

RHIC Machine/Detector Planning Meeting

23 Oct 07

Agenda

- Experiment Goals for Run 8 and Issues – summary from 9 Oct meeting: (pile)
- Other

DRAFT

Experiments luminosity goals for Run8 100 x 100 GeV/n d-Au

– PHENIX

- Delivered Luminosity = **230** nb⁻¹
- Recorded Luminosity = **58** nb⁻¹
- Assumed efficiencies: 48% vertex, 53% live → **25% overall**
- Approximate weeks: **10**

– STAR

- Delivered Luminosity = **120** nb⁻¹
- Fast Detector Sampled Luminosity = **60** nb⁻¹
- Slow Detector Sampled Luminosity = **30** nb⁻¹
- Fast detector overall sampling efficiency = **50% (?)**
- Approximate weeks: **10**
- **Further metrics to be provided once bandwidth allocation is made**

– Monopole Proposal – Detector Tests

- Once ~ 20:1 signal to background is achieved in building 902, move to 10:00 IR, reestablish good signal to background and then request collisions

STAR and PHENIX Plan

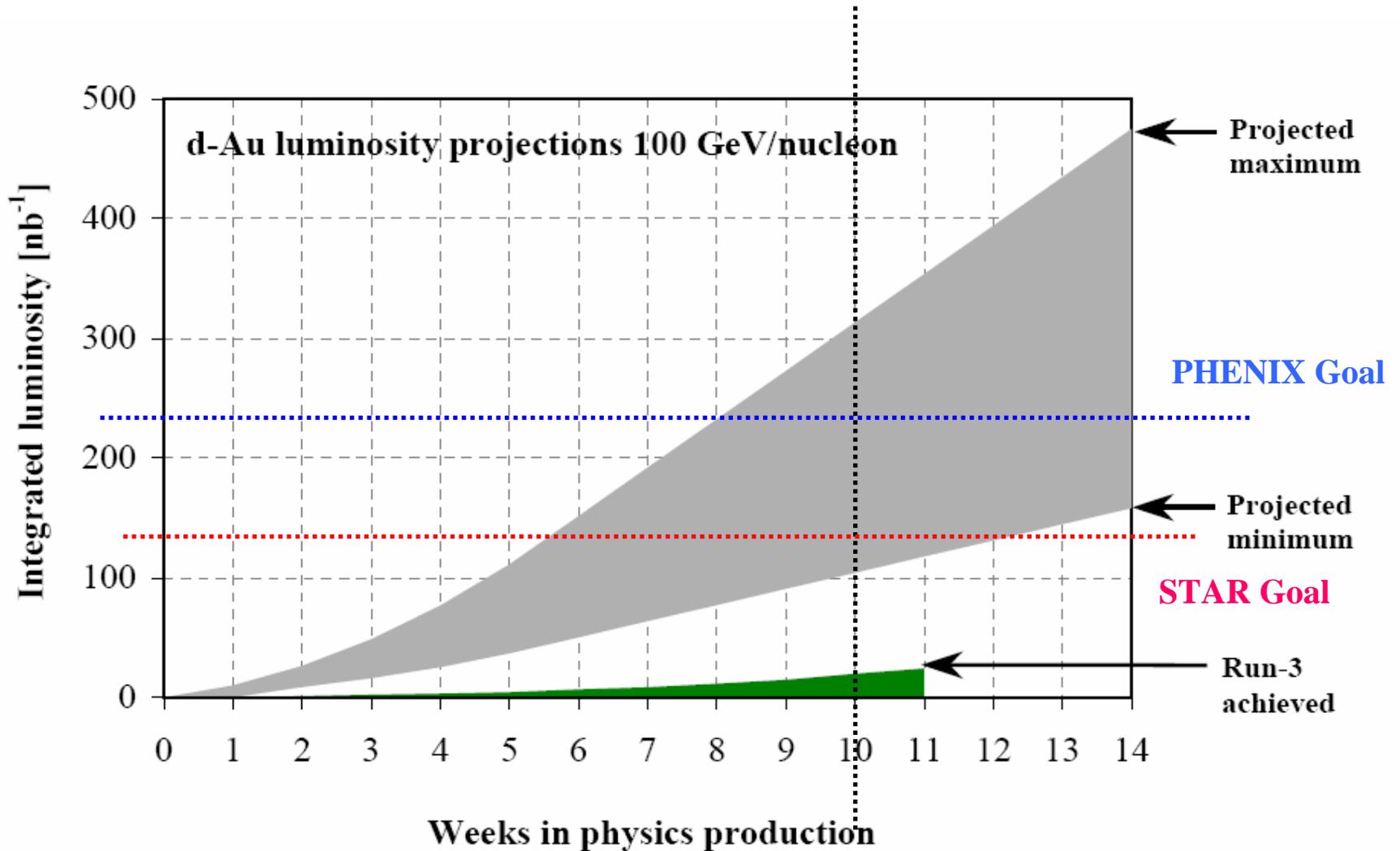


Figure 2: Projected minimum and maximum integrated luminosities for deuteron-gold collisions at 100 GeV/nucleon beam energy, assuming linear weekly luminosity ramp-up in 6 weeks.

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Experiments luminosity goals for Run8, 100 x 100 GeV pp

– PHENIX

- Delivered Luminosity = **140** nb⁻¹
- Recorded Luminosity = **35** nb⁻¹
 - Longitudinal Polarization goal: **26** nb⁻¹
 - Transverse polarization luminosity goal: **9** nb⁻¹
- Assumed efficiencies: **48%** vertex, **64%** up, **82%** live → **25% overall**
- Assumed Polarization: **65%**
- Approximate physics weeks: **12**

– STAR

- Delivered Luminosity = **90** nb⁻¹
- Slow Detector Sampled Luminosity (Transverse and Longitudinal) = **30** nb⁻¹
 - Longitudinal Polarization Goal: **?**
 - Transverse polarization luminosity goal: **?**
- Assumed efficiencies: **50%** uptime, **65%** live → **33% overall**
- Assumed Polarization: **65%**
- Approximate physics weeks: **12**

- pp2pp: 3 days of dedicated running
- Goals: 20M elastics, 300K double pomeron exchange events

An issue: In 2006 it took 6 weeks of physics running to get from ~45% polarization to ~60% polarization, above goals assume 65% from physics day 1

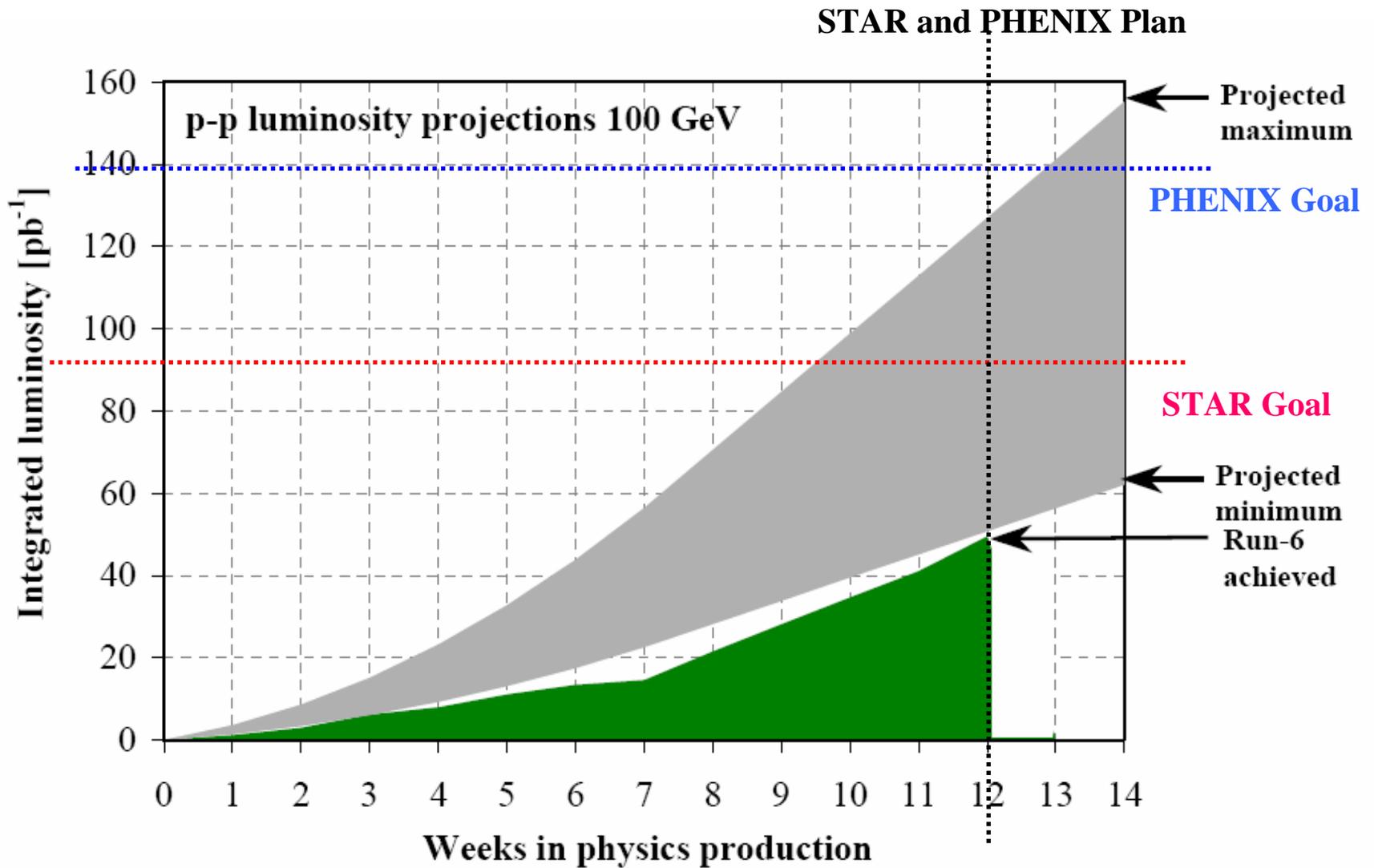


Figure 3: Projected minimum and maximum integrated luminosities for polarized proton collisions at 100 GeV beam energy, assuming linear weekly luminosity ramp-up in 8 weeks. An average store polarization of 65% is expected.

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Next Meeting

Tuesday, October 30

Agenda items:

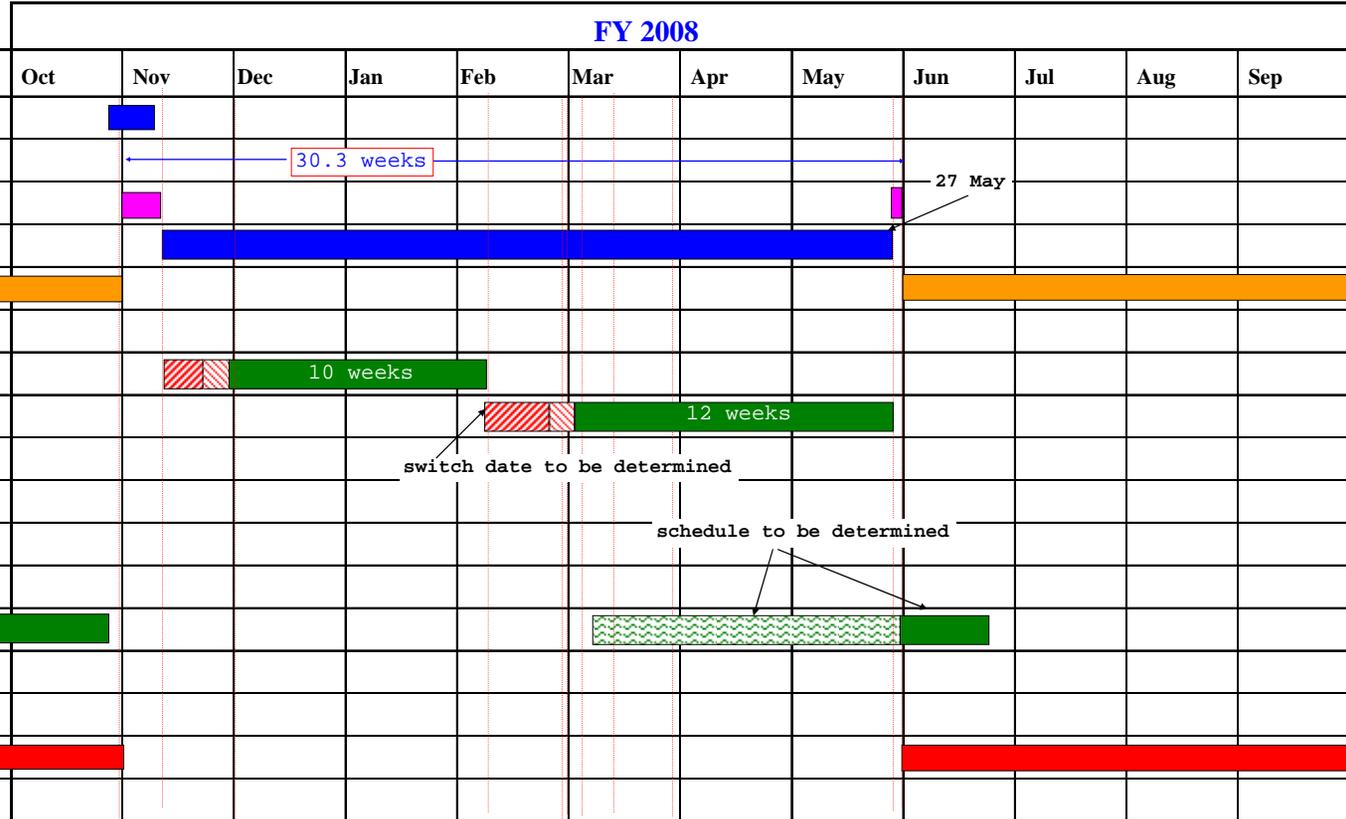
- APEX update: Pilat
- Other

C-A Operations-FY08

1 Oct 07

Planned, subject to change

-  concurrent with RHIC
-  setup with beams in both rings
-  ramp up luminosity



Fischer et.al. Possible 30 week run schedule

Cool-down from 80 K to 4 K	1 ½ week
Set-up mode 1 (d-Au)	1 ½ weeks
Ramp-up mode 1	1 week
Data taking mode 1 with further ramp-up	11 weeks
Set-up mode 2 (p↑-p↑)	2 ½ weeks
Ramp-up mode 2	1 week
Data taking mode 2 with further ramp-up	11 weeks
Warm-up	½ week