RHIC Polarimetery: p-Carbon

Status

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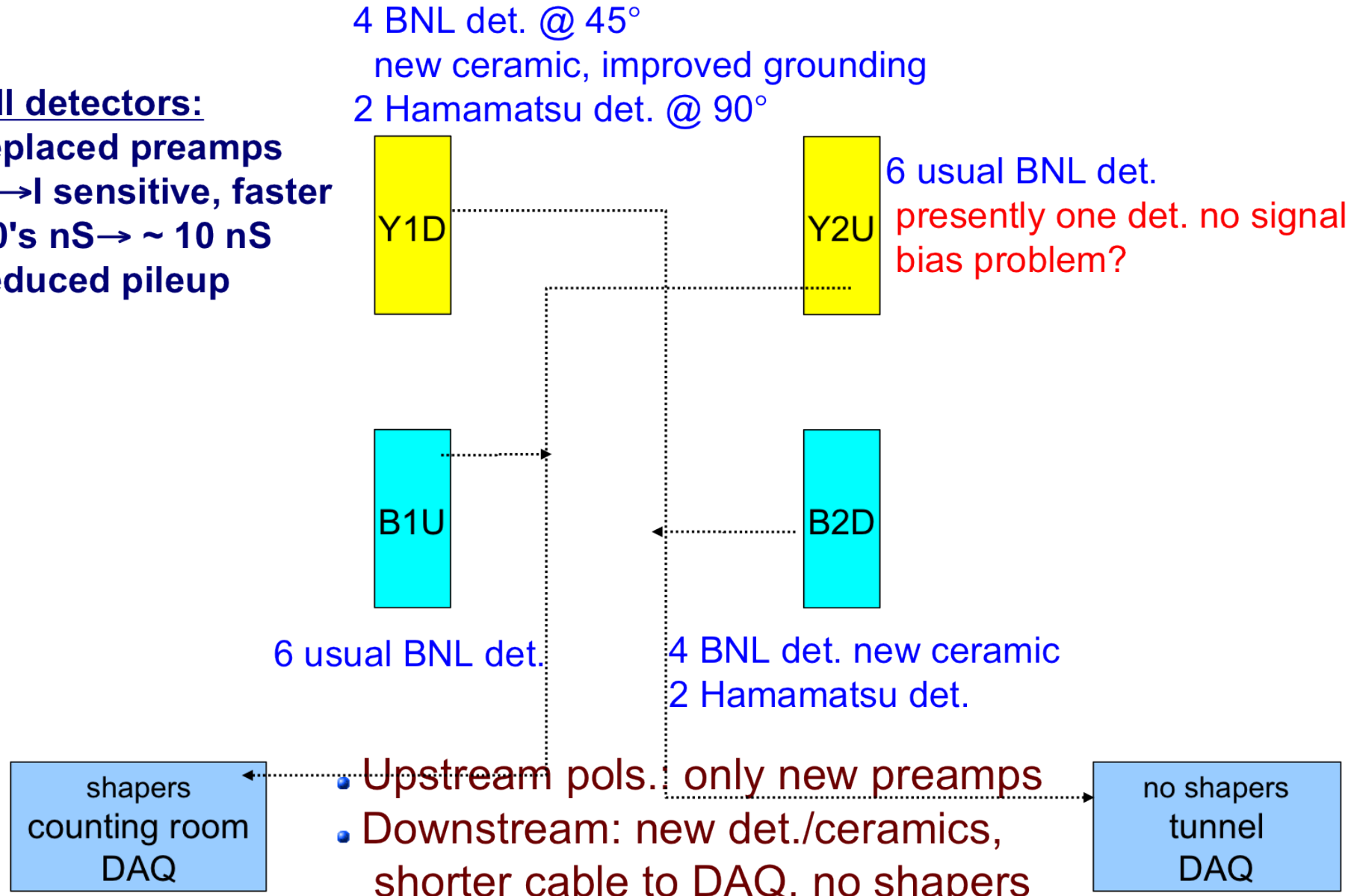
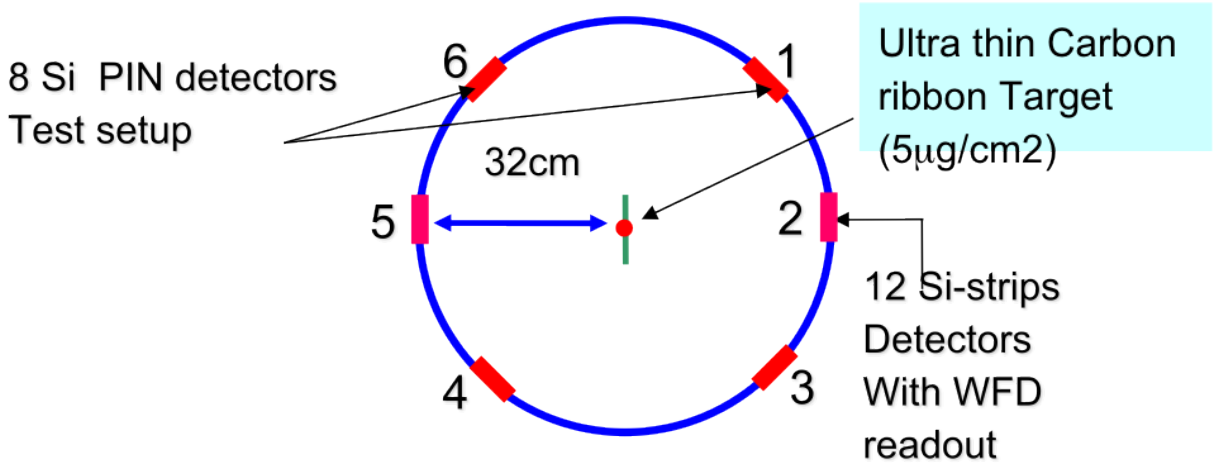
p-Carbon Polarimeters in 2011

All detectors:
replaced preamps
Q→I sensitive, faster
10's nS→ ~ 10 nS
reduced pileup



p-Carbon Polarimeters



- Each polarimeter has six (6) detectors at $\pm 45^\circ$, $\pm 90^\circ$, and $\pm 135^\circ$
- Each detector reads out 12 channels

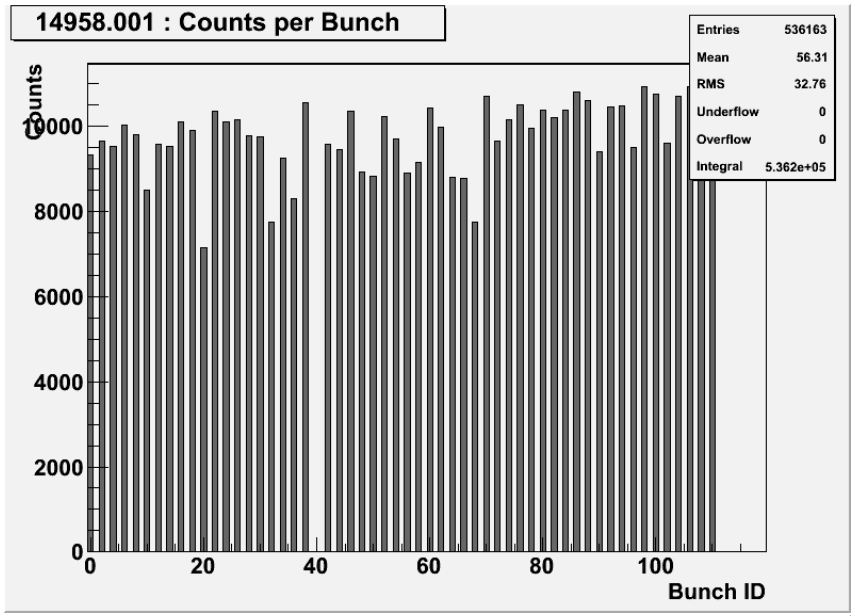
CNI Polarimetry Activities

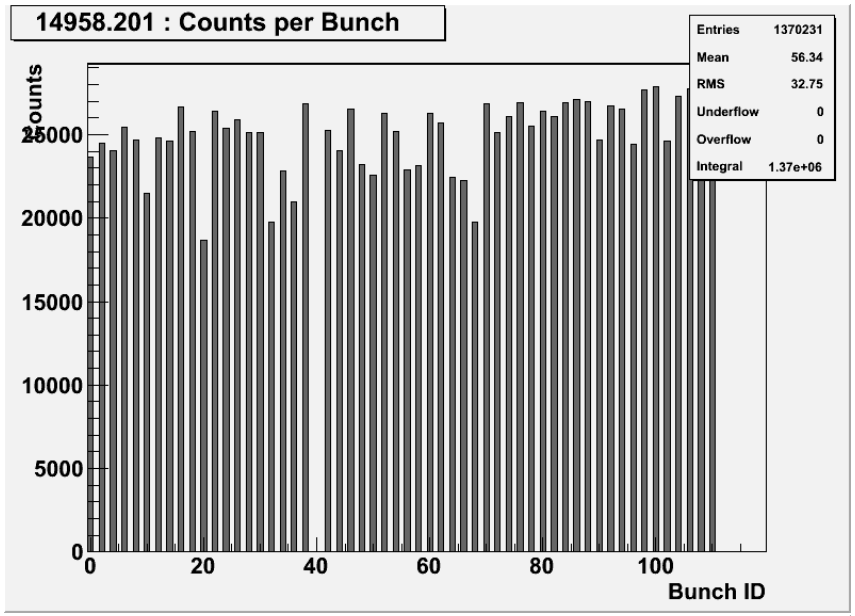
- Week of 01/14 - 01/21
  - Found read out errors in one of the downstream crates in the tunnel
  - During access replaced both the power supply and the CAMAC crate controller
  - Additional test of the replaced CMC found failed RAM chip
- Week of 01/22 - 01/28
  - Bananas dissapeared from Yellow-2 upstream
  - A detailed investigation revealed different time delays for different channels
  - Traced the problem to one of the NIM modules and replaced it

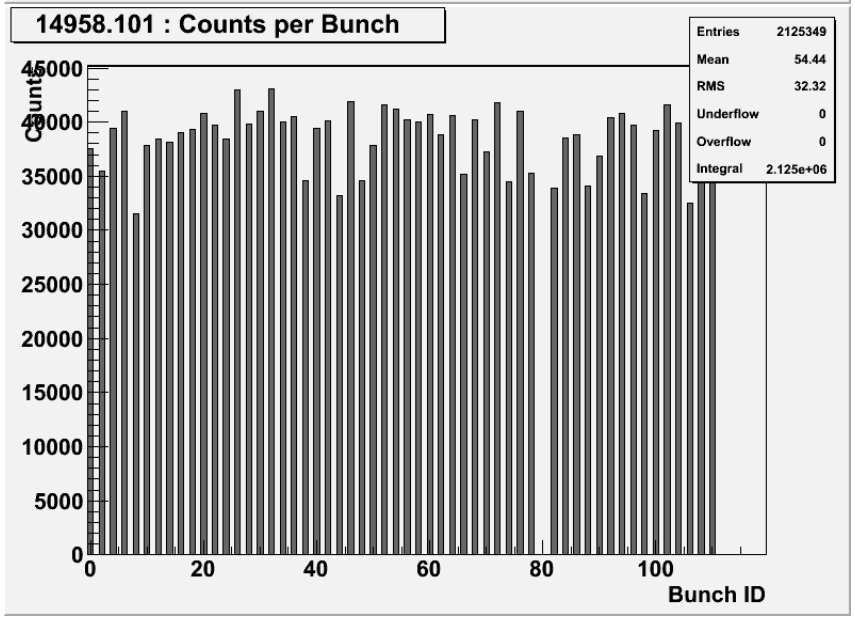
CNI Polarimetry Activities

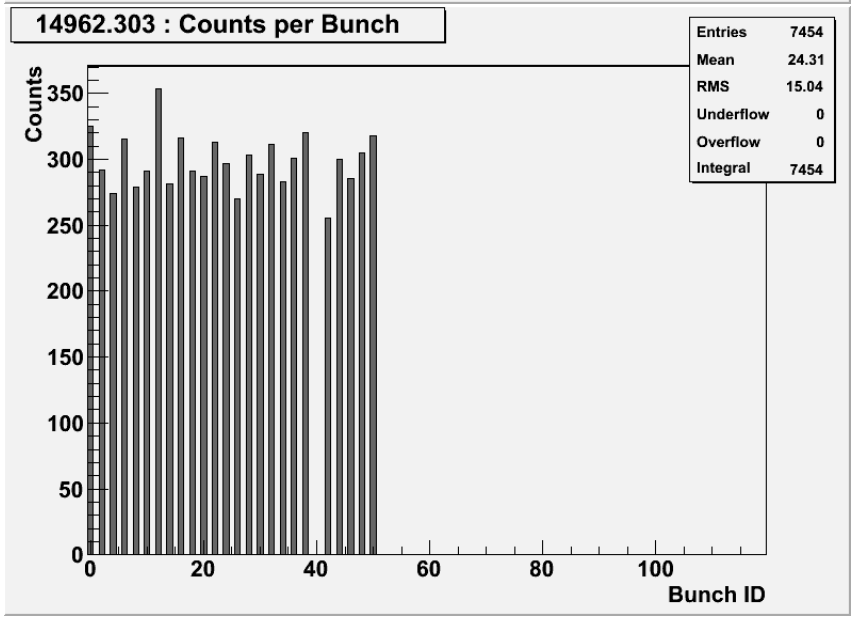
- Since then saw reasonable carbon data from all polarimeters except Yellow-2 upstream
- Disconnected HV from the compromised detector 4 in Yellow-2 upstream
- Adjusted the timing parameters
  - Found carbon data in Yellow-2 in a diferent bunch
  - However, the fill pattern should be checked
- As of yesterday all polarimeters showed carbon data
- Updated the "dead layer" and t_0 constants in online for Blue-1 and Blue-2 polarimeters
- Added 3.8T of disk space to the online machines
  - Need to arrange for a back up solution. An automatic script to send data to HPSS?

Runs 14958.001/101/201 and 14962.303









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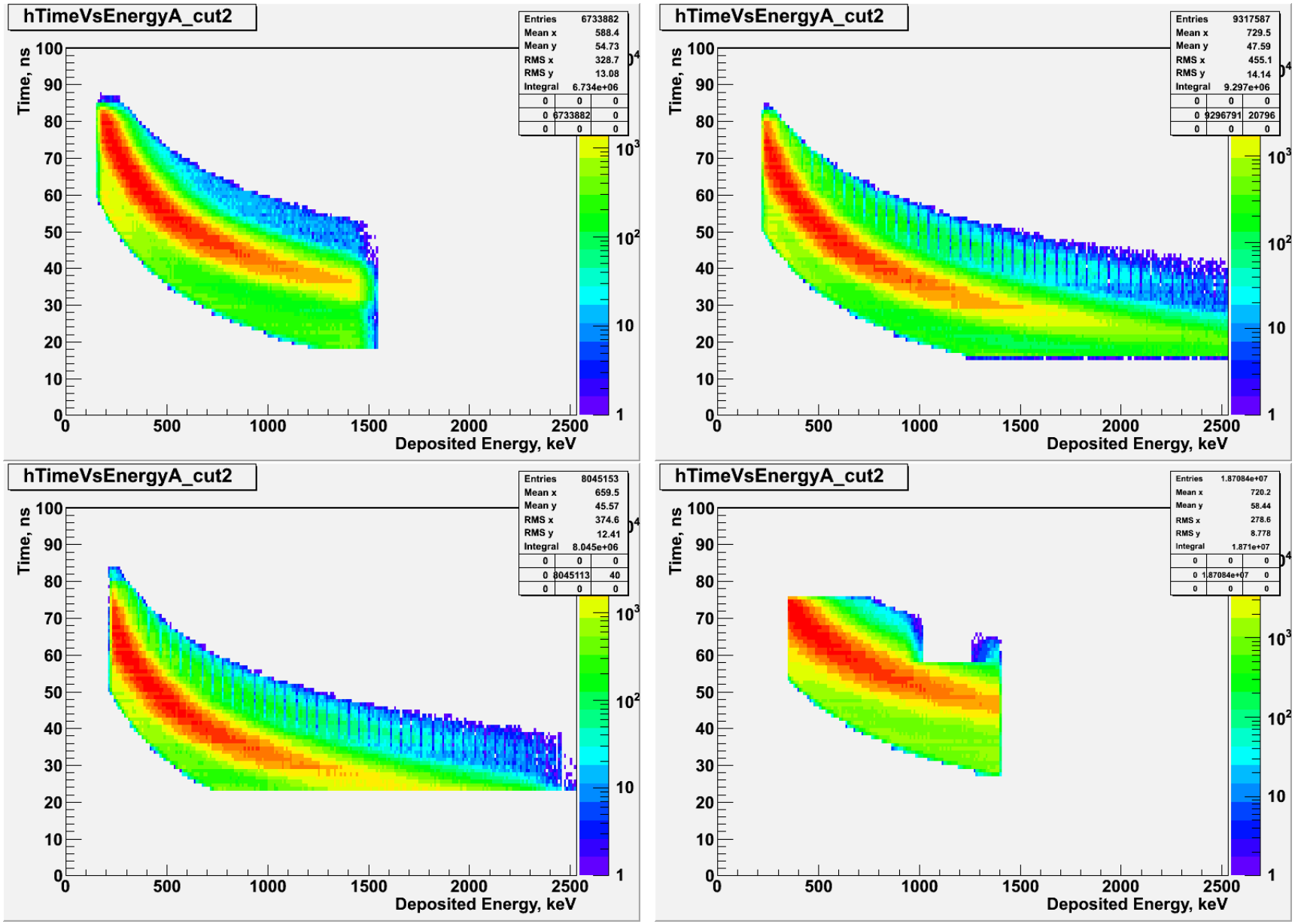

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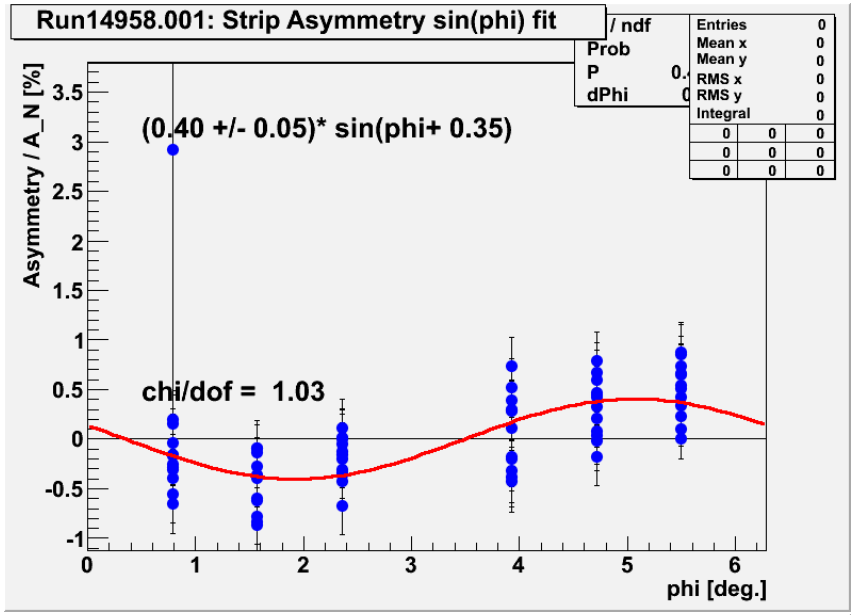

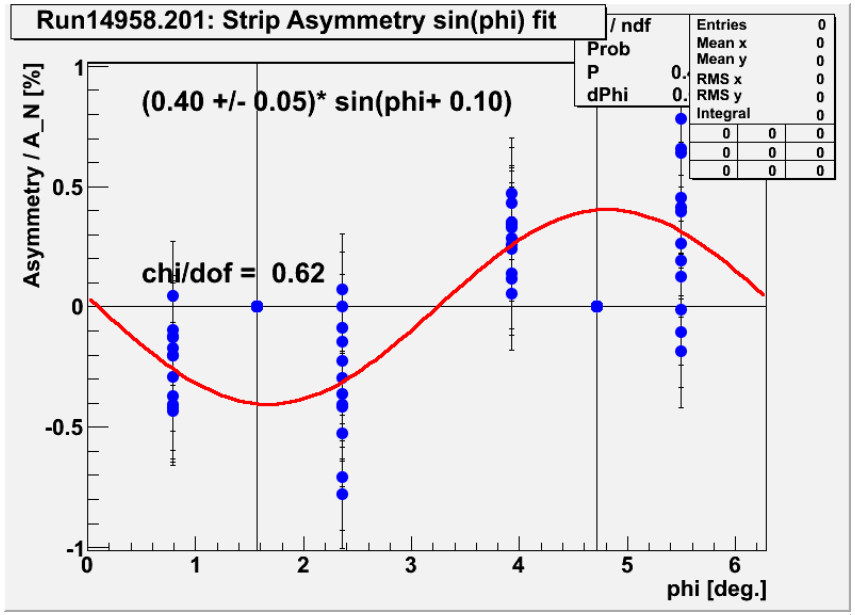

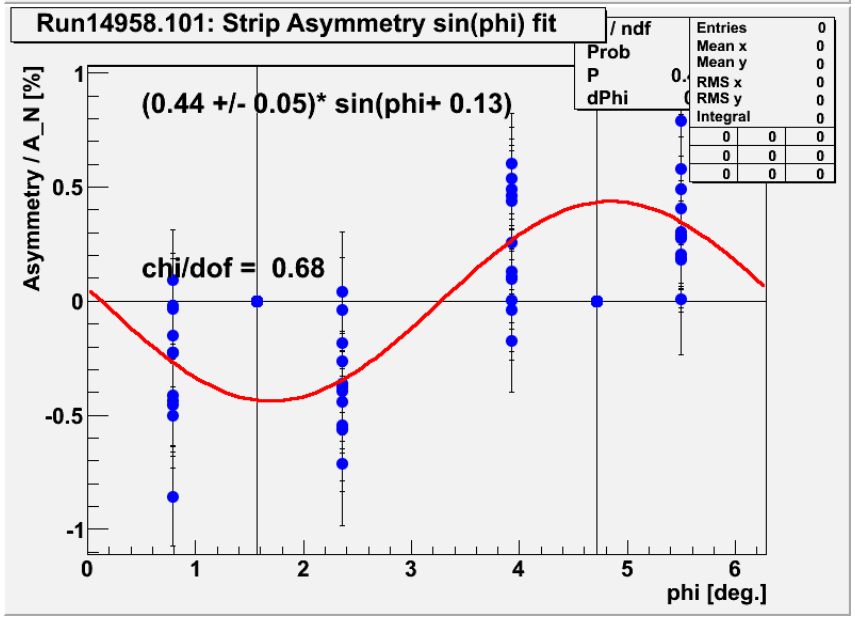

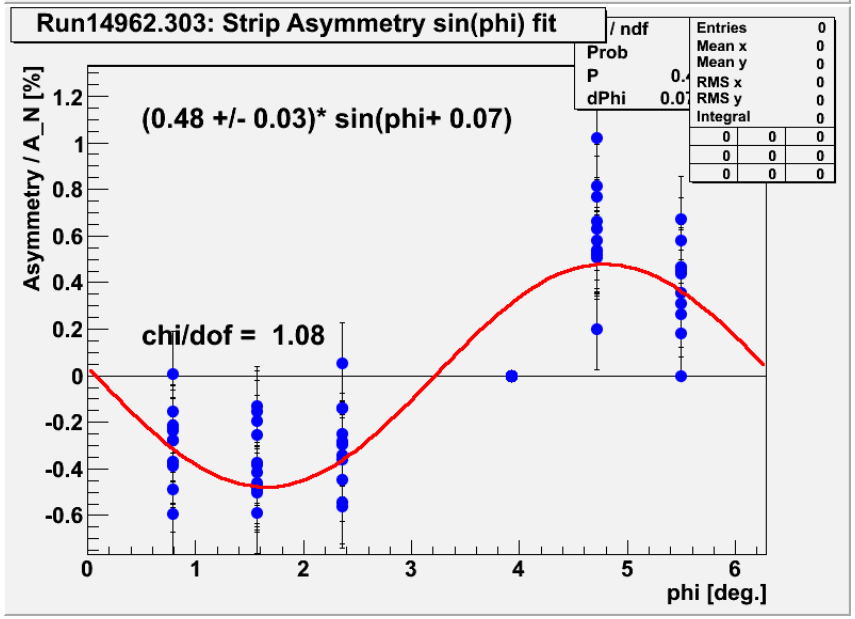

Summary and Plans

- Update calibraton constants ("dead layer", t_0) for Yellow polarimeters online
- Start closely monitoring stability of everything. . .
- Understand what is causing the read out errors (radiation?)