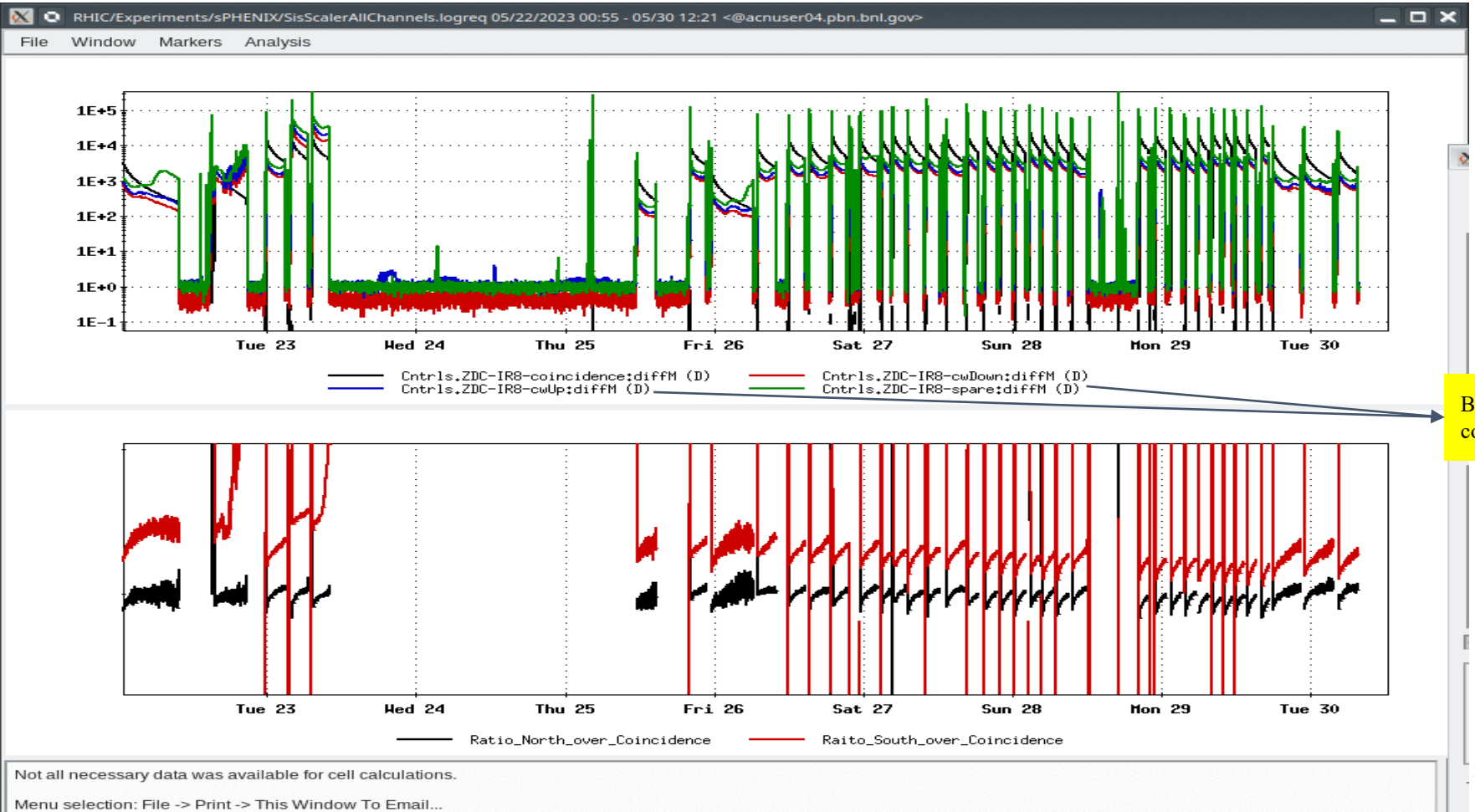
sPHENIX Commissioning continues



Background counters

sPHENIX Commissioning Progress

- Except MVTX （and sEPD - not installed), all detectors have been turned on at some point during beam collisions for timing-in and/or data-taking.
  - TPC HV went (almost) to the operating level on Monday (May 29) with beam

- We are optimizing the DAQ readout and the trigger system, and fixing problems to allow running all detectors together.

- Magnet has been cold (<5 K) since Thursday night and hipot test was completed successfully Friday morning (May 26). We're testing and ramping the Magnet to operational settings (May 30/31).
  - Wed. night, after the Magnet test/ramp finishes, we'll turn off the magnetic field to make sure our detectors function normally after two days' of magnet ramps.

12 week sPHENIX Commissioning Plan

- 2 weeks of stores with 6-28 bunches @ zero crossing angle (<2 kHz) for initial tune-up of timing and trigger.
  - The magnet doors will be closed and the magnet ramped at the earliest at one end of this period.

- 2 weeks of stores with 111 bunches @ zero crossing angle (1-5 kHz) for optimizing trigger, plus data analysis & diagnosis.
  - The trigger developed in the first two weeks will provide physics triggers for all other detectors

- 1 week of machine studies of optimizing crossing angle.
  - The major goal of this period will be to demonstrate the narrower vertex distribution and reduced rates in the TPC allowed by the crossing angle. The evidence for this will come from the vertex distribution from the trigger and hit distribution in the TPC and the silicon detectors.

- 1 week of 111 bunches @ non-zero crossing angle for calorimeter timing/tune-up.
  - As the luminosity nears the design, the experiment will continue to collect data from as many of the sub-detectors as possible, and the radiation damage to the silicon photomultipliers will be carefully monitored.

- 4 weeks of 111 bunches @ non-zero crossing angle (1-5 kHz) for operating tracking detectors including TPC.
  - This running period is designed to collect data from all detectors which will asymptotically approach physics data at modest rate. Any detectors which are having problems taking data or keeping up with the rate will be debugged during this period.

- 2 week of 111 bunches @ non-zero crossing angle with increasing collision rates (15-20 kHz).
  - This period is a dry-run of operation for physics which will develop software and procedure for physics data taking, which immediately follows this period.