

RHIC status

June 14, 2016



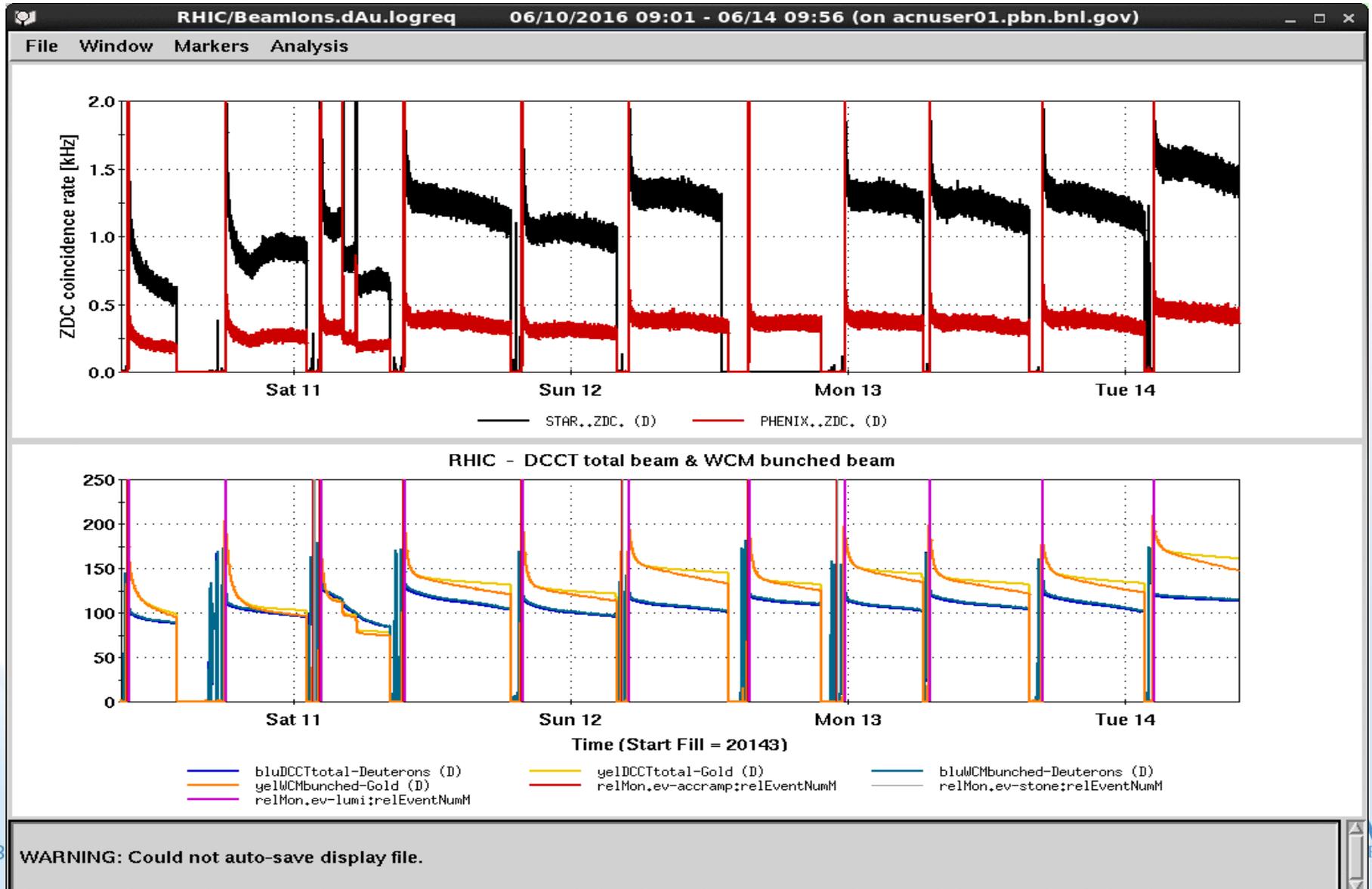
U.S. DEPARTMENT OF
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RHIC status

- RHIC has been delivering stores regularly since last Friday for 39 GeV dAu program. This will continue until the switch-over date (TBD).
- APEX will take place this Wednesday.

39 GeV stores



Notes on 39 GeV

- This is the lowest energy that SC cooling was engaged in RHIC. There are two challenges: beam energy too close to transition energy, beam sizes are large at kickers. A new lattice was designed by Guillaume to fulfil the requirements of large eta and small beam sizes at kickers.
- Even though the longitudinal kicker can't be closed, with YV cooling only, the horizontal emittance gets cooled due to coupling and the longitudinal IBS growth rate is reduced. Possible longitudinal cooling with significant transverse cooling!!
- Yellow beam re-bucketing works fine, Blue beam re-bucketing beam loss too high. Travis suggested no re-bucketing for blue since bunch is relatively short when close to transition. PHENIX narrow vertex ratio is almost identical w or w/o blue beam re-bucketing.
- Operations are very responsive to instability issue and store tuning.