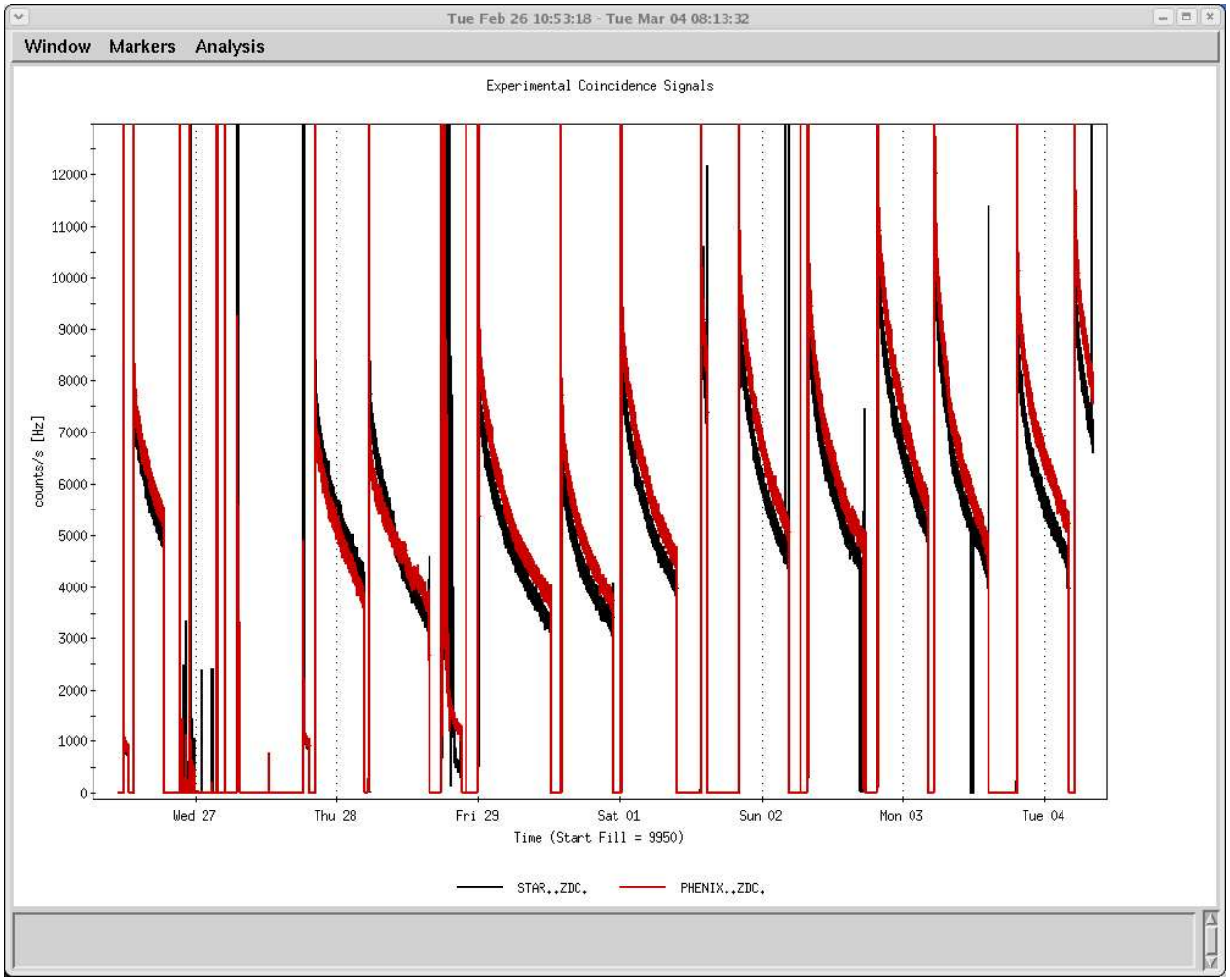
Polarized Proton Run

March 4, 2008

ZDC rates Feb. 26 – Mar. 4



- Feb. 26: APEX. pp83lowbeta ramp seems ready for production stores. 56-bunch ramp attempt erroneously used regular pp83 ramp.

- Feb. 27: Maintenance Day.

- Feb. 28: pp83lowbeta production ramp test with 56 bunches. Yellow nonlinear chromaticity is large, poor lifetime. Blue looks great. 109-bunch ramp gets lost at last stone – sextupoles for nonlinear chromaticity correction had not been propagated back gracefully. Back to pp83.

- Feb. 29 – Mar. 4: Increased bunch intensities store-by-store. Best store so far (9981) had 12.5 kHz out of approx. 1.6e11 per bunch.
  With new effective cross sections, this corresponds to a luminosity of $35 \cdot 10^{30}\,\mathrm{cm}^{-2}\mathrm{sec}^{-1}$
  Yellow polarization is low, around 40 percent.

- Mar. 1: Quench protection problems.

- Mar. 3: Set Yellow snakes to same currents as Blue (= nominal currents).
  First fill after the change (9980) still has low polarization.

- Mar. 4: Fill 9981 has good polarization (> 50 percent), with YA2 tripped before start of ramp.
  May indicate a chromaticity problem on the ramp.