

HRS Counting DAQs for PREX-II/CREX: Slides to start a discussion

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Trigger Setup for PREX

(Note: try to make the same for Left and Right HRS)

Definitions:

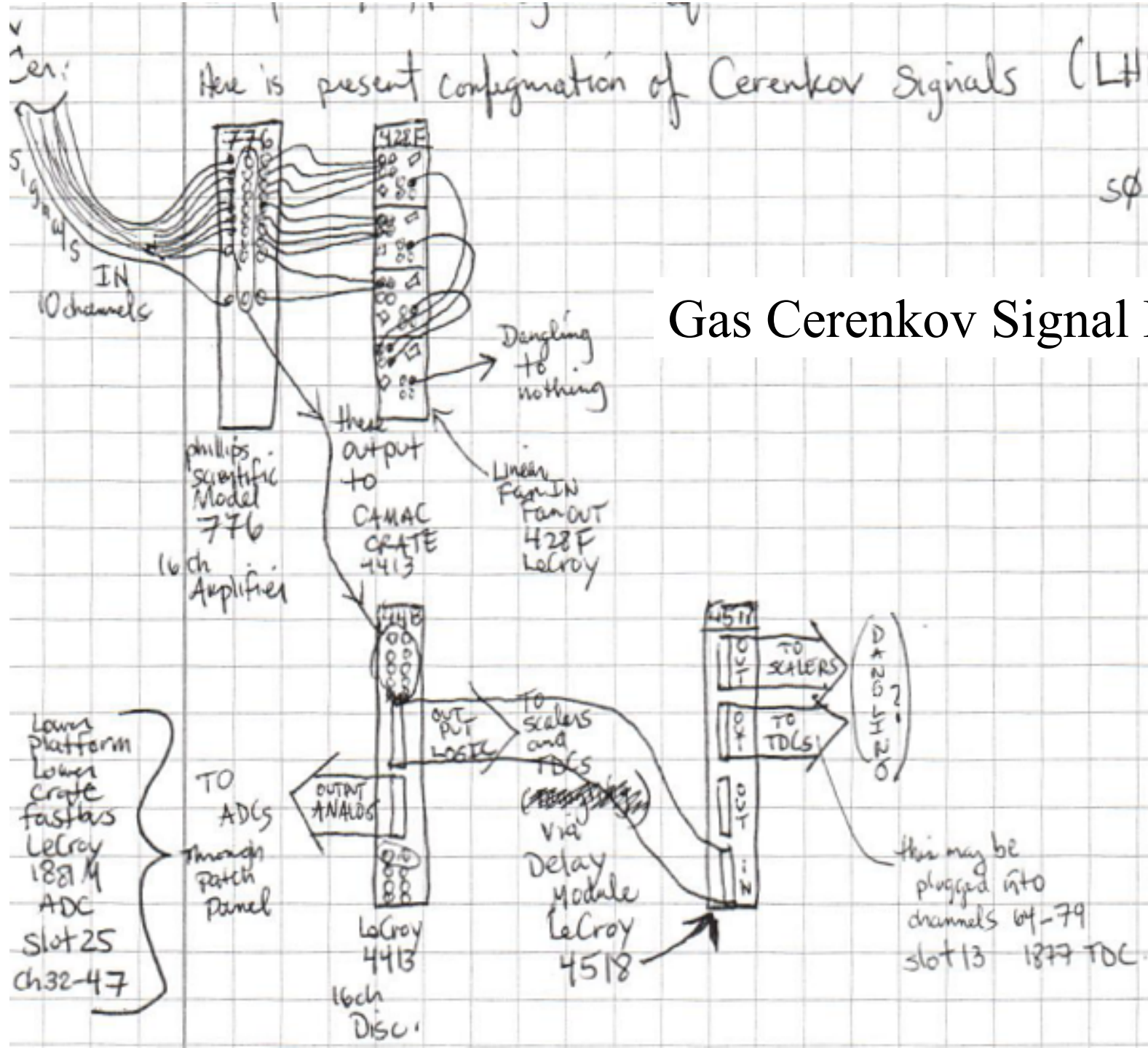
- T1: $s\phi$ (Bogdan's $s\phi$ scint.) [$s\phi$] -OR- A scintillator like $s3$ below
- T2: Prex Det Upstream [PDU]
- T3: Prex Det Downstream [PDD]
- T4: Prex A-T Det [PAD]
- T5: $s3$ (Bogdan's Scint) [$s3$]
- T6: Cosmic Trigger (hard cosms -- with Lead between scints) : T1+T5
- T7: pulser (2kHz?) - Random -- Is it nec?
- T8: Clock

2 We will use gas cerenkov and $s1$ signal pathways for our signals, but No $s2$ pathways; per Bogdan's request.

Here is present configuration of Cerenkov signals (LHRS)

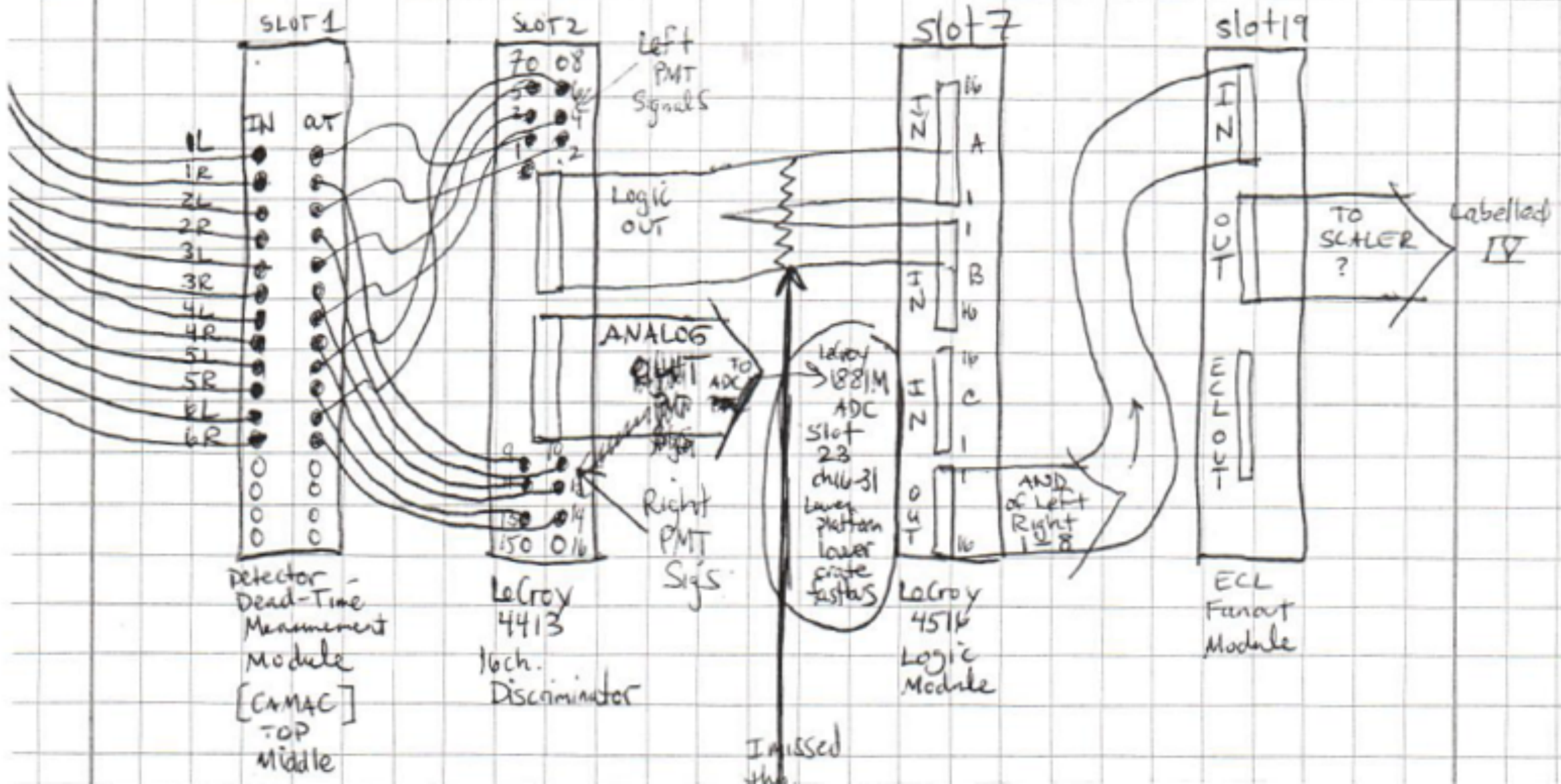
slot	ch	V
13 ^{52m} SWT	8	-14
13	9	-14

Gas Cerenkov Signal Pathways

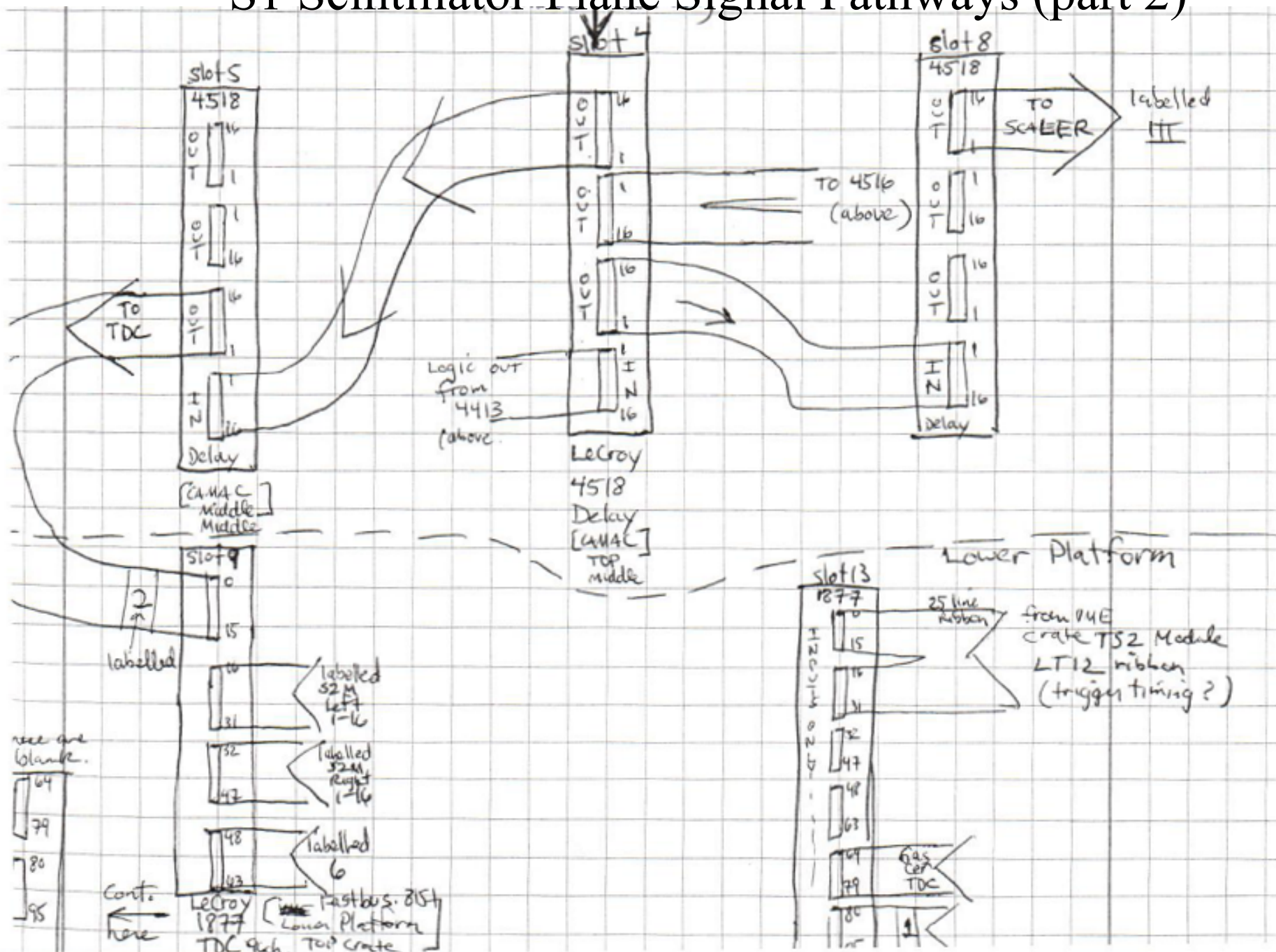


S1 Scintillator-Plane Signal Pathways (part 1)

✓ Here is present configuration of s1 signal pathways (LHRS)



S1 Scintillator-Plane Signal Pathways (part 2)



DAQ needs not presently available in HRS:

- GEM/Quartz DAQ: (note that we will need CODA 2.6.2)
 - Two VME 64x crates with Linux ROCs (one for each arm) and at least 4 available slots in each crate to accommodate a TI, 2 MPDs, and QDC
 - ISU and SBU each have a CAEN V965 16ch QDC that we can bring to JLab
 - SBU has 2 and ISU has 4 MPDs that we can bring to Jlab
 - Readout APV cards, backplanes and cables will be provided by ISU and SBU
- Can we use existing signal pathways/modules for our trigger setups? Do we need any additional modules?
- What about UVA/SBS GEM DAQ? I estimate they will need 5 – 6 MPDs per arm; Will they use same crate as small GEMs?