

Run12 preparation

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What's up?

- H-jet: new detectors? DAQ checkout? α runs?
- MUX: problem in Yellow chan. switching fixed ✓
- Target motion? outstanding issues...
WHEN CAN I CLOSE WINDOW PORTS, TURN ON BIAS?
- Marker for run types (sweep, test, etc.)
 - implemented, Dima knows where info is ✓
- t_0 scintillators
 - PMTs (10 Hamamatsu H6524) have arrived
 - mechanical housing? (Grigor? help?)
 - WFDs ready; HV cables ready; need HV supply
 - install after machine commissioning?
- Pulser event identification ↘

Pulsar event identification

Recall raw data file has:

- Each event: chan. #, **rotation #, bunch #**, amp.&time info
(1 rotation = 120 RHIC bunches)
- Events are not chronologically ordered; ~in order of WFD readout
- To identify 'simultaneous' events, different channels compare:
rotation #, bunch #

Igor implemented 2 new WFD readout channels:

- Primary pulser pulse (what we usually look at)
- Secondary pulse (falling edge, $\sim 8 \mu\text{S}$ later, low amp./high TDC 'echo')

Hope to use new info:

- Make list (**rotation #, bunch #**) of pulser events
- Reject from polarization analysis
- QA analyze pulser events
- Coincidences in t_0 scintillators

BUT: requires accurate **rotation #, bunch # info each chan.**

Pulsar event identification

This info was not correct initially, debugged (*fun over the holidays*):

- 3 bad WFD modules, including a spare swapped in
(rotation# or bunch # skips or misses)
- 1 bad control signal fanout output (1 WFD started $\sim 600 \mu\text{S}$ early[?])
- 1 bad attenuator (flaky signal seen on scope)

Seems working stably now (since Friday, dozens of runs OK) ✓

- Should be able to implement, use info
- I have tool to monitor/debug problems, will keep an eye on...

Special runs / measurements

Things we need to coordinate with RHIC, 1st ideas (Elke):

- One beam hitting H-jet target, other beam separated
 - can be done during normal running
 - shed light H-jet backgrounds, a largely uncertain uncertainty
- H-jet runs at injection energy
 - requires dedicated running time (end Run11 few a shifts done)
 - how much should we care about $A_N(pp)$ @ 24 GeV?
- Ramp up/down measurements
 - requires dedicated running time (end Run11 few a shifts done)
but RHIC know how to do now
 - what more can we learn?
@ E_p bit less than 250 GeV (below resonance), check improved P
- More...

Other measurements:

- Unpolarized H_2 contamination is a large(st) uncertainty
 - how checked before? how can we improve?
- More....