self-trigger mode using SciFi motherboard #1, look for simultaneous triggers from ASICs instrumenting two different fibre planes
  - Example: see simultaneous triggers on MB1-ASIC4-ch 9 and MB1-ASIC9-ch 4
  - Possibly just noise, but trigger bit mapping to fibres is in place and further calibration + self-trigger runs are in progress