RHIC status

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Time meeting

June 2, 2015

BROOKHAVEN NATIONAL LABORATORY
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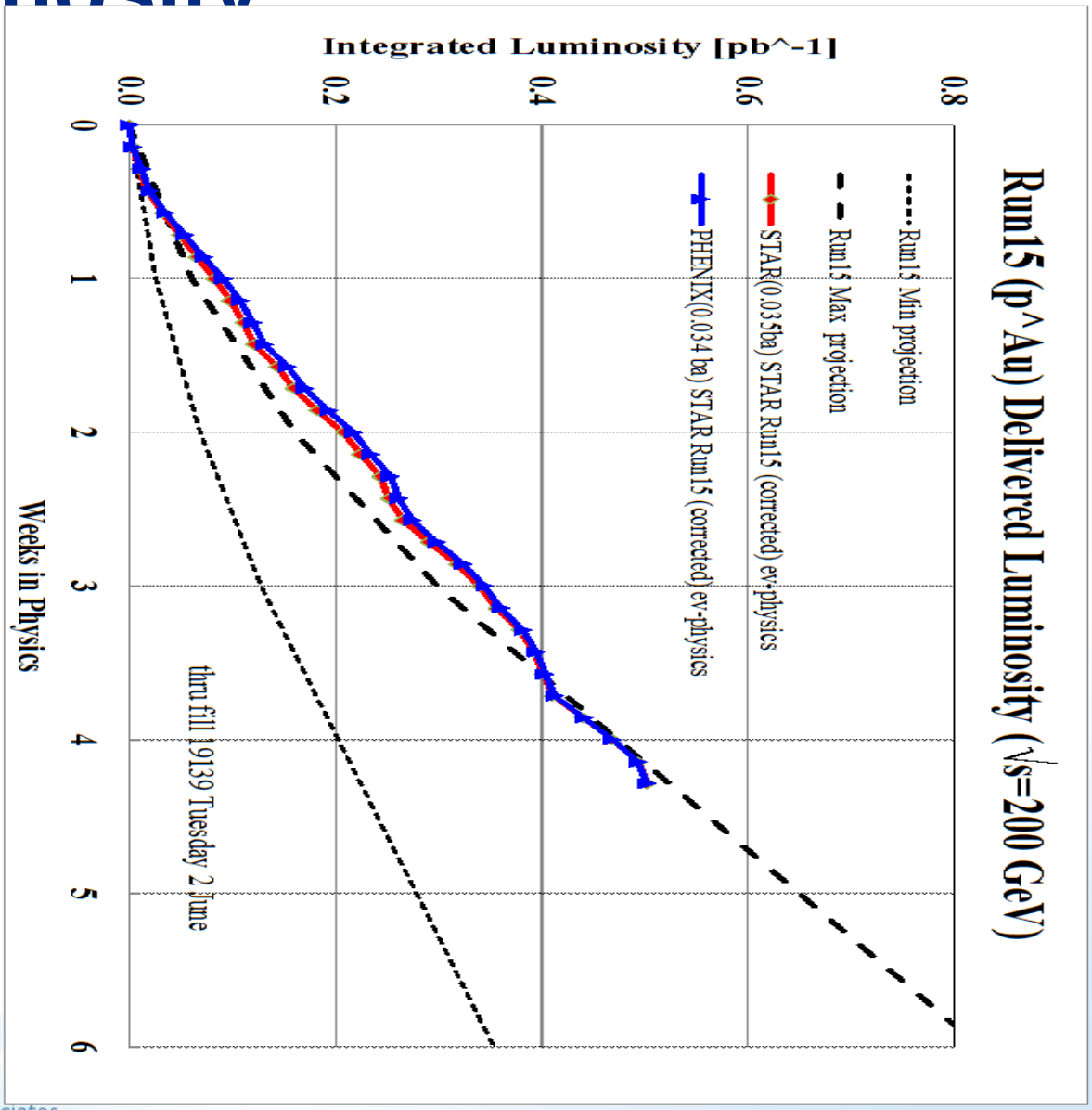
U.S. DEPARTMENT OF ENERGY | Office of Science

RHIC status

- Proton intensity is ~2.3E11 ppb. Beam scraping needs to be relaxed for further increase of proton intensity, which means larger emittance and lower polarization. Au transmission efficiency was improved to 94%, intensity ~1.8E9.
- Proton injection tunes were optimized, the emittance blow-up is much reduced, therefore luminosity is improved.
- Maintenance done on Wed. Transverse BBB damper ready for operation.

Luminosity


Run15 (p^Au) Delivered Luminosity (√s=200 GeV)
Run15 Min projection
Run15 Max projection
STAR(0.035ba) STAR Run15 (corrected) ev-physics
PHENIX(0.034 ba) STAR Run15 (corrected) ev-physics
Integrated Luminosity [pb^-1]
0.0
0.2
0.4
0.6
0.8
0
1
2
3
4
5
6
Weeks in Physics
thru fill 19139 Tuesday 2 June

Abort kicker pre-fire and protection

- The cause of pre-fire is not well understood.
- Pre-fire is unpreventable, there are about the same amount of pre-fires in other labs with different kicker design.
- Protection bumps in the arc for both beams were designed in 2014 to protect detectors.
- RHIC masks were installed before Run-15 to protect detectors.
- Protection bump in Yellow was reinstalled on May 12.
- Protection bump max amplitude was increased from 20 to 22 mm on June 1st.

Plan of the week

- APEX on Wednesday, June 3rd, 8 AM to 2 PM.