RHIC Polarimetery: p-Carbon

Status

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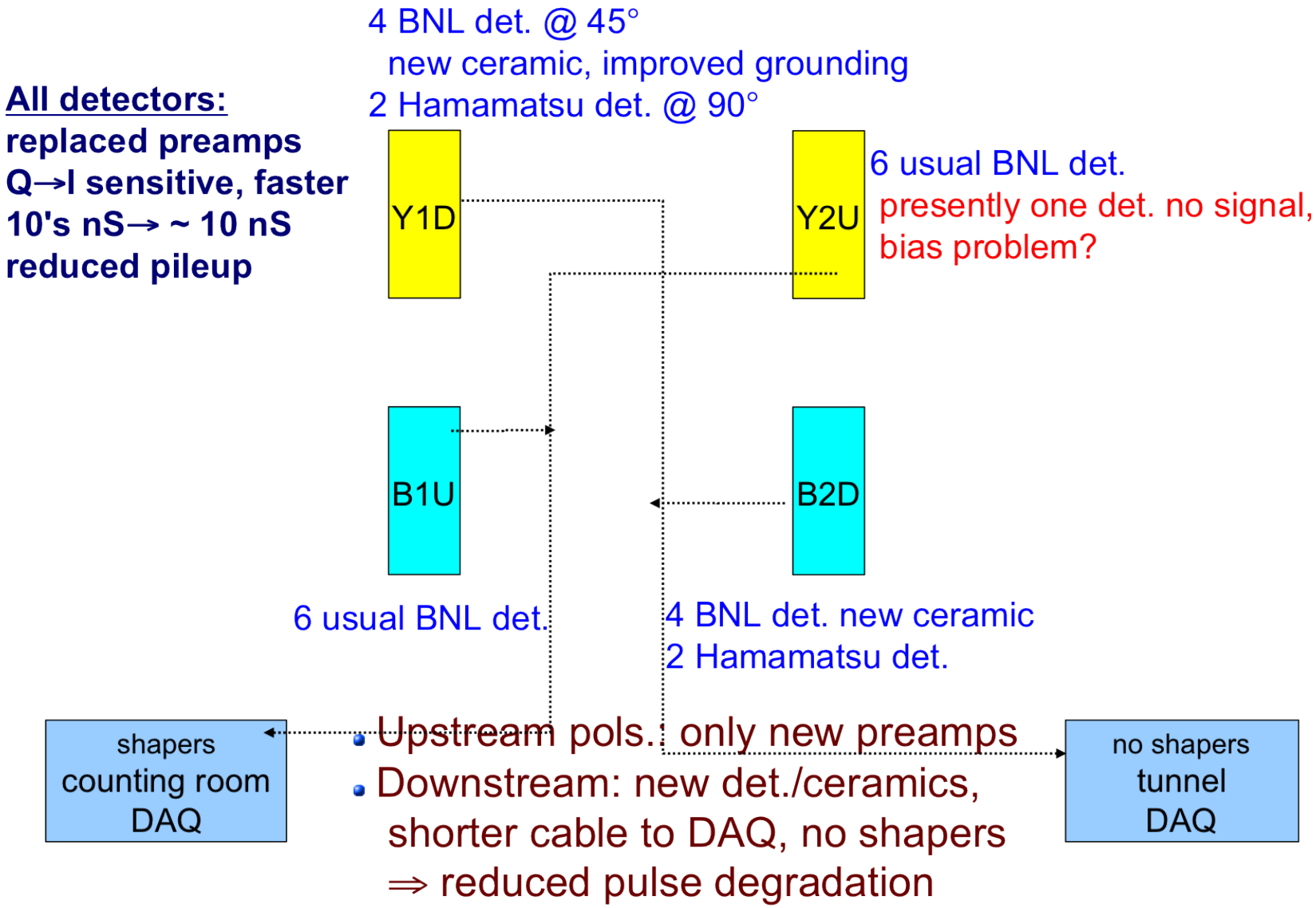
p-Carbon Polarimeters in 2011

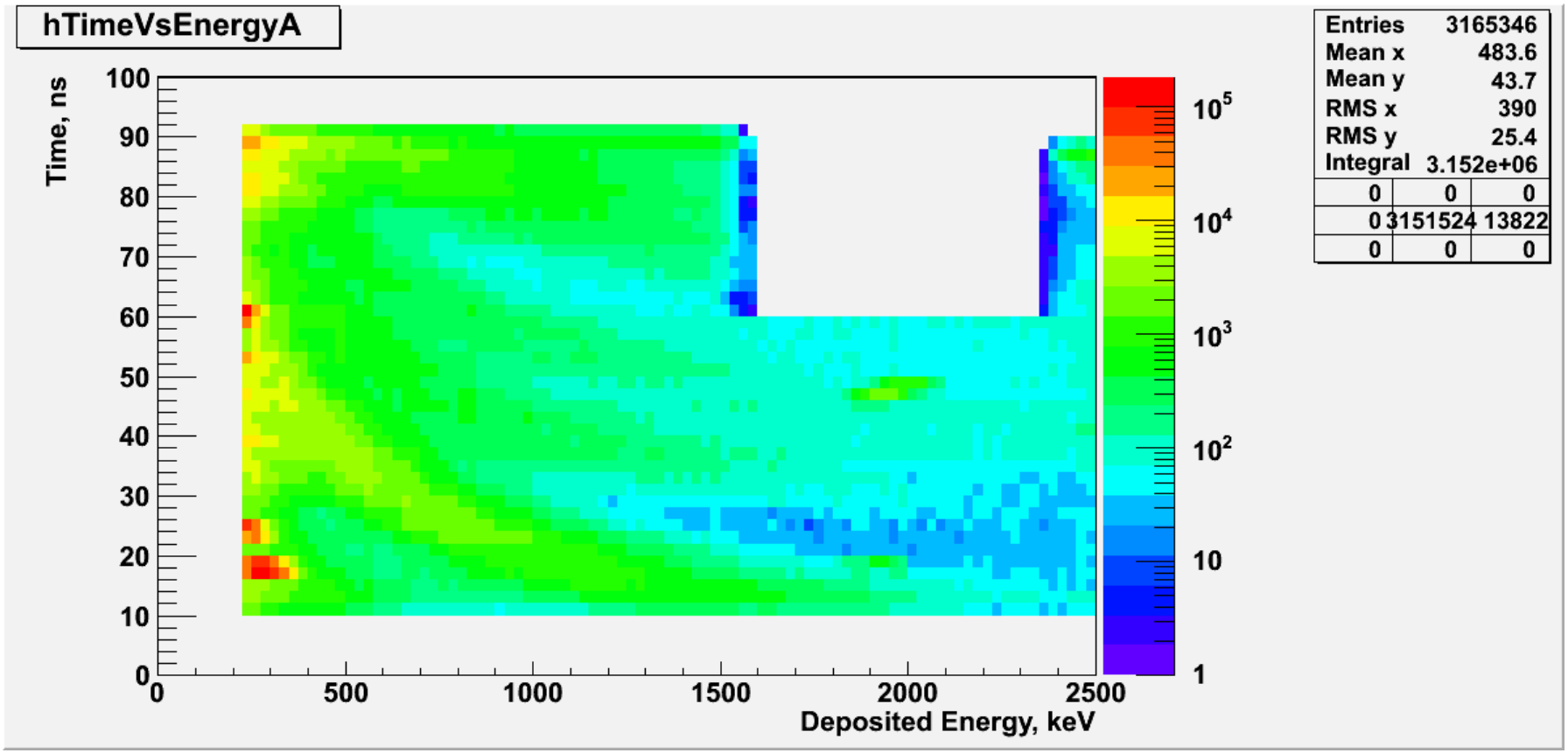
- **The schematics is not valid any more**. See next slide



Online Activities

- Week 02/11 - 02/18
  - Over the weekend took some runs with downstream polarimeters
    - First look reveals that the Hamamatsu detetors are noisy and should be masked out from the readout when HV is off
    - YD looked fine, BD had BZ problem
  - Moved inside-the-tunnel DAQ system (YD and BD) to the counting room
  - Tested with pulser and alpha calibration runs
    - YD looks ok and stable
    - BD has an intermittent problem with BZ signal
  - With the system outside it is easier to track down the problem with BZ signal

BZ Signal Problem



Offline Activities

- Continue improving the offline analysis framework
  - Improved offline database
    Keeps track of unresponsive/masked channels, empty bunches, common calibration files, etc.
  - No HBOOK histograms
  - No intermediate perl/shell scripts
  - Decreased time from about 30-60 min to 5-10 min per run
  - There is still lots of room for improvement
    - Code in SVN `https://svn.bnl.gov/cnipol/`
- When compare online and offline numbers keep in mind:
  - Offline polarization includes a -15% correction from Run09
  - Online and offline apply different energy corrections
    (under investigation)

Offline Polarization Results

- Fill 15150, Friday, February 11

Run	Blue, Upstream	Yellow, Upstream
001	37.5 ± 3.2	47.7 ± 2.3
002	36.2 ± 3.0	43.2 ± 1.9
003	30.9 ± 3.3	43.1 ± 1.7
004	74.3 ± 18.9	41.8 ± 2.1
005	29.7 ± 5.3	39.9 ± 3.7

- Polarization decays with time
- Blue polarization is consistently lower
- $E_{\text{beam}} = 250$ GeV
- More info available at `http://yellowpc.rhic.bnl.gov/rundb/`

Offline Polarization Results

- Fill 15154, Saturday, February 12

Run	Blue, Upstream	Yellow, Upstream
001	51.1 ± 3.4	51.1 ± 2.7
002	37.4 ± 2.5	45.0 ± 2.1
003	38.6 ± 3.0	43.2 ± 2.4
004	38.5 ± 3.0	32.0 ± 2.8
005	37.1 ± 3.0	29.9 ± 3.0
006	35.5 ± 2.9	–
007	34.3 ± 2.9	24.7 ± 3.1
008	11.2 ± 15.9	29.6 ± 2.9

- Polarization decays with time
- First run $E_{\text{beam}} = 24$ GeV, rest at $E_{\text{beam}} = 250$ GeV
- More info available at `http://yellowpc.rhic.bnl.gov/rundb/`

Summary and Plans

- Hope to have downstream polarimeters operational soon
- Continue improving the offline framework
- Analyse all available runs
- Hopefully, polarization profiles will be available next week