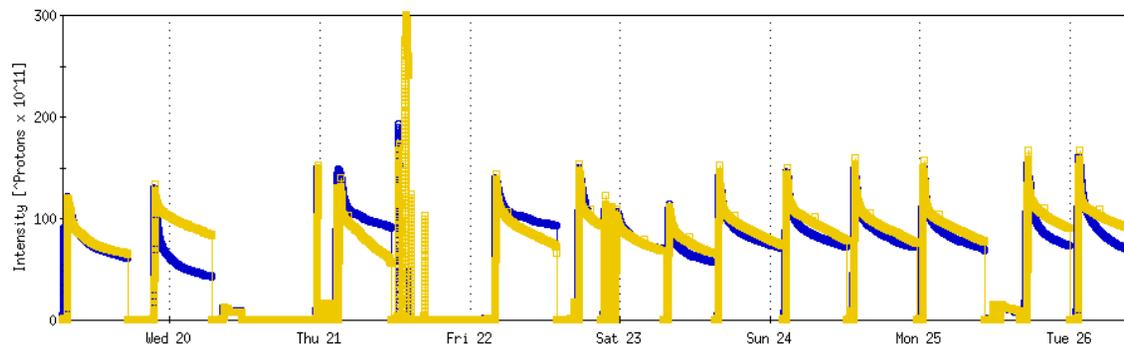
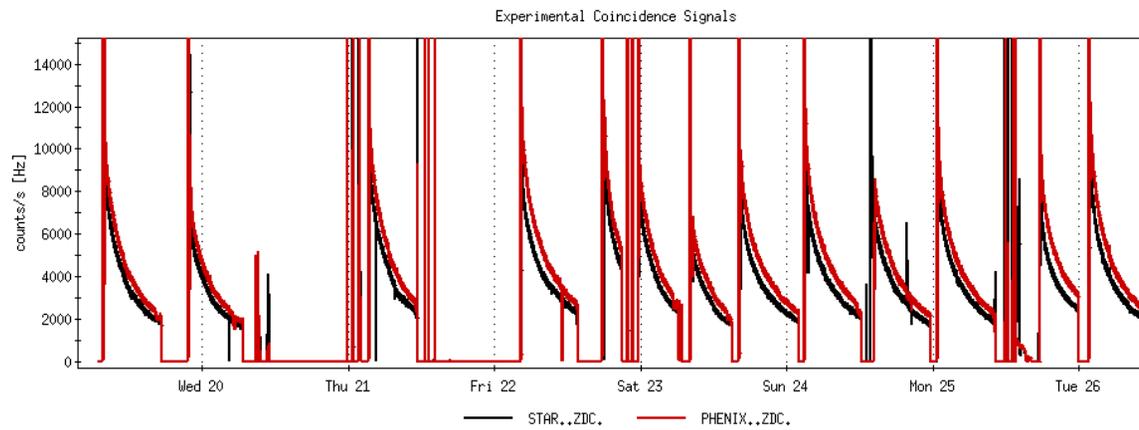


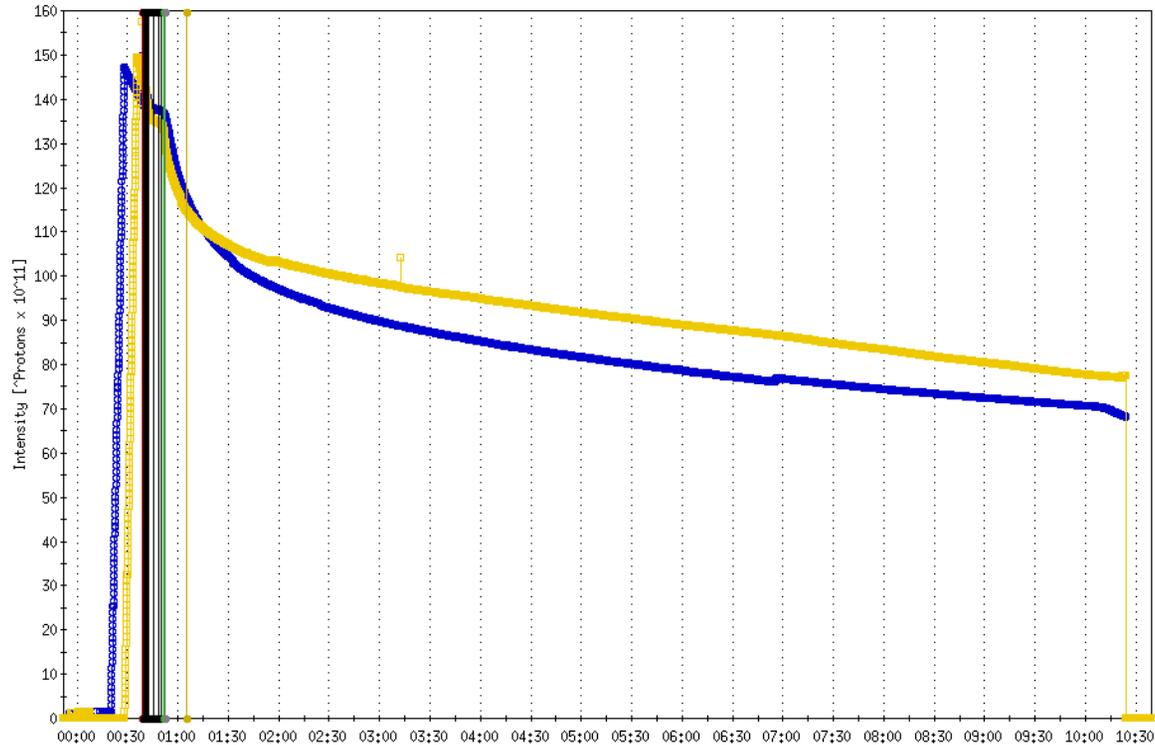
RHIC Status

May 26, 2009



- Reasonably good uptime
- APEX on Wednesday, 7 AM – 7 PM
- Various problems to get back to physics; first store at 03:40
- Vacuum scrubbing on Thursday, hampered by smoke detector alarms at Yellow abort kicker. Most likely radiation induced.
- Booster transformer failure on Thursday, 12 h downtime (only!!!)

Store 10786



Very poor beam lifetime during first hour at store (also at injection).

Only about 5 h luminosity lifetime, vs. 10 h in Run-6/8

What have we learned so far?

- Fewer bunches (84x84) have better ramp efficiency in Yellow, but luminosity lifetime is unaffected. Back to 109x109.
- Turning off RF voltage ramp at store helps long-lived luminosity component, but bunches get very long (hour-glass, PHENIX vertex cut). Introduced slow, gentle ramp to 150 kV in 9 h (instead of 200 kV in 3 h).
- Low intensities ($1e11$) do not help luminosity lifetime.

Plan for the week

- Physics running
- 12 h APEX Tuesday night; first two hours to address effect of relaxed nonlinear chromaticity correction on beam and luminosity lifetime.
- Maintenance Day Wednesday
- Machine Development Thursday to address beam and luminosity lifetime issues. Have a $\beta^* = 80$ cm ramp ready as well.
- As a last resort, may have to go back to Run-8 ramp, with $\beta^* = 1.0$ m.