

# RUN 11 RHIC MACHINE/EXPERIMENTS MEETING

23 Nov 2010

Agenda:

- Schedule Update – are we ready for a 27 Dec cool-down? - (all)
- APEX – proposal for alternate schedule – M. Bai

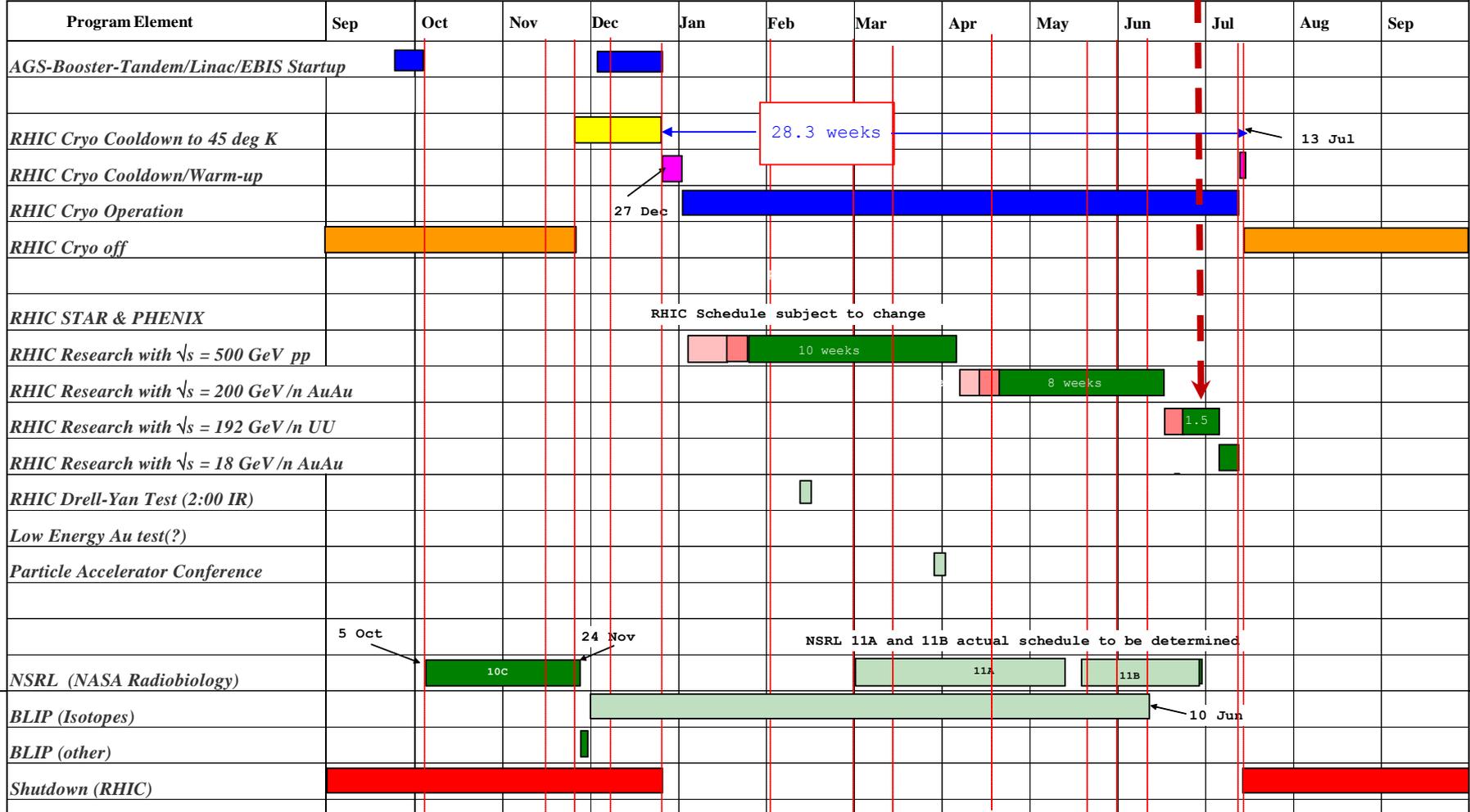
# C-A Operations-FY11

26 weeks

planned (budget permitting)

- concurrent with RHIC
- setup with beams
- ramp up luminosity

FY 2011



28.3 weeks

27 Dec

RHIC Schedule subject to change

10 weeks

8 weeks

1.5

NSRL 11A and 11B actual schedule to be determined

10c

11A

11B

10 Jun

5 Oct

24 Nov

13 Jul

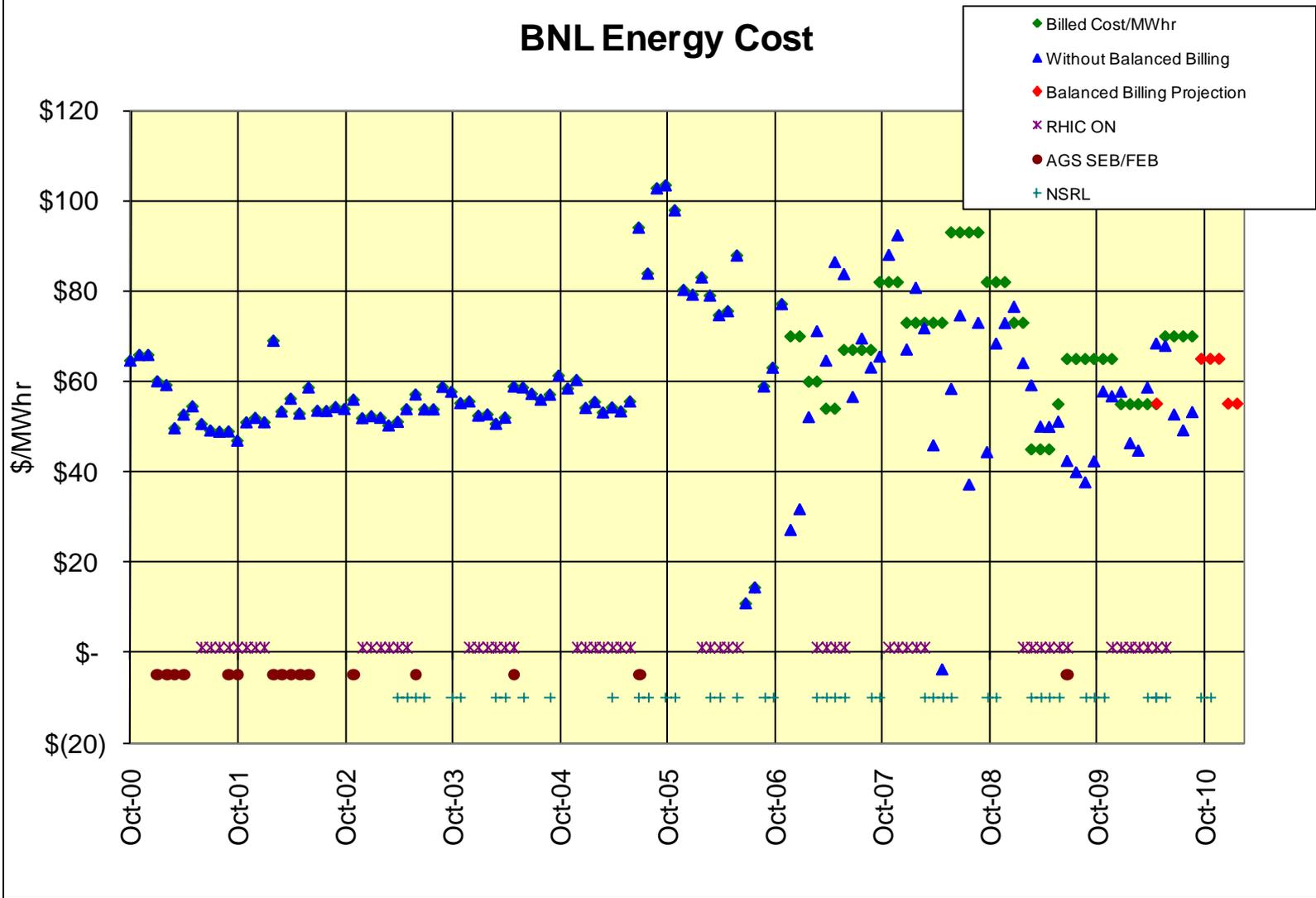
## Run 11 Plan based on PAC recommendation/ALD Guidance and 28.3 weeks cryo operation

- 27 Dec, Begin cool-down to 4.5K
- 2 Jan, Cool-down to 4.5K complete in both rings
- 2 Jan, 2 ½ weeks beam setup for  $\sqrt{s} = 500$  GeV pp in RHIC begins.
- 20 Jan (Thursday), 1 week Ramp-up with 8 hr/night beam to experiments
- **27 Jan, begin 10 week physics run ( $\sqrt{s} = 500$  GeV pp)**
- **28 March – 1 April, PAC 2011**
- **7 Apr, end 10 week physics run at  $\sqrt{s} = 500$  GeV pp run**
- 7 Apr, begin 1 week setup for  $\sqrt{s} = 200$  AuAu
- 14 Apr, begin 1 week Ramp-up with 8 hr/night beam to experiments
- **21 Apr, begin 8 week physics run at ( $\sqrt{s} = 200$  AuAu)**
- **16 Jun, end 8 week  $\sqrt{s} = 200$  AuAu run**
- 16 Jun, begin setup for  $\sqrt{s} = 192$  GeV UU
- **23 Jun, begin 1½ week physics run ( $\sqrt{s} = 192$  UU)**
- **27 June – completed 26 weeks of cryo operation, may be out of \$\$'s**
- **3 Jul, end 1½ week physics run at  $\sqrt{s} = 192$  GeV**
- 3 Jul, begin setup for  $\sqrt{s} = 18$  GeV AuAu
- **4 Jul, begin 1 week physics run ( $\sqrt{s} = 18$  AuAu)**
- **11 Jul, end 1 week physics run at  $\sqrt{s} = 18$  GeV**
- 13 Jul, warm-up complete (28.3 weeks)

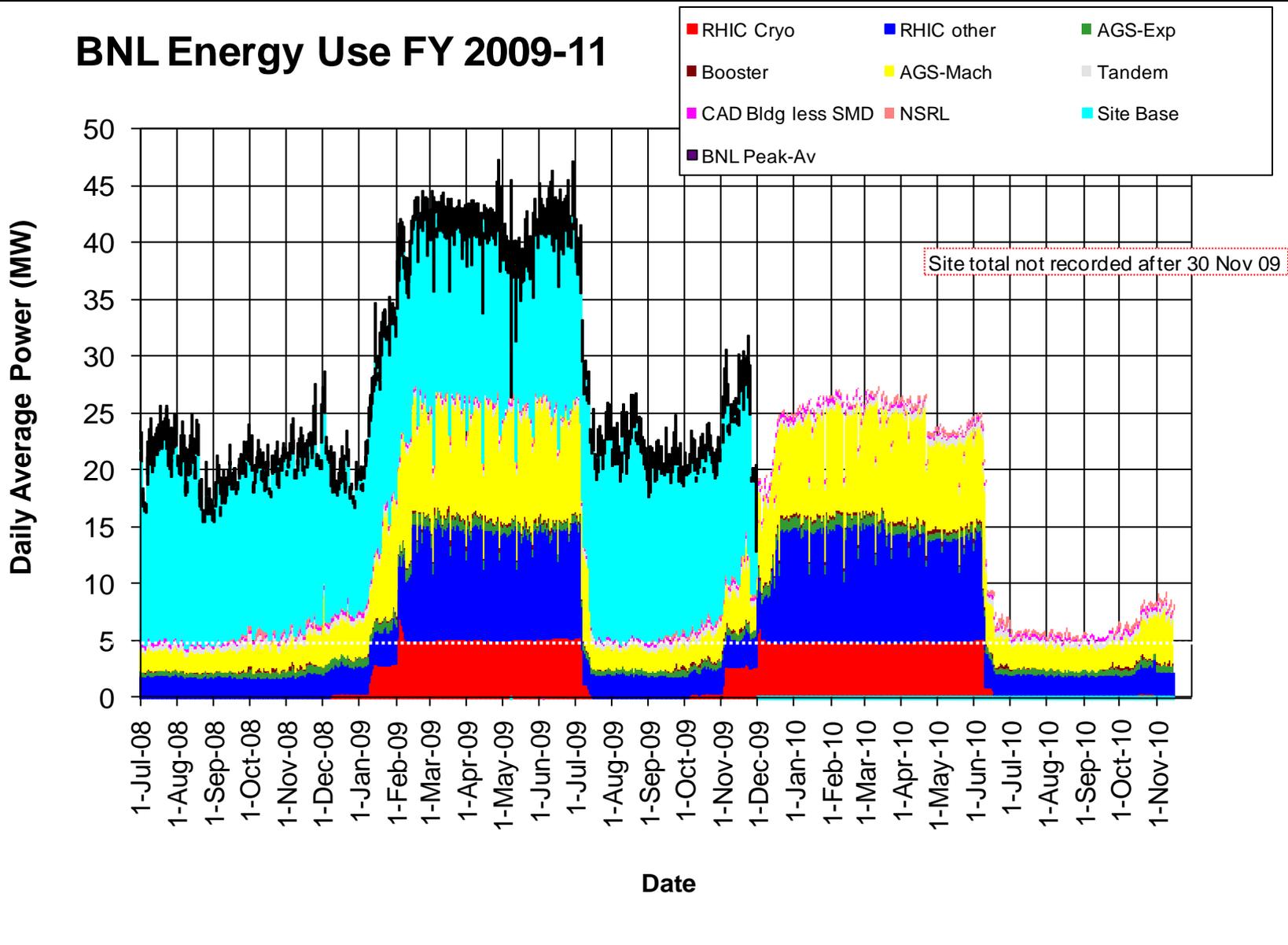
Possible additions:

- Low energy test run

# BNL Energy Cost

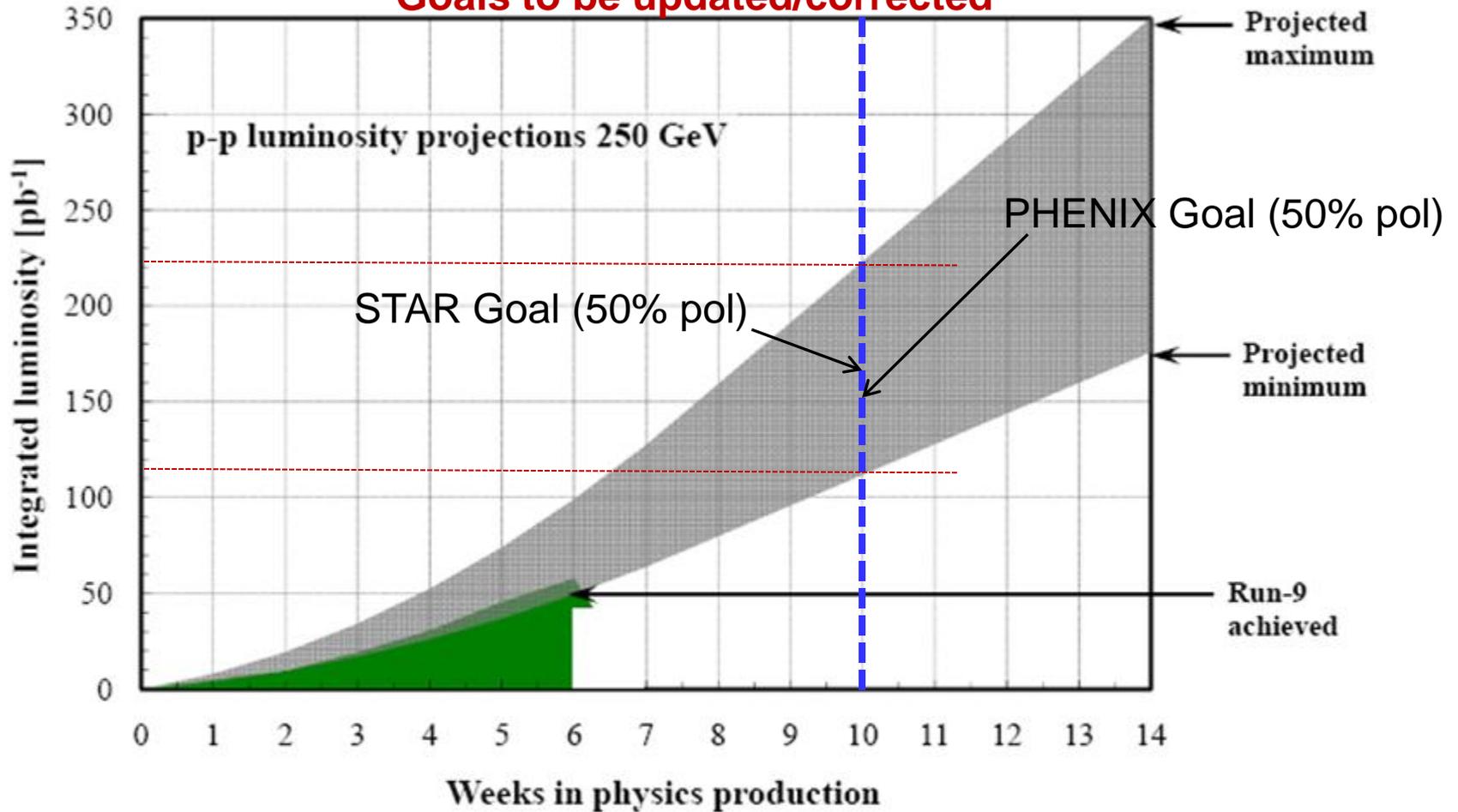


# BNL Energy Use FY 2009-11



# Run-11 p<sup>↑</sup>-p<sup>↑</sup> luminosity projections

Goals to be updated/corrected

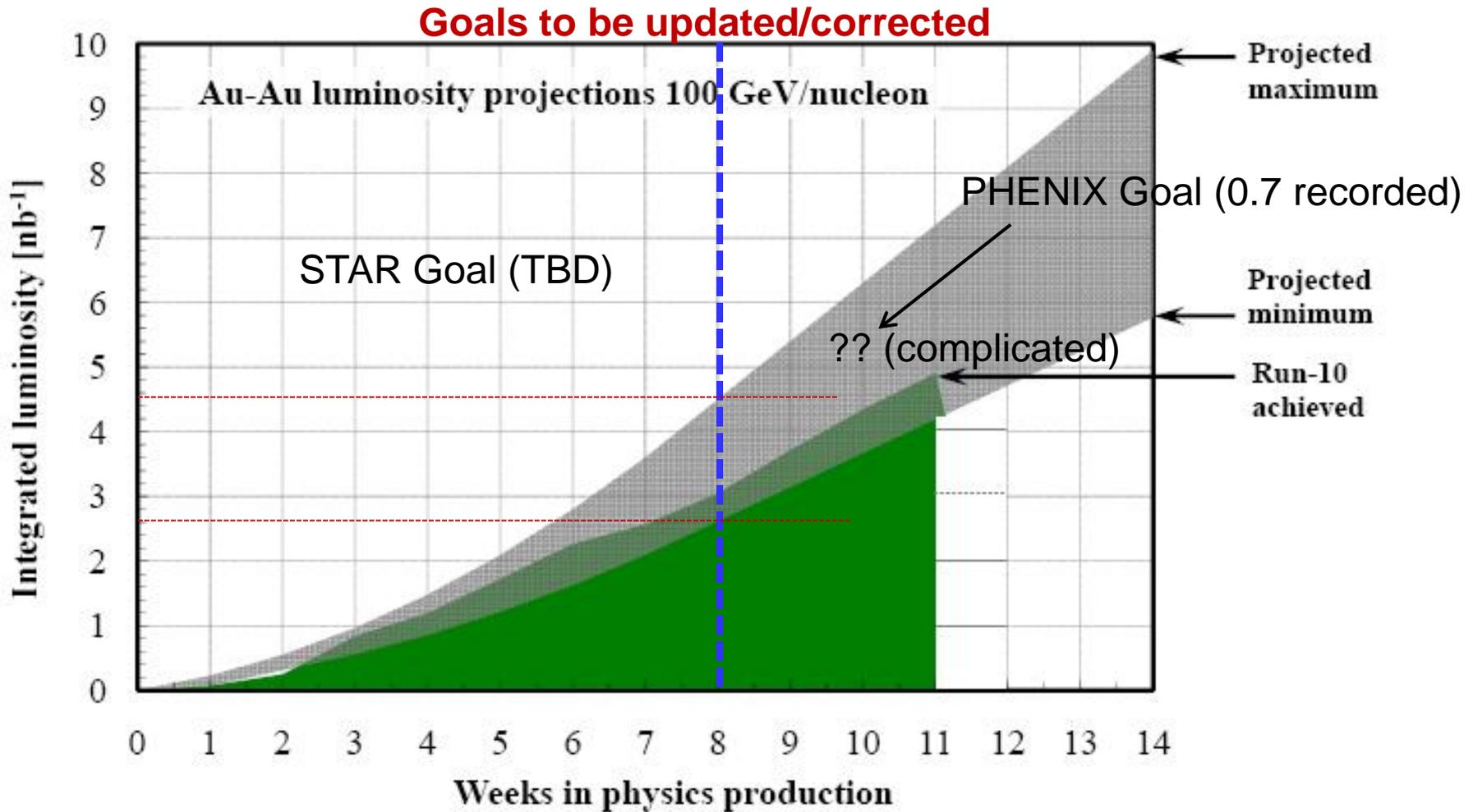


Assume 8 weeks to ramp-up for max.

Expect store  $P_{\text{avg}} = 35\text{-}50\%$ ,  $L_{\text{avg}}$  up to  $100 \times 10^{30} \text{cm}^{-2} \text{s}^{-1}$  (+80%).

[from Run-9 to max projection:  $\beta^* = 0.7 \rightarrow 0.6 \text{ m}$ ,  $N_b = 1.1 \rightarrow 1.4 \times 10^{11}$ ]

# Run-11 Au-Au luminosity projections 100 GeV/nucleon



Assume 6 weeks to ramp-up for min, and 8 weeks for max (stoch. cooling re-commissioning).

**Expect  $L_{\text{avg}}$  up to  $25 \times 10^{26} \text{cm}^{-2} \text{s}^{-1}$  (+25%).**

**[from Run-10 to max:  $\beta^* = 0.75 \rightarrow 0.65$  m,  $N_b = 1.1 \rightarrow 1.1 \times 10^9$ , more cooling]**