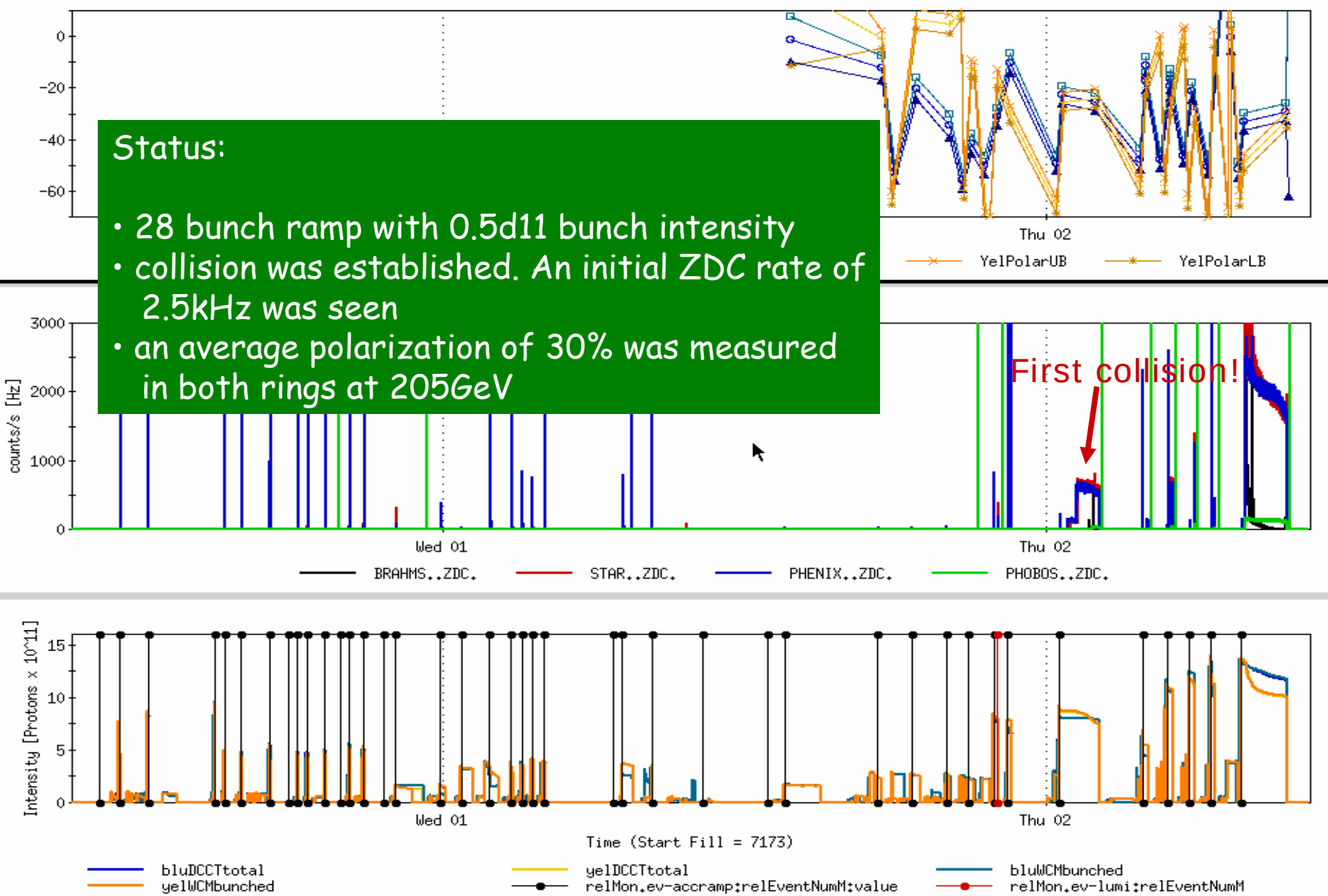
RHIC pp 205 GeV Development Status

http://www.agsrhichome.bnl.gov/AP/Spin2005/

Status:

- 28 bunch ramp with 0.5d11 bunch intensity
- collision was established. An initial ZDC rate of 2.5kHz was seen
- an average polarization of 30% was measured in both rings at 205GeV



Things are done

- Tailor the sequencer for pp22, no rotator ramp: Todd
- Fixed the first part of the ramp (inj – 100 GeV): Todd, Steve
- Modified the slow factor for pp22 so that we can have faster down ramp: George Ganetis
- Fixed model orbit and restored the separation bumps: Vadim
- Orbit correction along the ramp: Vadim
- Yellow ramp coupling correction: Yun
- Tunes/chromaticity improved
- CNI polarimeter for 205GeV: Sandro
- 28 bunches ramp
- Cogging + Steering: Todd + operations and many others

Plan

- 205 GeV development: May 31 0800 – June 3 0800
  - Finish collision setup with 56x56 stores
  - Polarization ramp measurement to identify the location of depolarization resonances
  - Provide production stores for experiments later in the afternoon till tomorrow morning
  - Parasitically study the depolarization resonance strength dependence on the orbit distortion from ramp to ramp
  - Monitor the polarization lifetime across the store
  - Vernier scans
  - Parasitic polarimeter physics studies at 205GeV

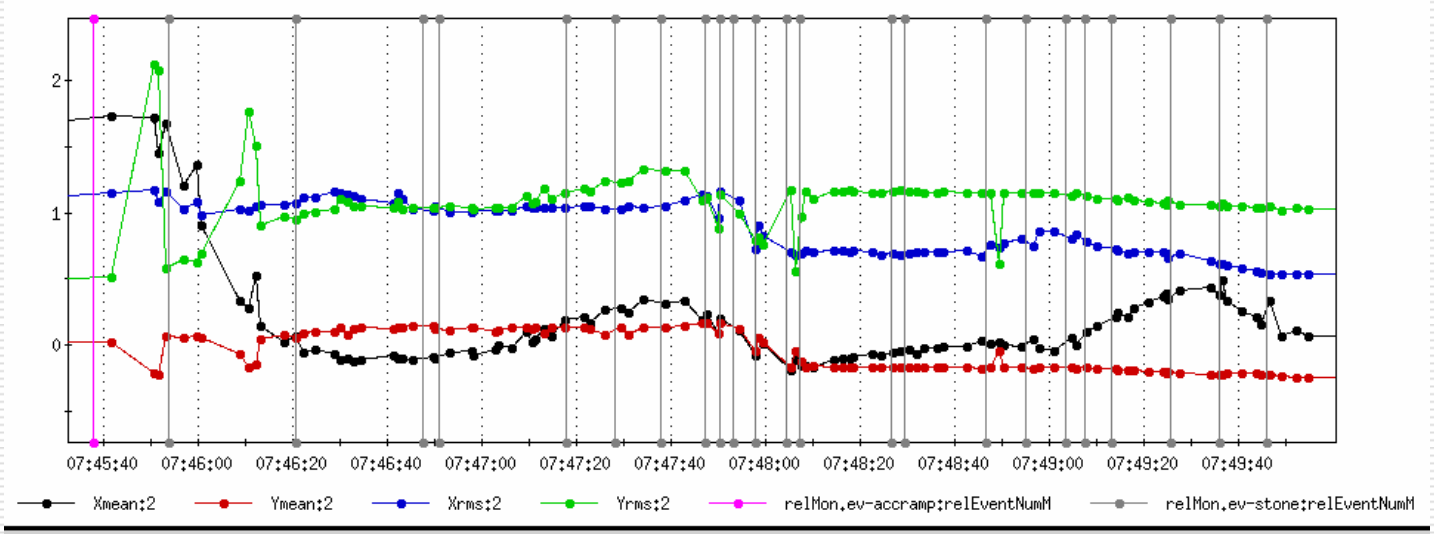
- Back to 100 GeV Physics program on Friday
  - 62 or more bunches

Plan for accommodate PHOBOS 200GeV collision

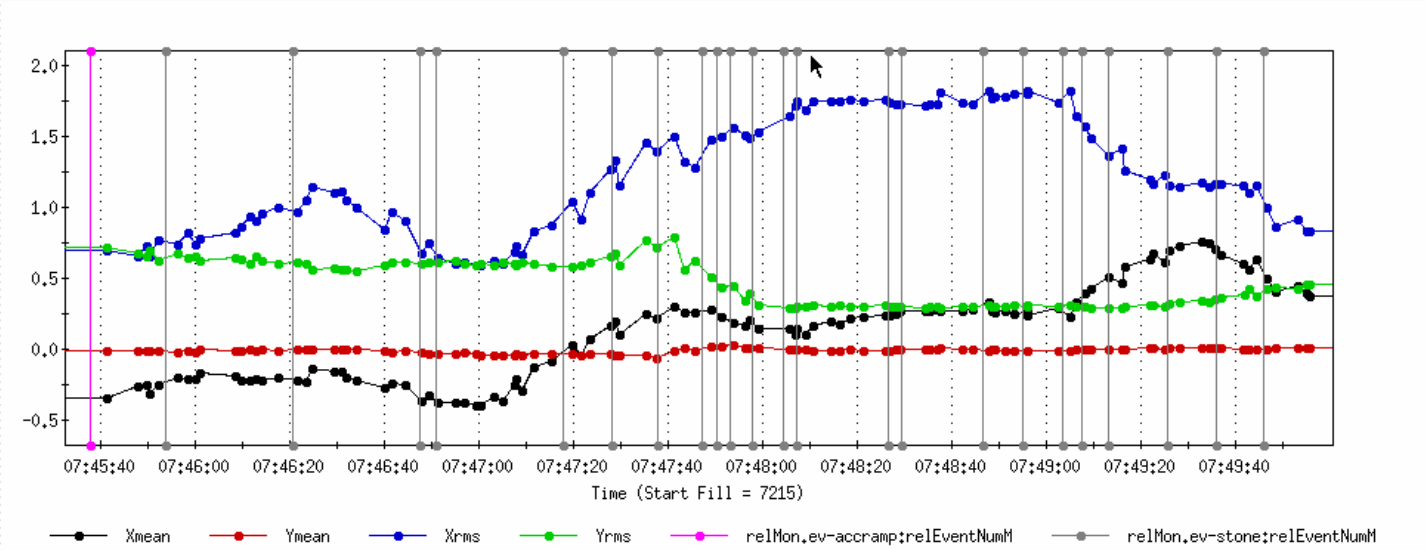
- Turn on PHOBOS collision at the end of a production store to exam the effect of an additional collision
- If it has negative effects, turn off Brahms to recover the beam lifetime as well as the luminosity lifetime
- Confirm the above configuration at the end of the following production store
- Provide collisions for PHOBOS 3 hours from the beginning of the store with the above configuration

Orbit along the ramp

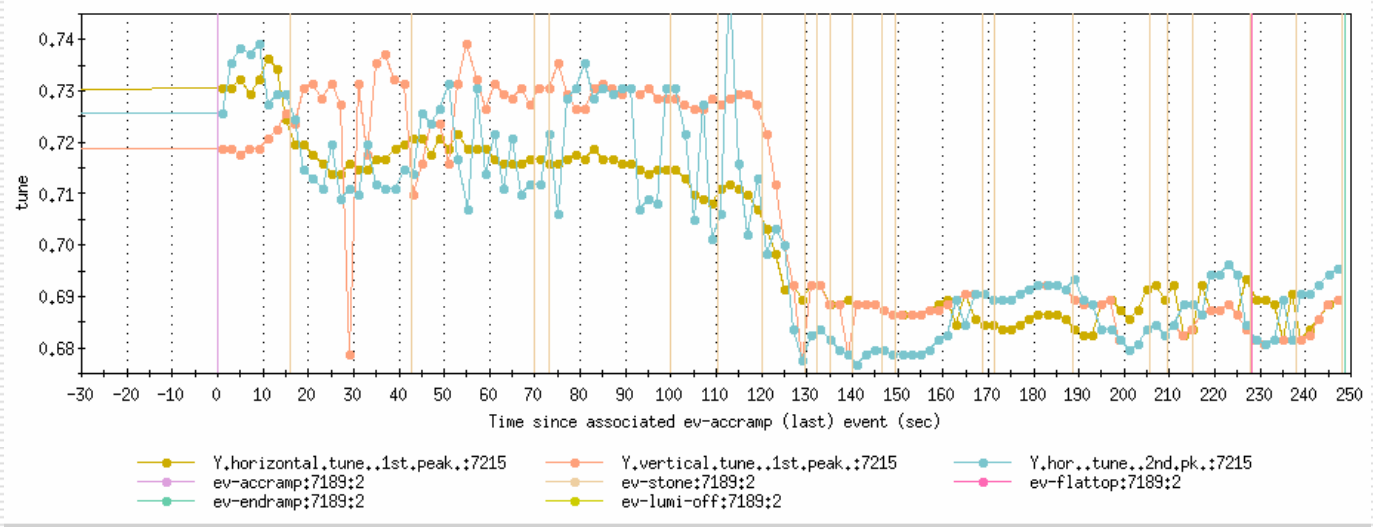
Yellow

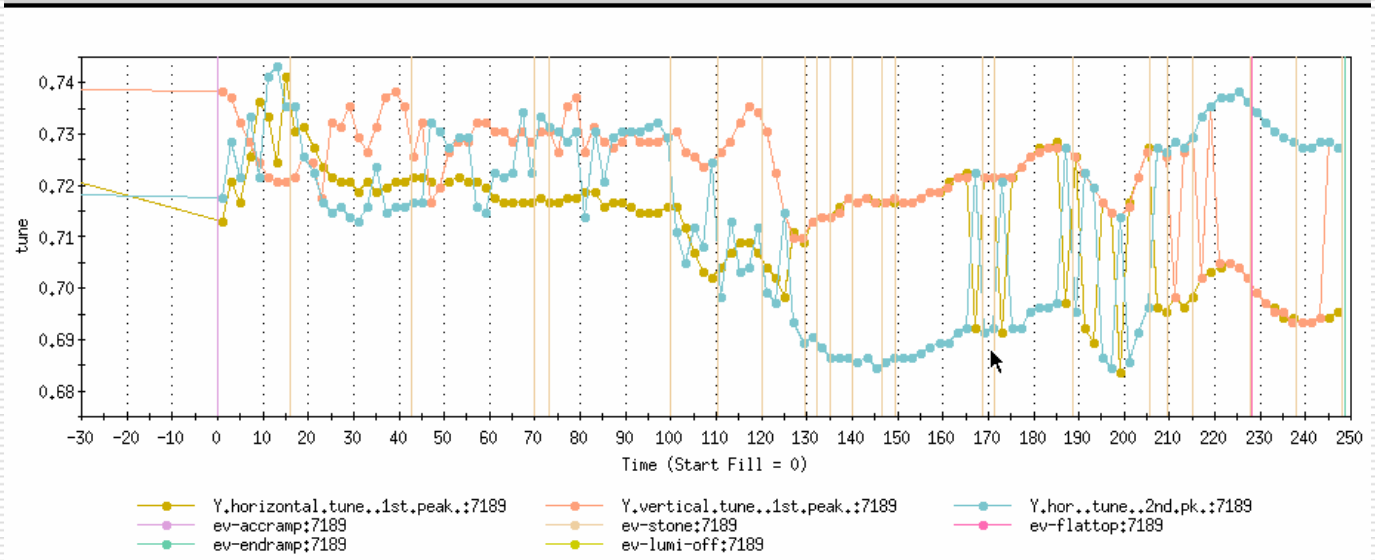


Blue



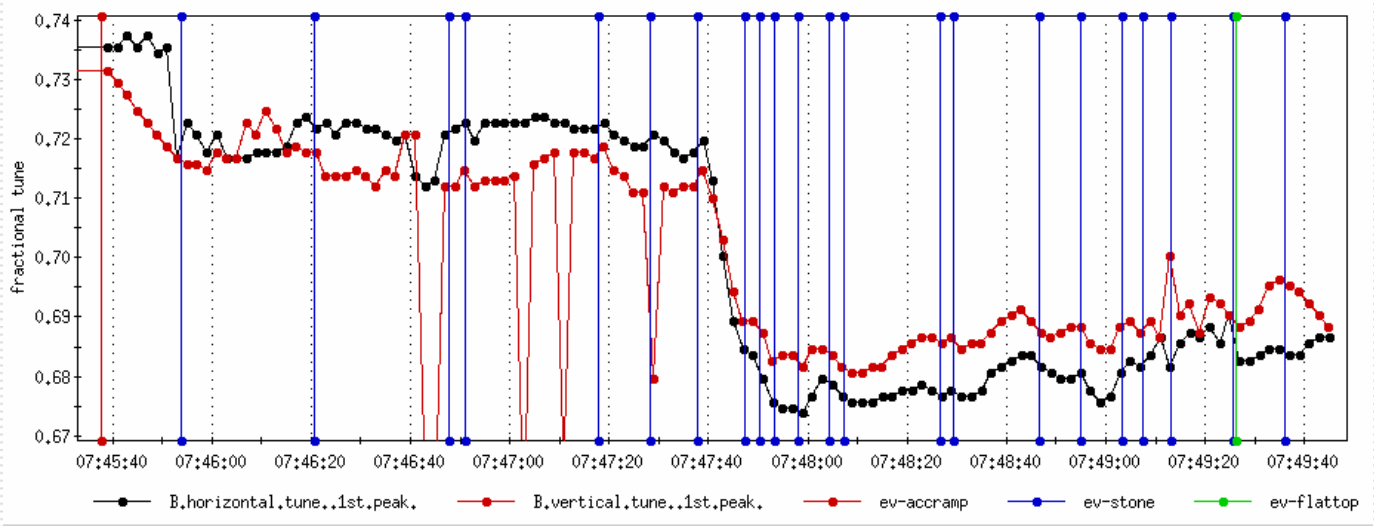
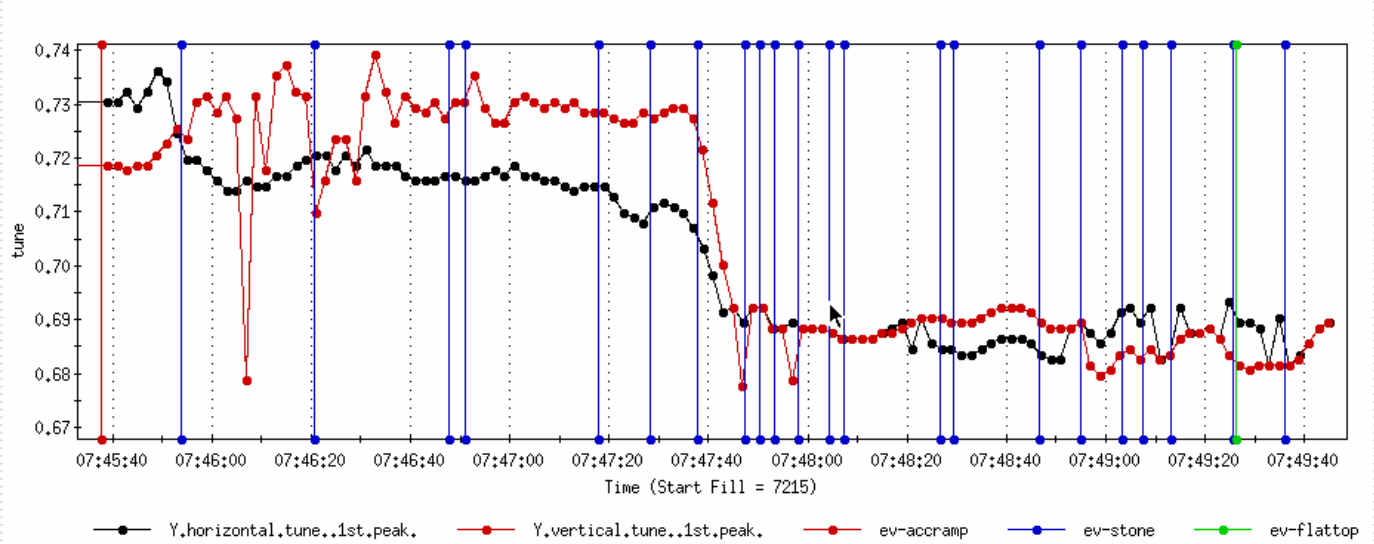
Decoupling Yellow during the ramp





Tunes along ramp

Blue



Yellow