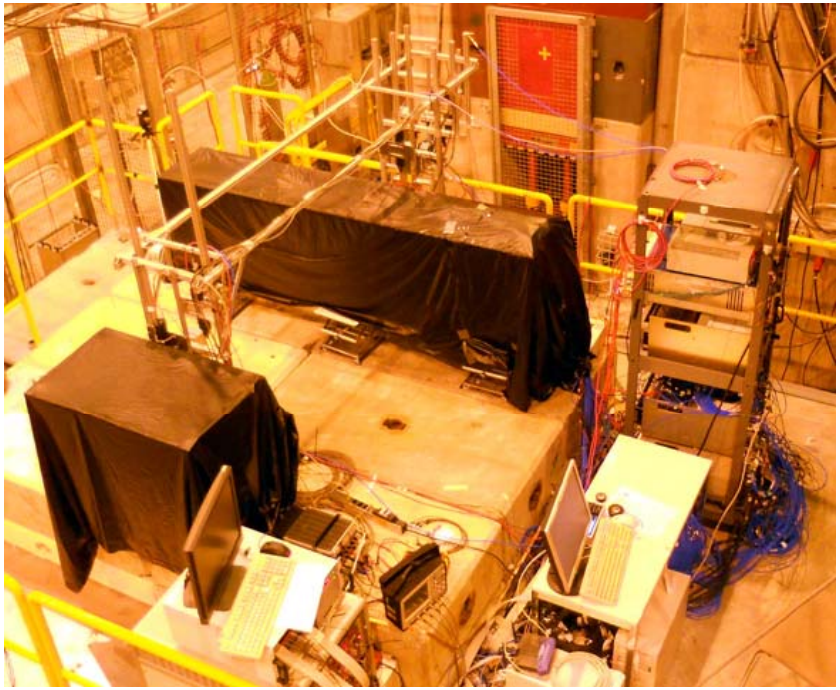
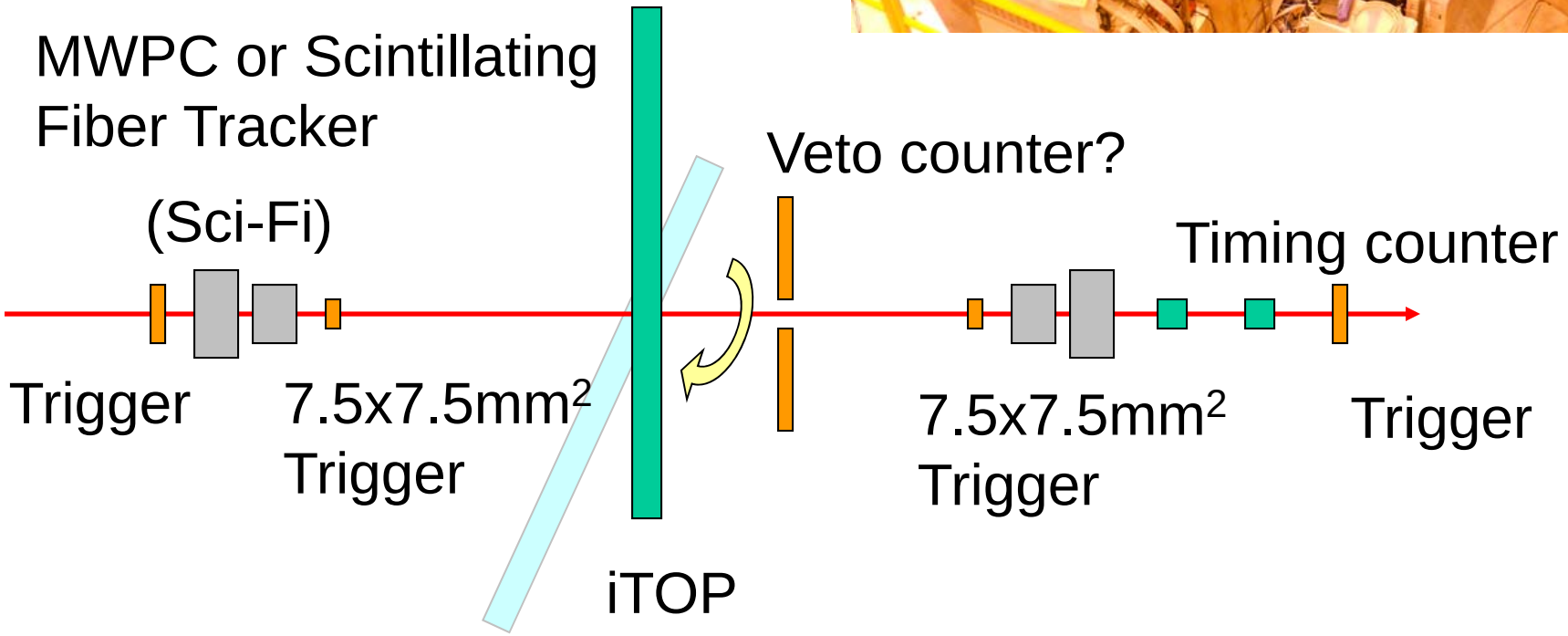
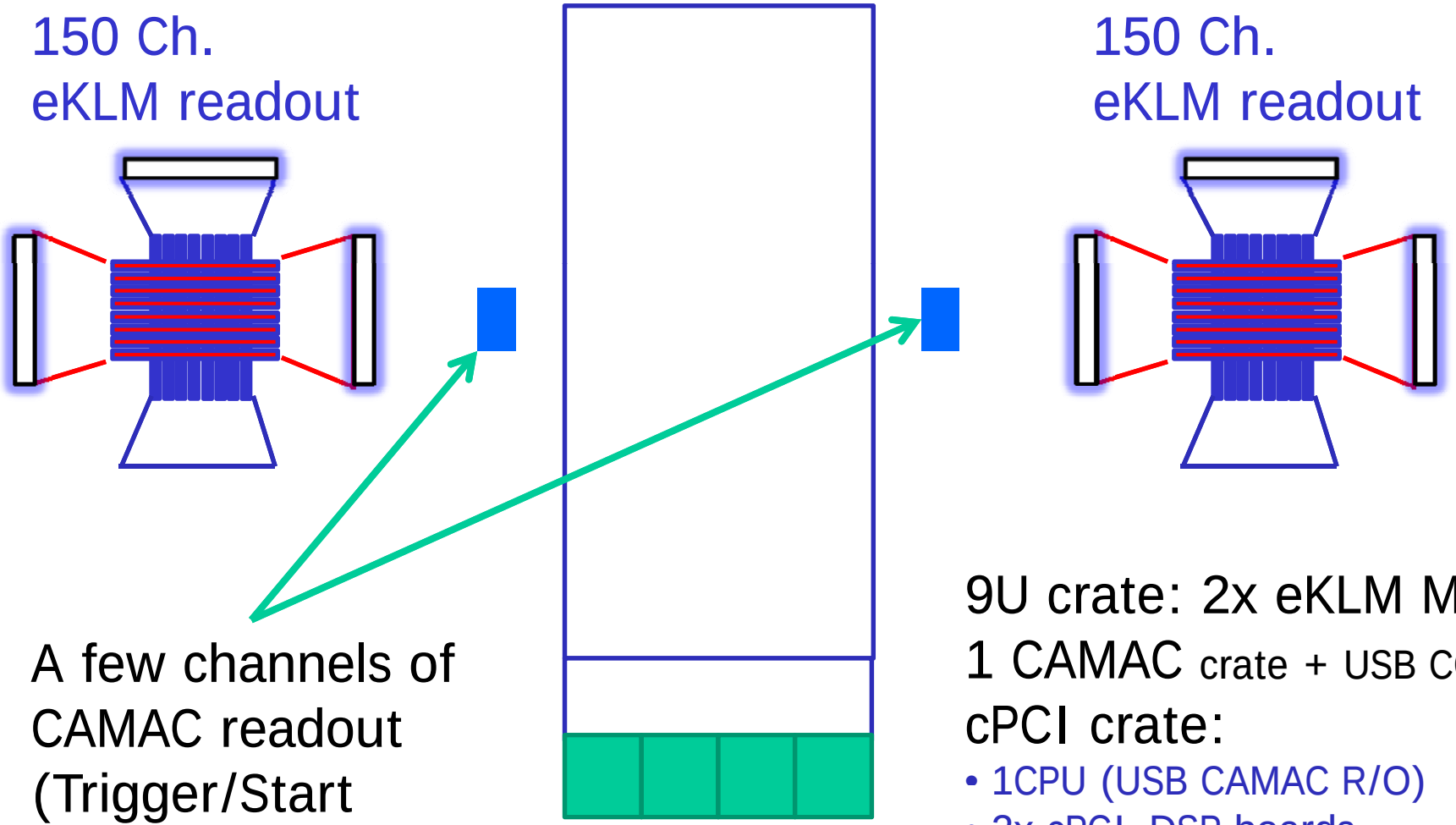
Autumn 2011 beam test

- CERN SPS T4-H6B
  - 120GeV hadrons
  - DAQ rate: ~100Hz?
    - 25MB/s (PCI bus limited)
    - ~250kB/event (non Zero-Supr.)





Readout system – Component



9U crate: 2x eKLM MB

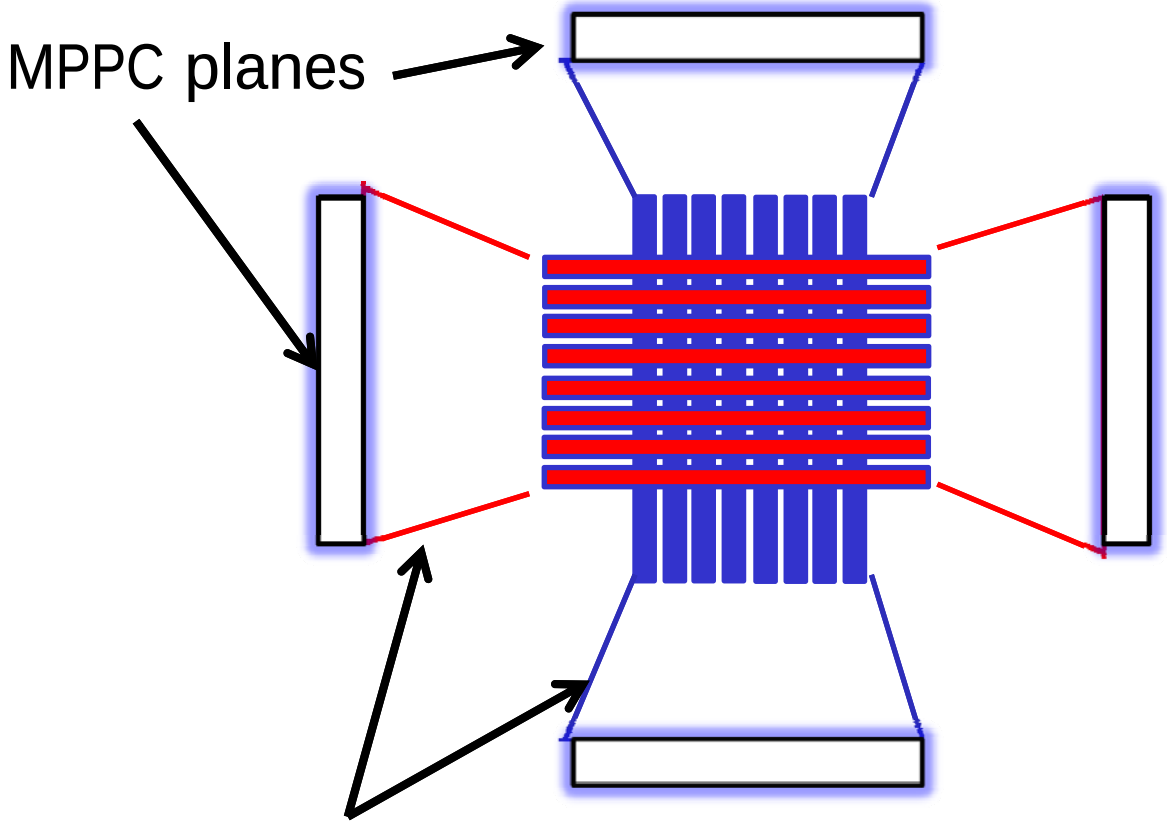
1 CAMAC crate + USB CC

cPCI crate:

- 1CPU (USB CAMAC R/O)
- 2x cPCI_DSP boards

SciFi Tracker (overview)

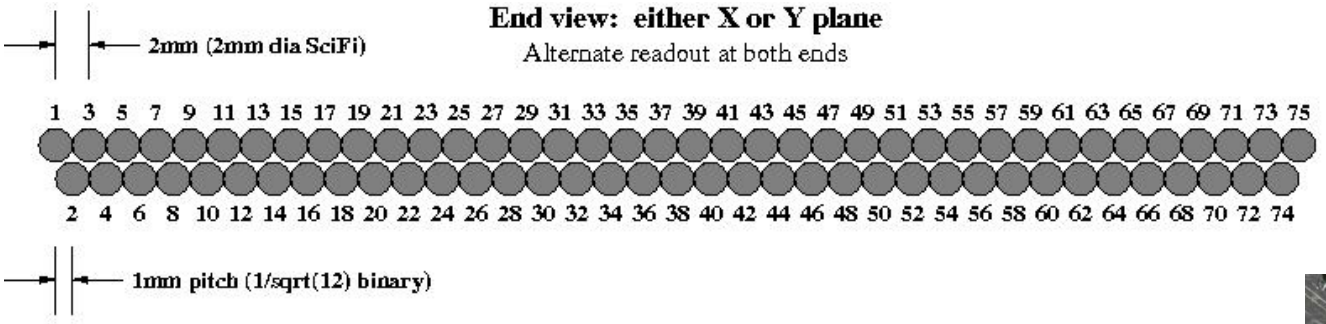
A pair of x and y (orthogonal planes)
of 2mm dia Scintillating Fiber,
Offset 1mm pitch (for better resolution)

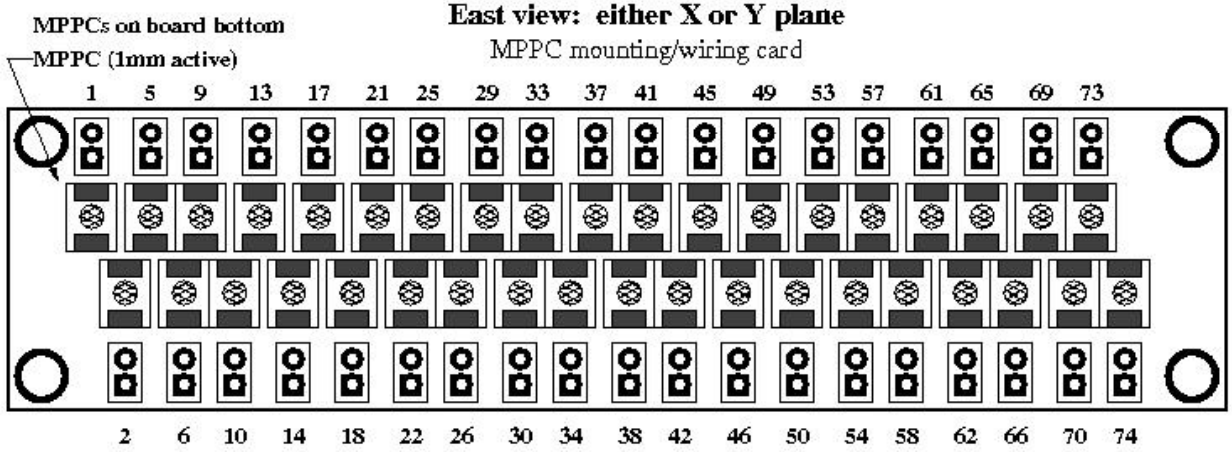


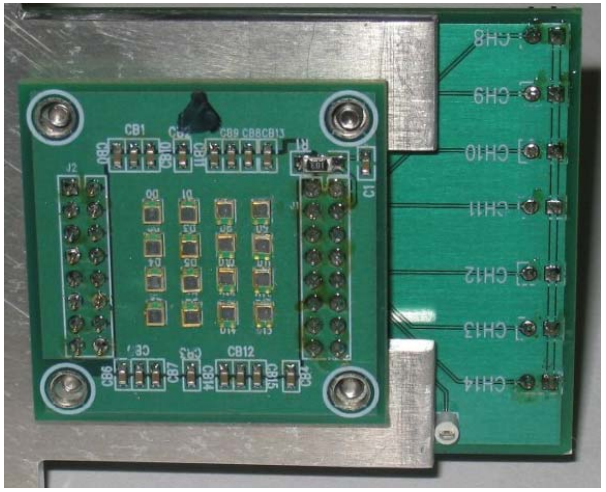
75mm x 75mm
Tracking area

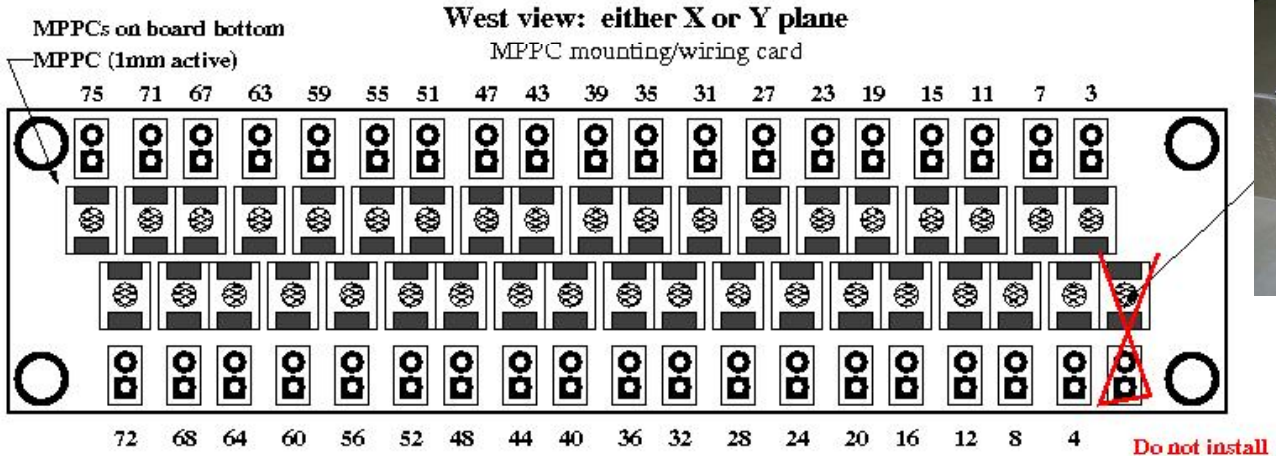
Resolution ~
1mm/sqrt(12)
~300um

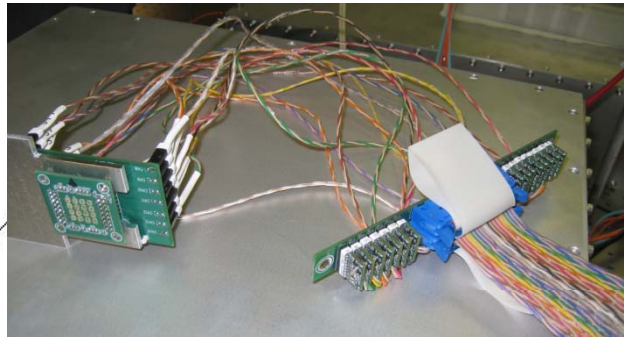
SciFi Tracker readout = eKLM



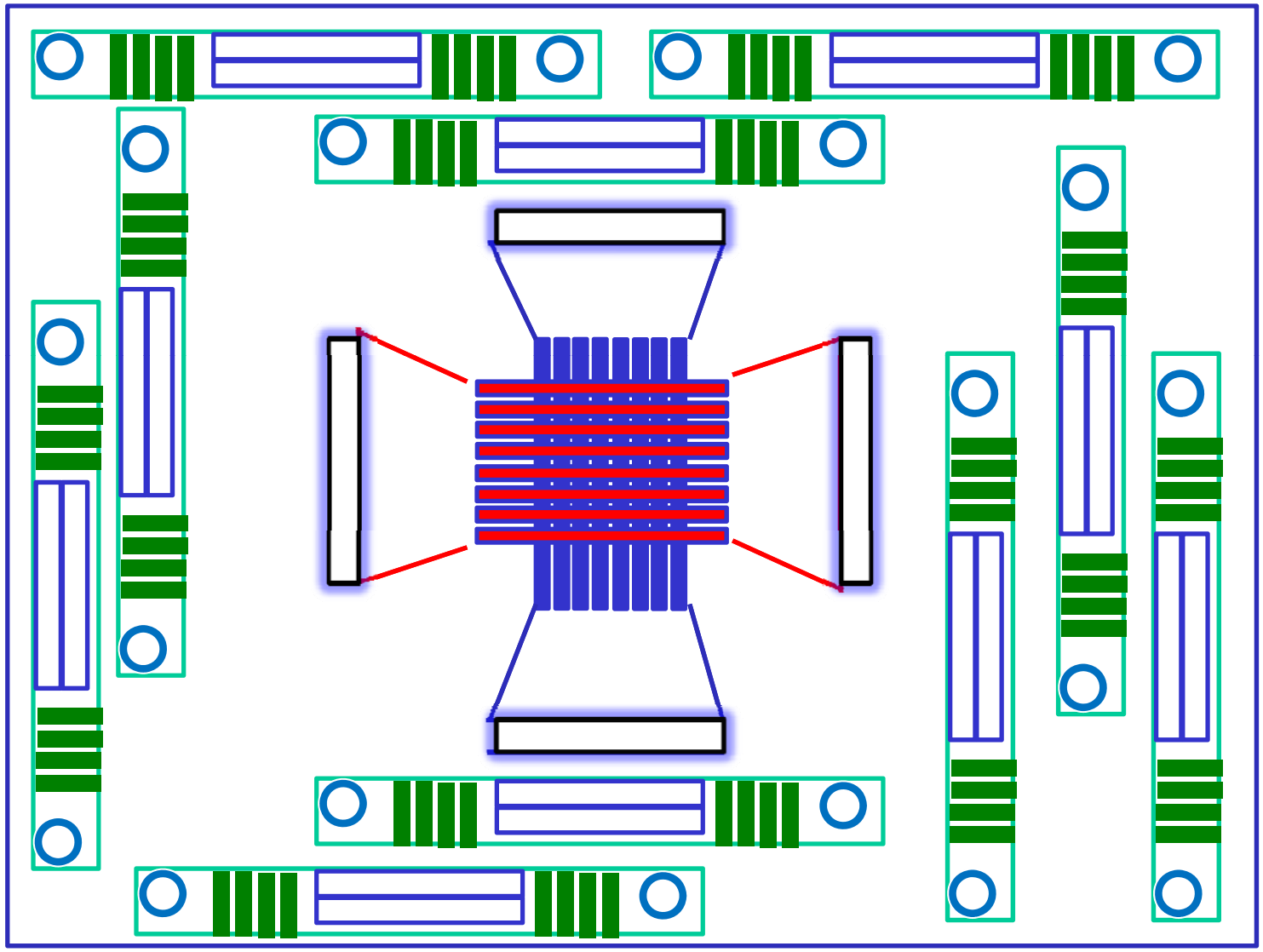








SciFi Tracking Chamber



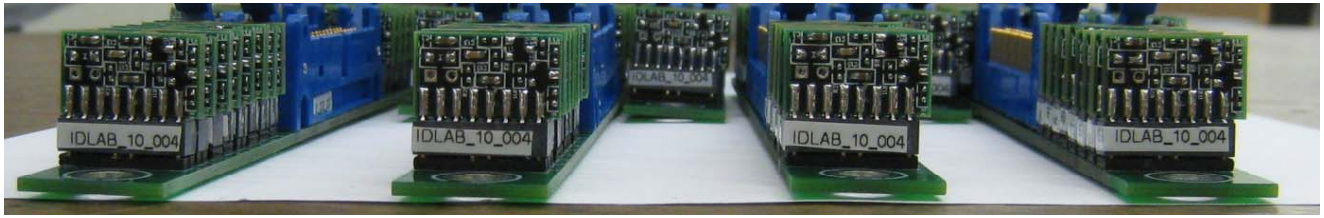
Mounting/support frame

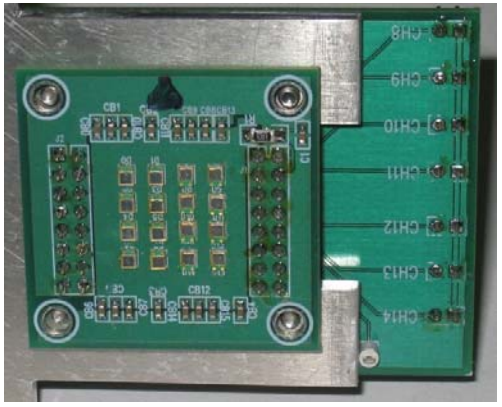
Brackets needed: amps, SciFi

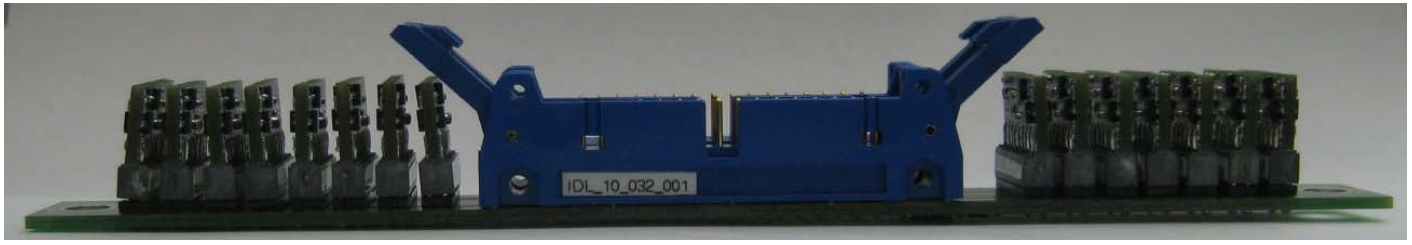
Beamtest system: tracking boards

Front-End system

Item	Needed	Spares	Comments
eKLM Rev. B amplifiers	300 (~190)	32	Stencil, external assy?
Amp carrier Rev. C	20	2	Stencil, external assy?
SciFi tracking chamber	2	--	SciFi, 300MPPCs
38 channel MPPC cards	8	2	**Design needed**



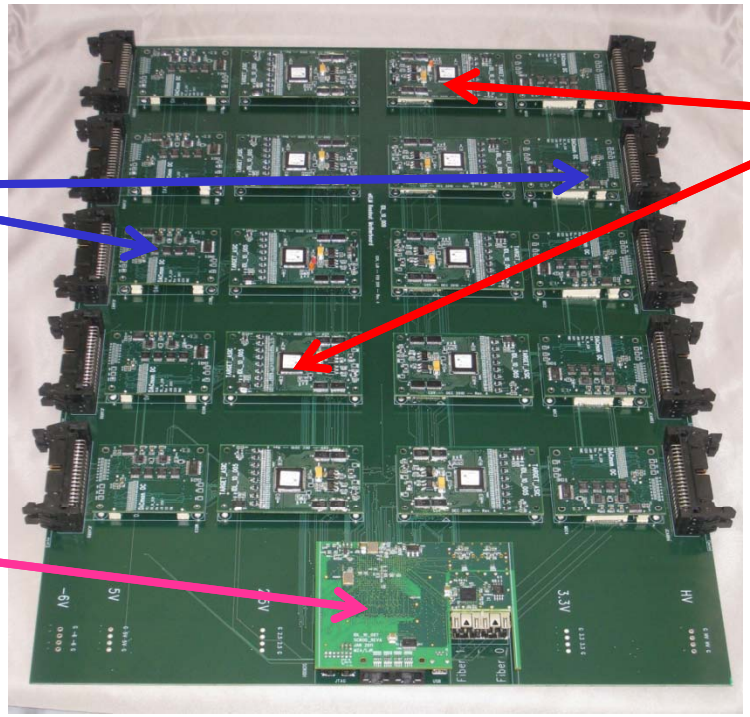




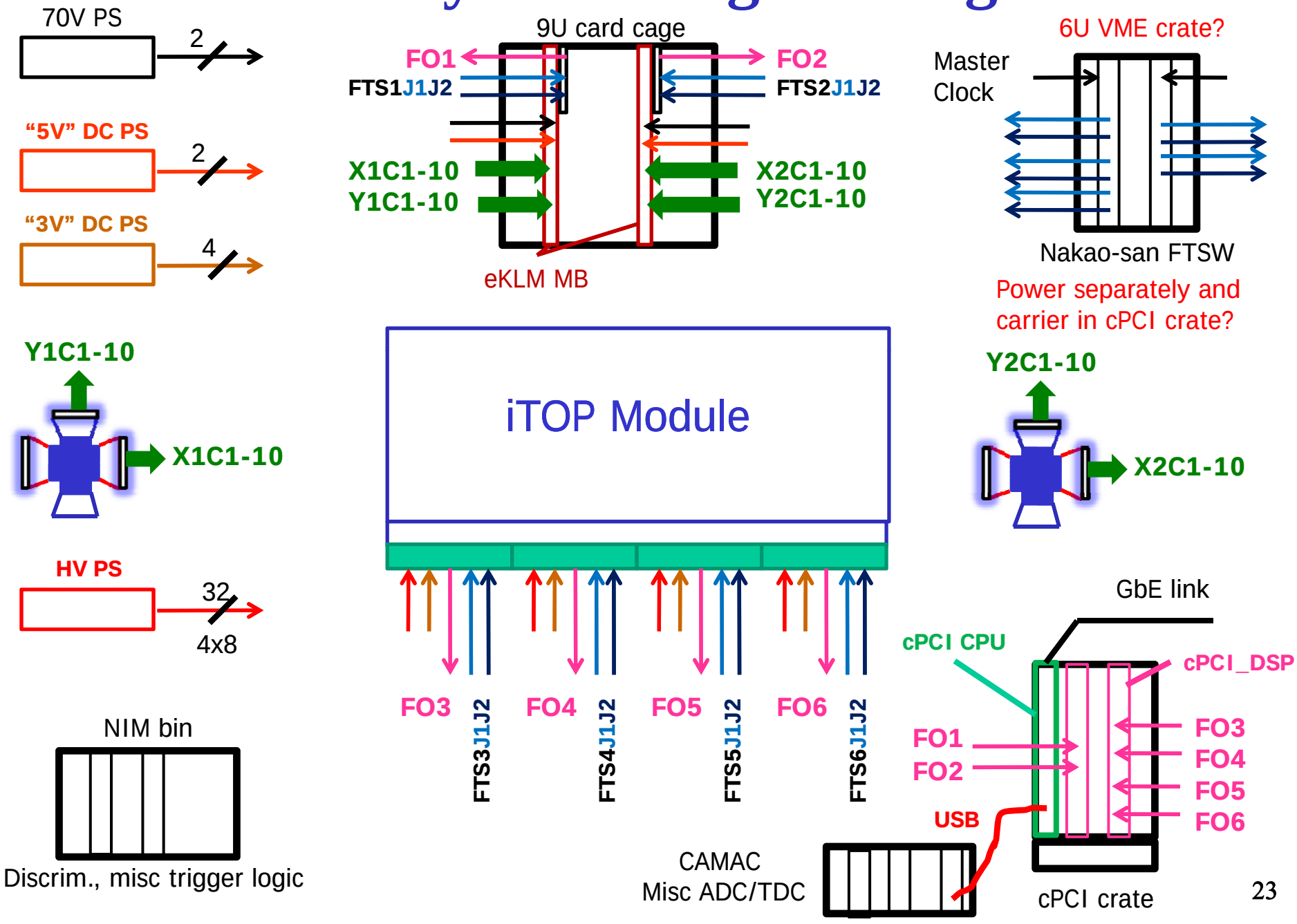
Beamtest system: tracking boards

Back-End system

Item	Needed	Spares	Comments
9U eKLM Motherboard	2	1	**Design needed (anyway for eKLM)**
DAC_MON	20	2	Stencil, external assy?
TARGET3 DC	20	2	**Design needed**
cPCI_DSP	1	--	Board stack R/O spare?

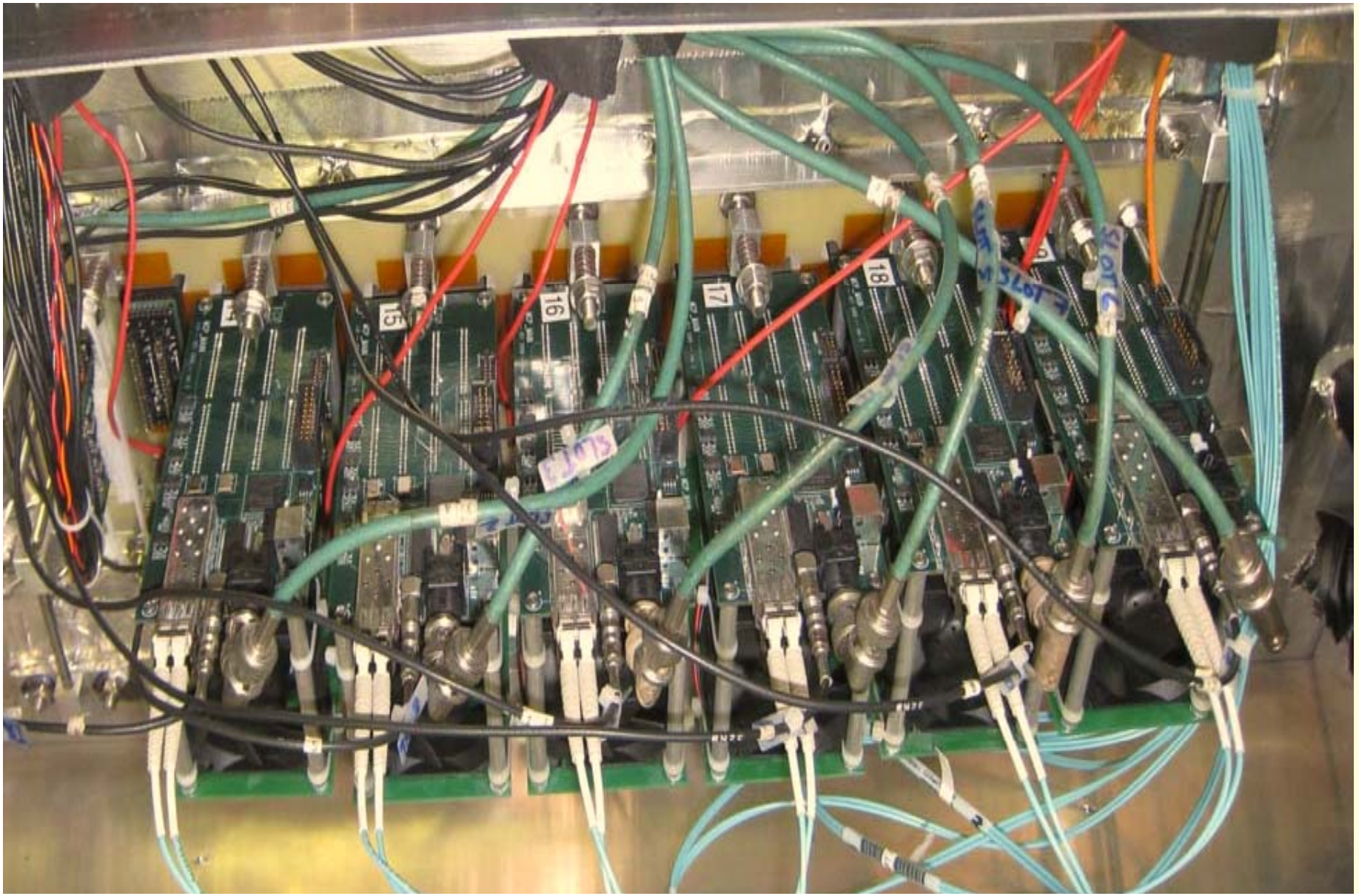


Readout system – logical diagram



Cable harnesses

Cosmic test stand @ SLAC ~400 channels (vs. 512)



Action items

1. Integration test at Nagoya (1st week August)
2. Complete board stack designs
3. Firmware!! (control and processing)
4. DAQ and calibration
5. “full system” [512 channel] cosmic run ~ September