Shutdown work: incomplete list

polar. meeting
27.07.11

- Just what I can think of at the moment
- Several questions: “when do we need to order...”
- pC emphasized; more things for H-jet?
- Please add what I've omitted...

Detectors

pC:

- We have agreed:
  - keep present BNL and Ham. for Run12 (change 1 BNL, high I-bias)
  - migrate to Hamamatsu over subsequent runs
- What do we need now:
  - any more BNL? More Hamamatsu?
- When do we need to order more Hamamatsu for longer term?

H-jet:

- Status: Hamamatsu single chan./strip photo-diodes?

DAQ

<u>pC (help from Igor, Dima in October):</u>

- Biggest problem Run11: bad/lost Bunch-0 signal; time info ill-defined
- Presently: one crate B1U/Y2U, other crate B2D/Y1D (Up/Dn-stream)
  - requires switching Blu/Yel clocks within crate
  - extra NIM hardware, ~3 levels of logic;
    failed at least once, probably more
- Change back?: one crate B1U/B2D, other crate Y2U/Y1D (Blu/Yel)
  - one set clocks each crate, no switching
  - requires (again) rearrangement of signals at MUX
- B2U double timing? Maybe from Bunch-0 problem...
- Pulser: sometimes 'echo' pulse @ low-amp., high-t, ban. fit problems...
  - cause? fix? pulser source tunnel→counting room?
- Add 1 WFD to 1 crate (presently downstream) for scint. readout

<u>H-jet:</u> Any issues?

<u>Longer term:</u> WFD replacement? (CAEN unit, Igor/Dima)

pC targets

- Stress tests ongoing, results soon
- Probably already know: loose targets survive better
- Also shown: loose targets → unstable A_N, pol. measurements

<u>So the choices are:</u>

- Loose ribbons, robust, but unstable measurements

<u>or:</u>

- Tight ribbons, (more) stable measurements, but short-lived

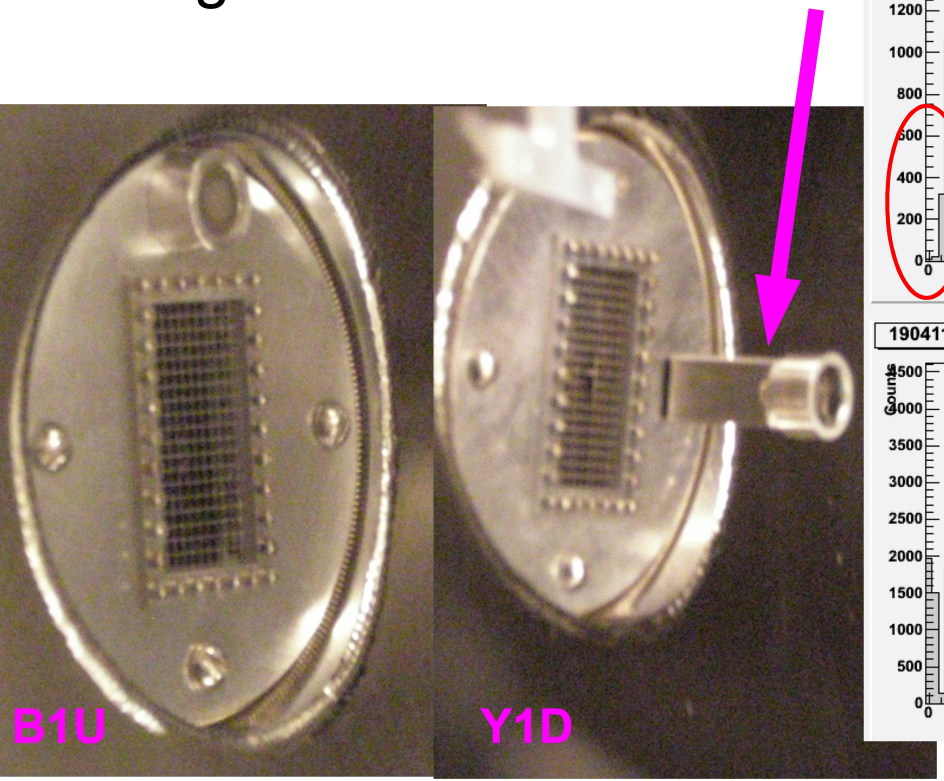
Probably choose: many poor measurements (over all Run12)
over: few good measurements (start Run12 until all lost)

- Dannie checking inventory; more fabrication needed?

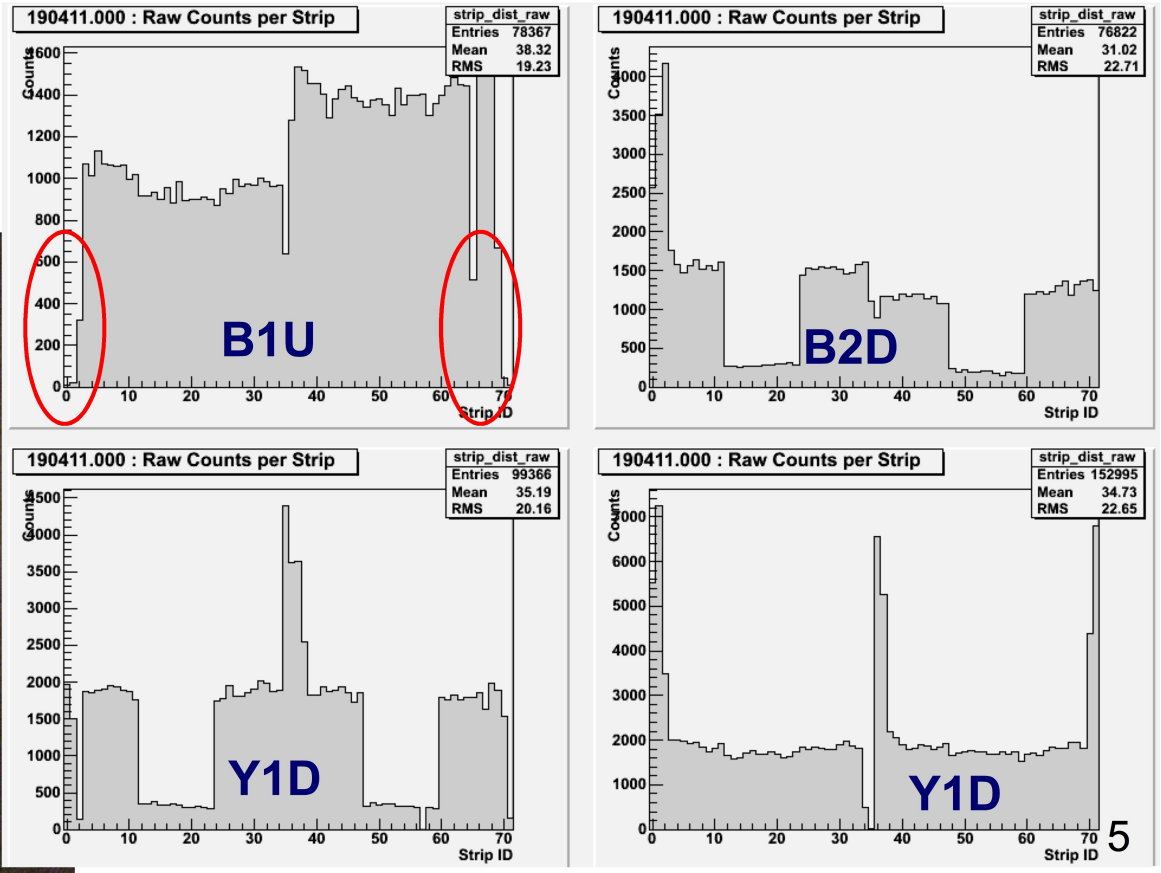
α sources

- H-jet will install Gd sources in ½ presently lacking
  - sources @ BNL; any mechanical parts needed?

- Have 1 Gd for testing
- Can we use test stand in Bldg. 930 for tests,
  e.g. energy energy degrading foils?
- Do we want (8) Gd for pC? order time?
- Add standoff brackets on B1U sources;
  on other polar. illuminated
  edge channels & more:

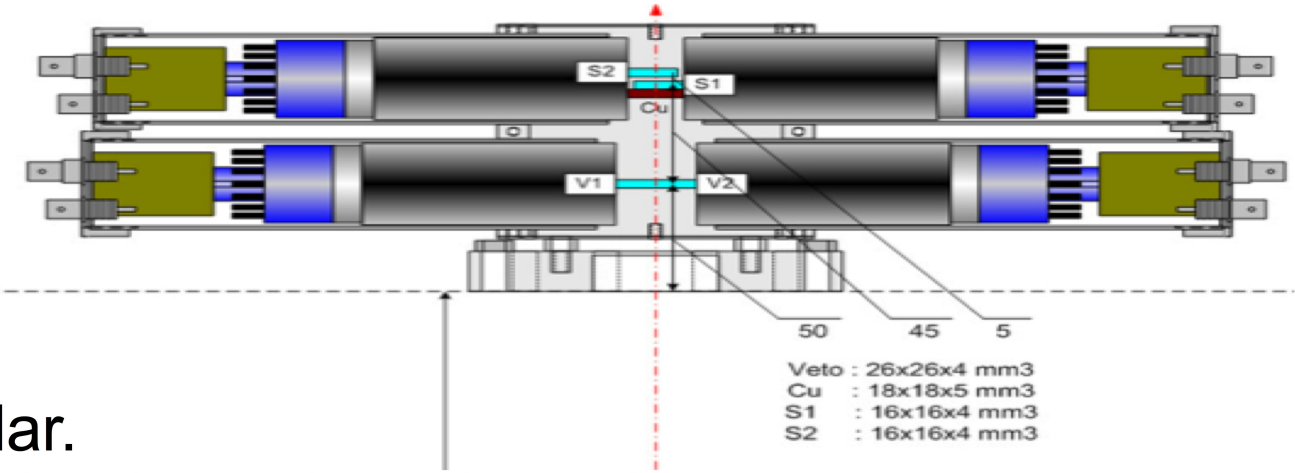


α-run hits/strip



t_0 scintillators

- Present setup in Y2U:
  - 3 scint. (V,S1,S2)
  - 4 PMTs (two on V scint.)
  - HV, readout only S1,V1



- Want a monitor all 4 pC polar.
- In each: seems a large/small scint. pair works well
  - coincidences not studied yet, may be useful
- If we cannibalize Y2U setup, need:
  - 6 more PMTs
  - 3 large scint. 26×26×4 mm^3
  - 2 small scint. 16×16×4 mm^3

Grigor help?

- Cables→count. room, signal & HV?
- HV: presently one 2-chan. NIM unit
  more such? alternative for 8 chan. HV? Adequate current?
- DAQ: need one more WFD in one readout crate

Other things

<u>H-jet:</u> new dissociator stage
parts in hand; assemble & test; plans yet?

<u>pC detector bias supplies:</u>

- Presently:
  - BNL (@110V) 'pet' controlled units in tunnel w/ readback
  - Hamamatsu (@10V) 4-chan. NIM unit in count. house, manual control, no readback
- Longer term: migrate to Hamamatsu's
  - need remote control & readback for ~10V bias

<u>Preamp boxes:</u>

- some mechanical improvements, contact Tony & Steve