

Possible Run 10 plan based on 25 Nov Revised Plan

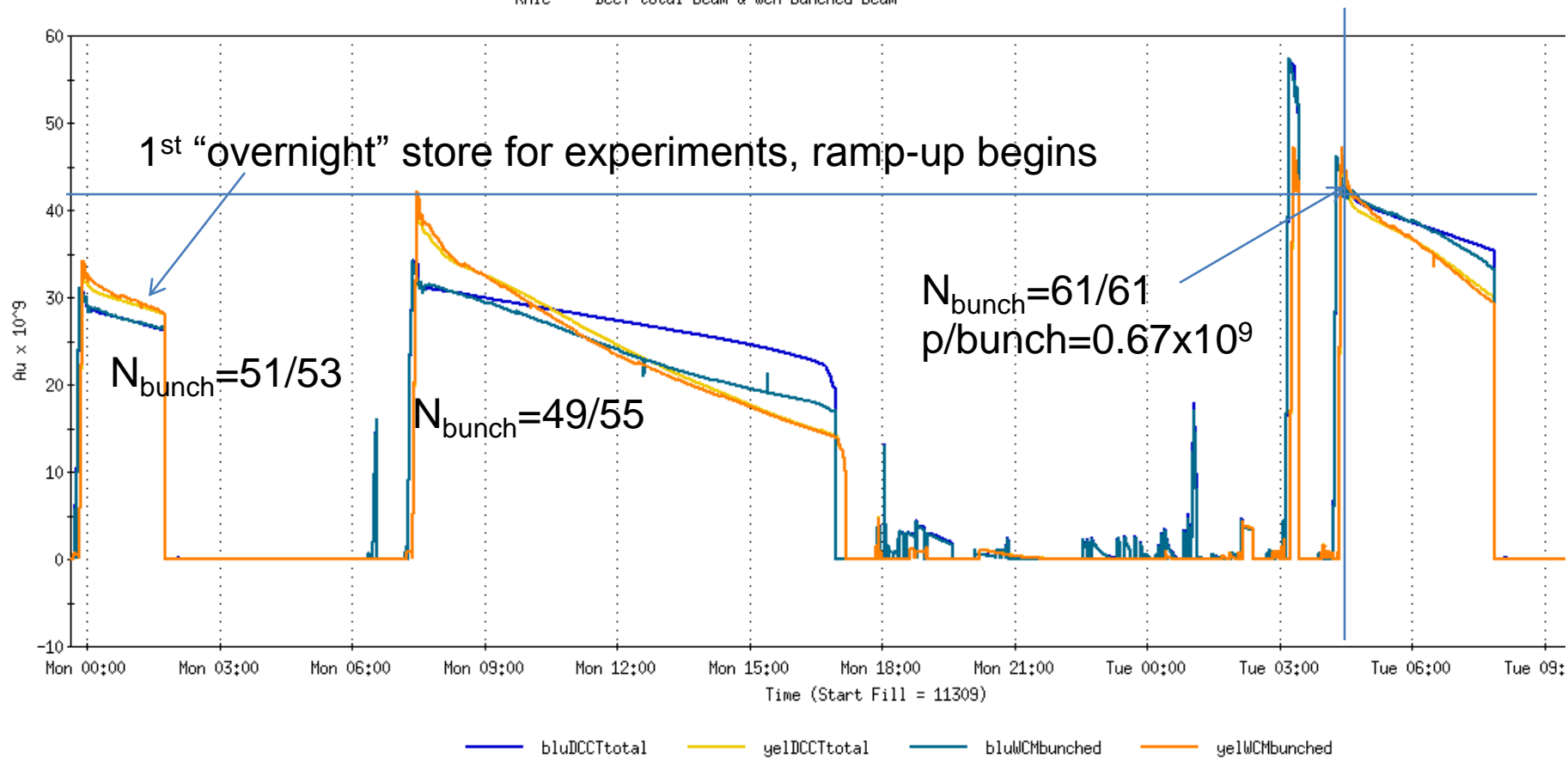
- Run10, 25 cryo-weeks (my guesses after Dec 27)
 - Dec. 1, Begin cooldown to 4.5K
 - Dec. 4, Cooldown to 4.5K complete in both rings!
 - Dec. 5, beam setup in RHIC begins.
 - Dec 16, 20 hr unplanned Maintenance day
 - Dec 20 (AM)-21(PM), blizzard 09 shut us down
 - Dec. 27, RHIC Setup complete, begin Ramp Up for Physics (was 14 Dec, late)
 - Jan. 5 (**maybe sooner!!!!**) , Projected Physics start $\sqrt{s}=200$ GeV/n Au-Au (was 22 Dec, late)
 - Mar. 16, End 10 week $\sqrt{s} = 200$ GeV/n Run, begin $\sqrt{s} = 62.4$ GeV/n setup
 - Mar. 18, Begin 4 week $\sqrt{s} = 62.4$ GeV/n run
 - Apr. 15, End 4 week $\sqrt{s} = 62.4$ GeV/n Run, begin $\sqrt{s} = 39$ GeV/n setup
 - Apr. 17, Begin 1.5 week $\sqrt{s} = 39$ GeV/n run
 - Apr. 28, End 1.5 week $\sqrt{s} = 39$ GeV/n Run, begin $\sqrt{s} = 7.7$ GeV/n setup
 - Apr. 30, Begin 4 week $\sqrt{s} = 7.7$ GeV/n run
 - May 25, End 4 week $\sqrt{s} = 7.7$ GeV/n Run, begin $\sqrt{s} = 5.0$ GeV/n setup – 25 CRYO WEEK
This is it unless we have \$'s to run longer – revisit in March
 - May 28, End 4 week $\sqrt{s} = 7.7$ GeV/n Run, begin $\sqrt{s} = 5.0$ GeV/n setup
 - May 30, begin 0.5 week beam studies at $\sqrt{s} = 5$ GeV/n and $v \sim 0.67$
 - Jun 3, end 0.5 week studies
 - Jun 5, begin $\sqrt{s} = 11.5$ GeV/n for STAR
 - Jun 19, end 2 week $\sqrt{s} = 11.5$ GeV/n run
 - Jun 20 , Begin Cryo Warm-up
 - Jun 21, Warm-up complete, 25 week run ends – **28.9 CRYO WEEKS**

12/28-12/29 stores

Sun Dec 27 23:37:04 - Tue Dec 29 12:09:44

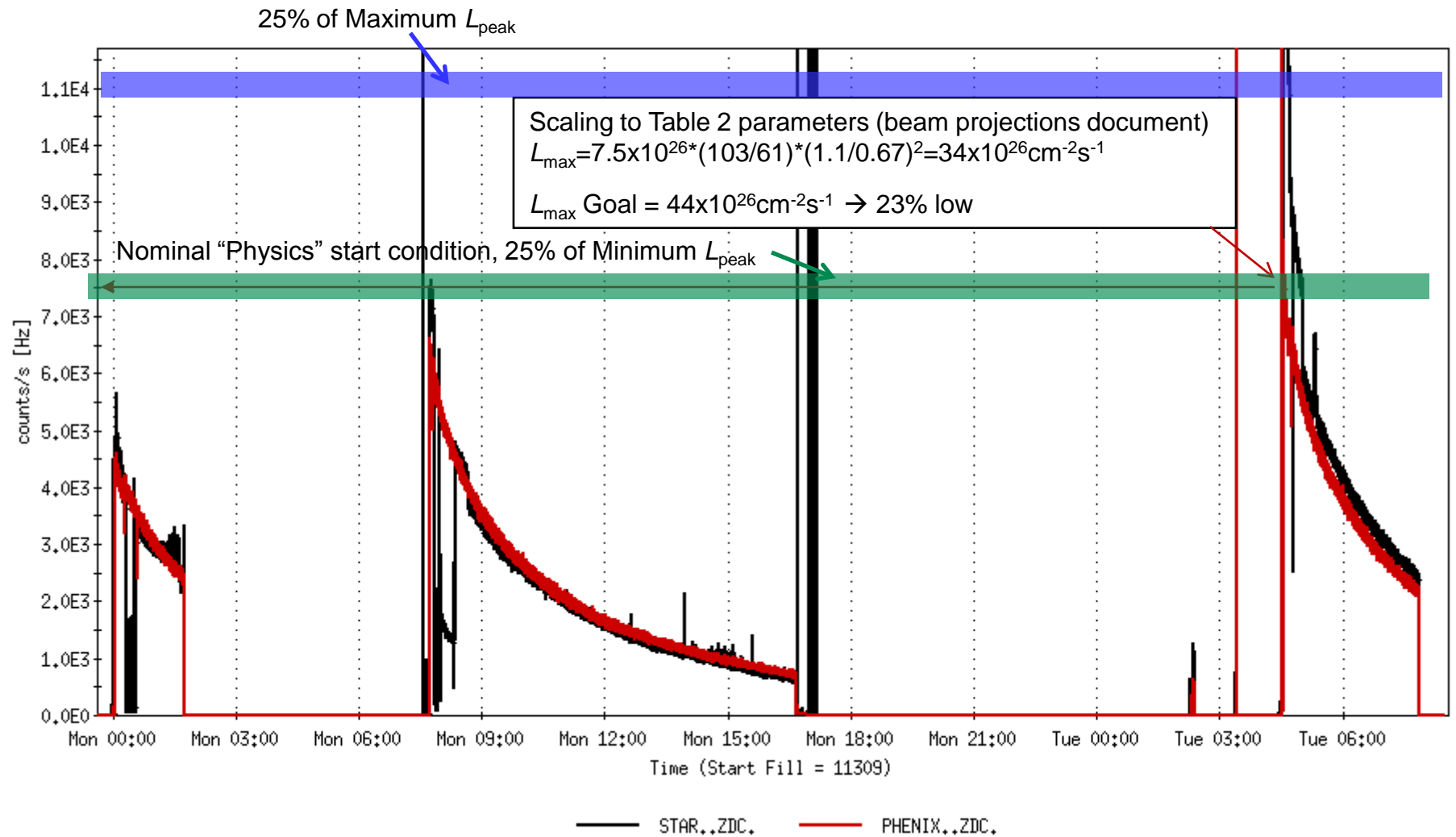
Window Markers Analysis

RHIC - DCCT total beam & WCM bunched beam



12/28-12/29 stores

Window Markers Analysis



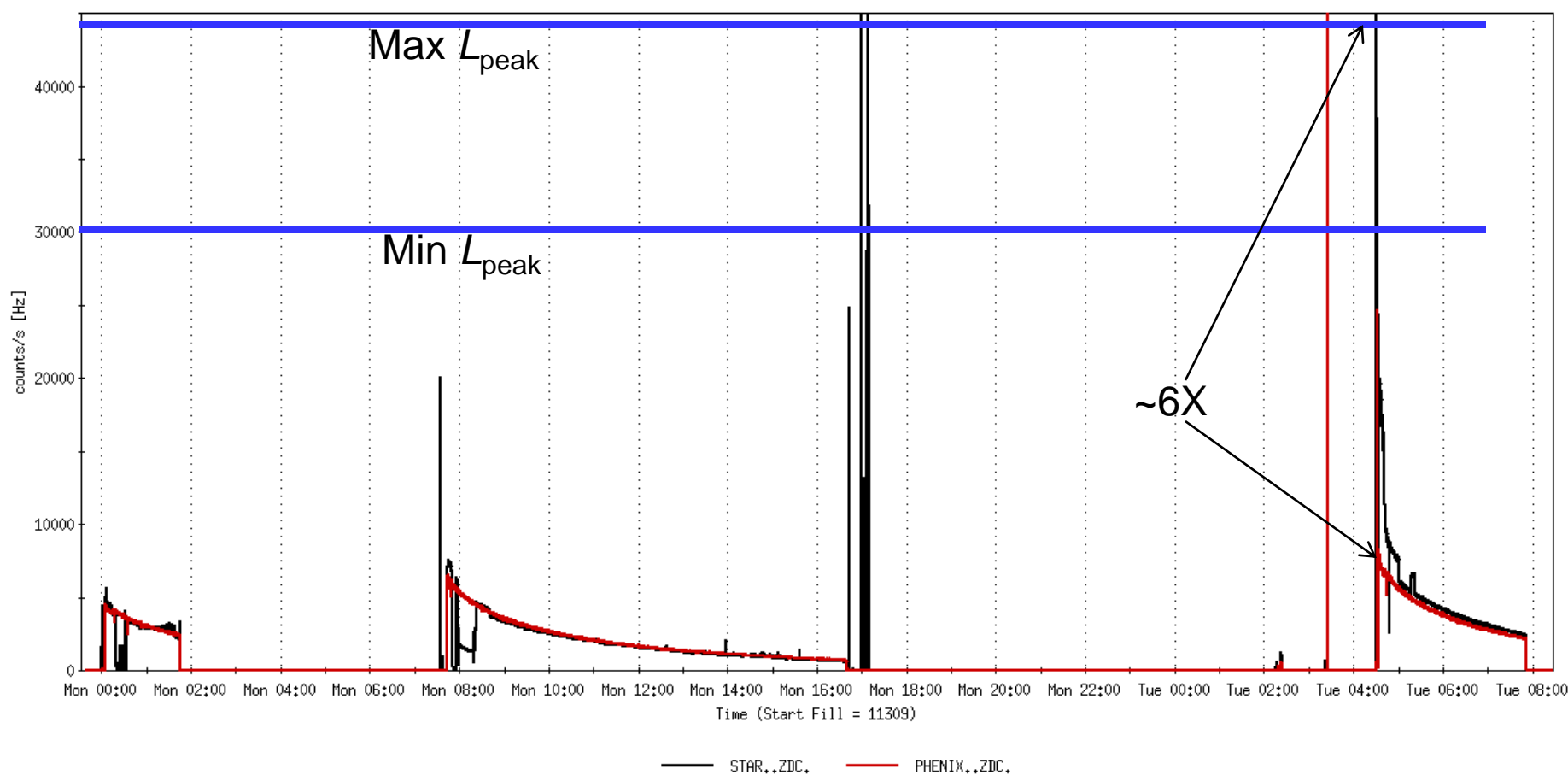
Assumes $L [10^{26} \text{ cm}^{-2} \text{ s}^{-1}] = \text{ZDC}[\text{kHz}]$

12/28-12/29 stores

NX - pile@acnuser01.pbn.bnl.gov:1068 - rhic

Window Markers Analysis

Experimental Coincidence Signals



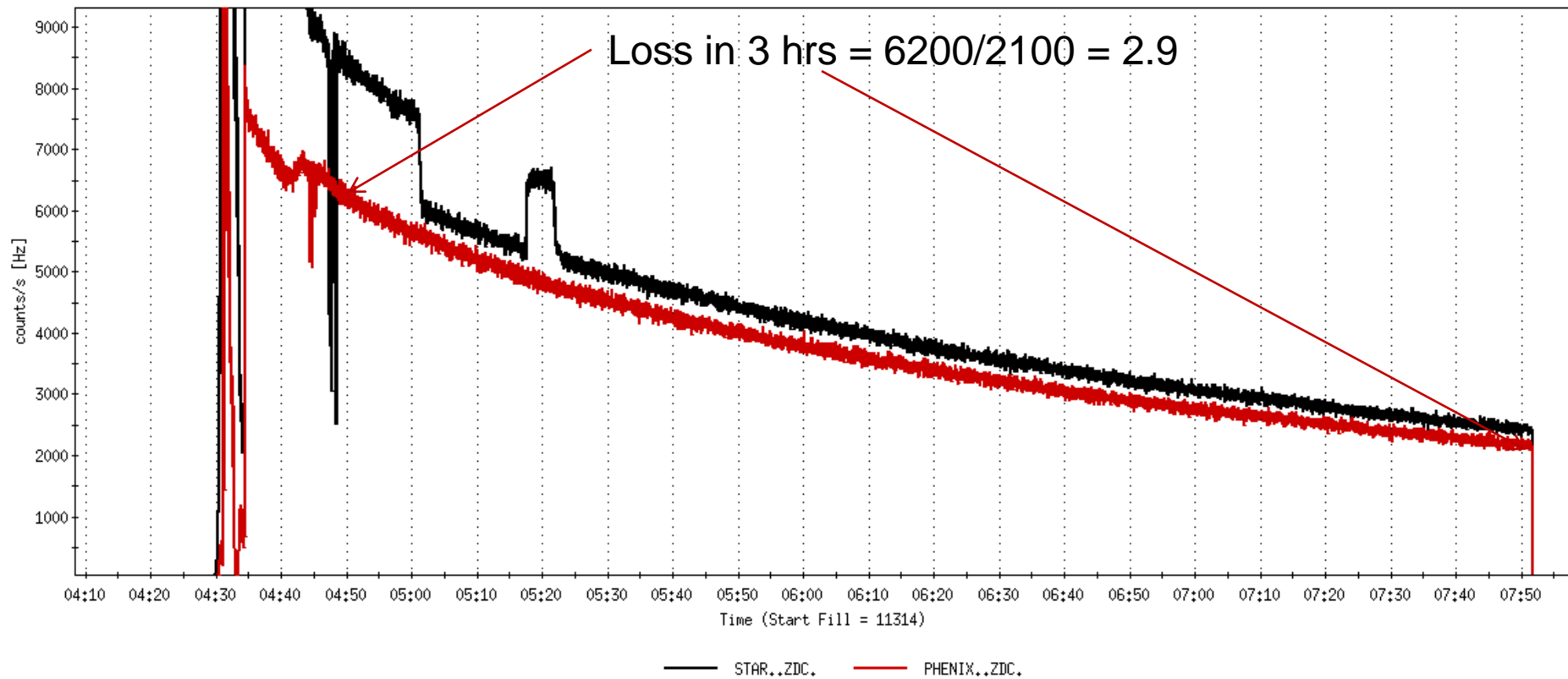
12/29/09 morning store

NX - pile@acnuser01.pbn.bnl.gov:1068 - rhic

Tue Dec 29 03:46:40 - Tue Dec 29 11:44:43

Window Markers Analysis

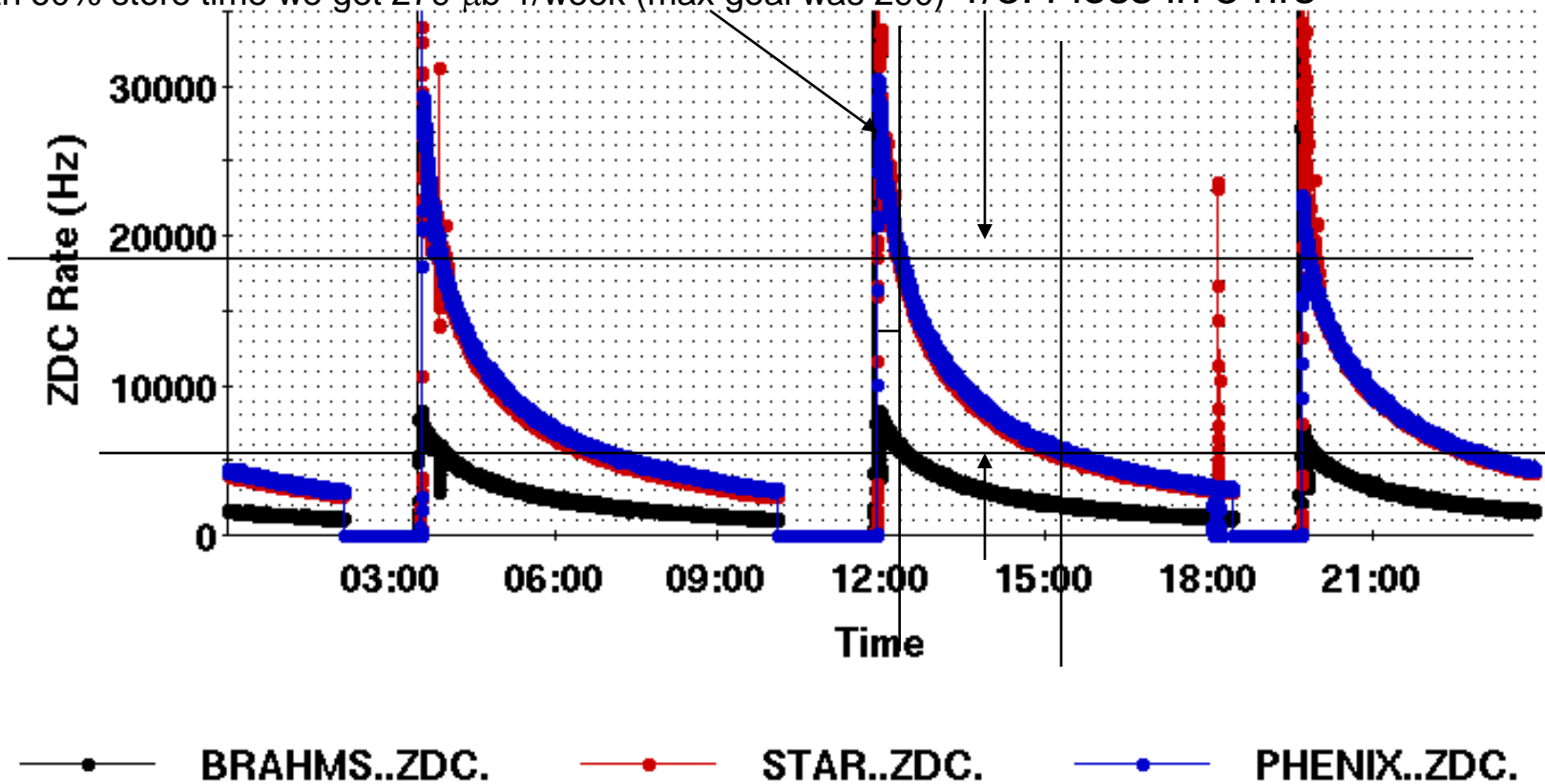
Experimental Coincidence Signals



RHIC Luminosity Sun Apr 15 23:58:53 2007

Store 8544, integrated lumi 17.7 μb^{-1} , 6.4 hr store

With 60% store time we get 279 μb^{-1} /week (max goal was 290) 1/3.4 loss in 3 hrs

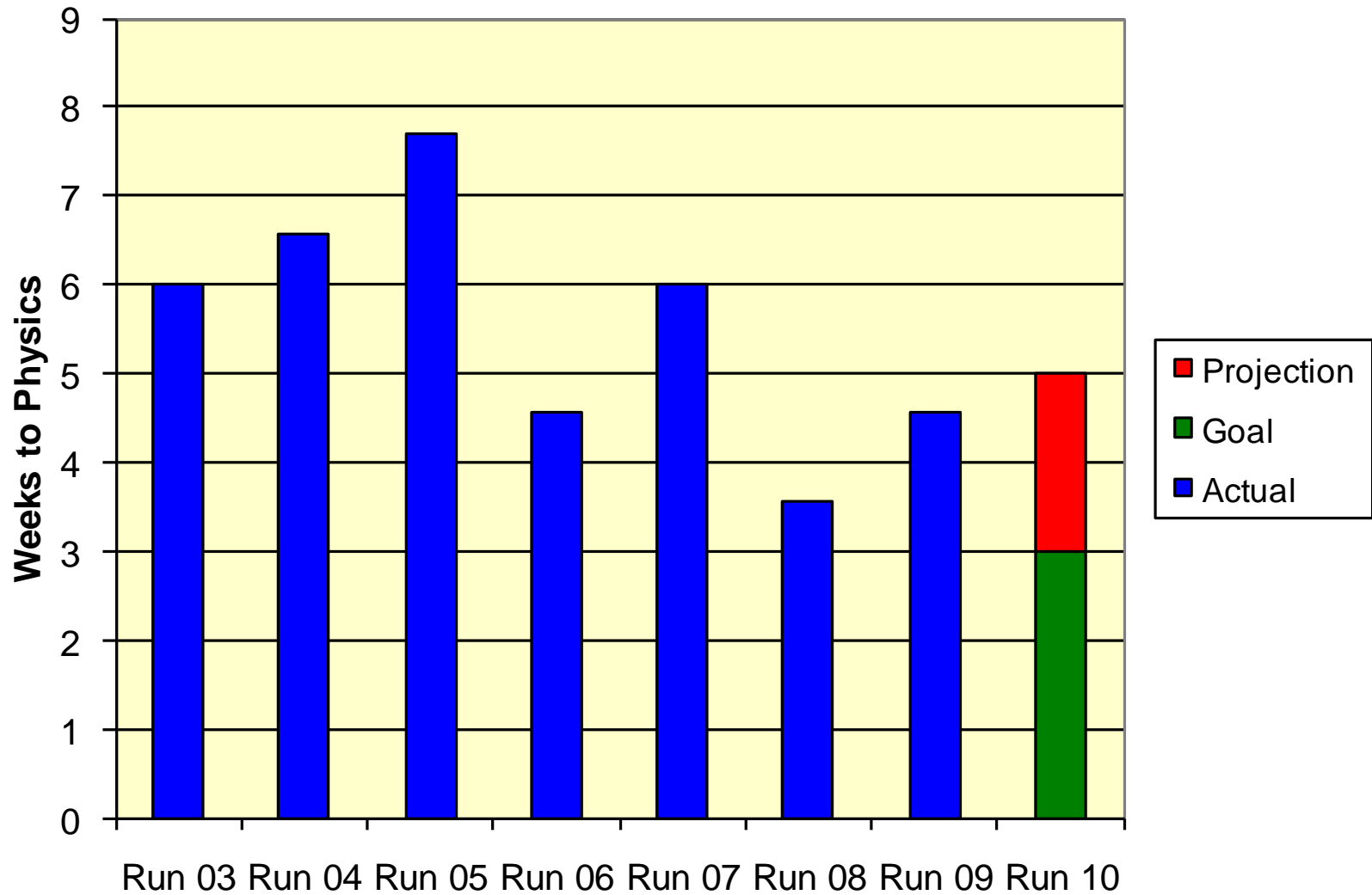


Future Topics

- Toward Smaller β^* - new quad triplets – D. Trbojevic

Archive

Time from start of 4.5 deg cooldown to Physics

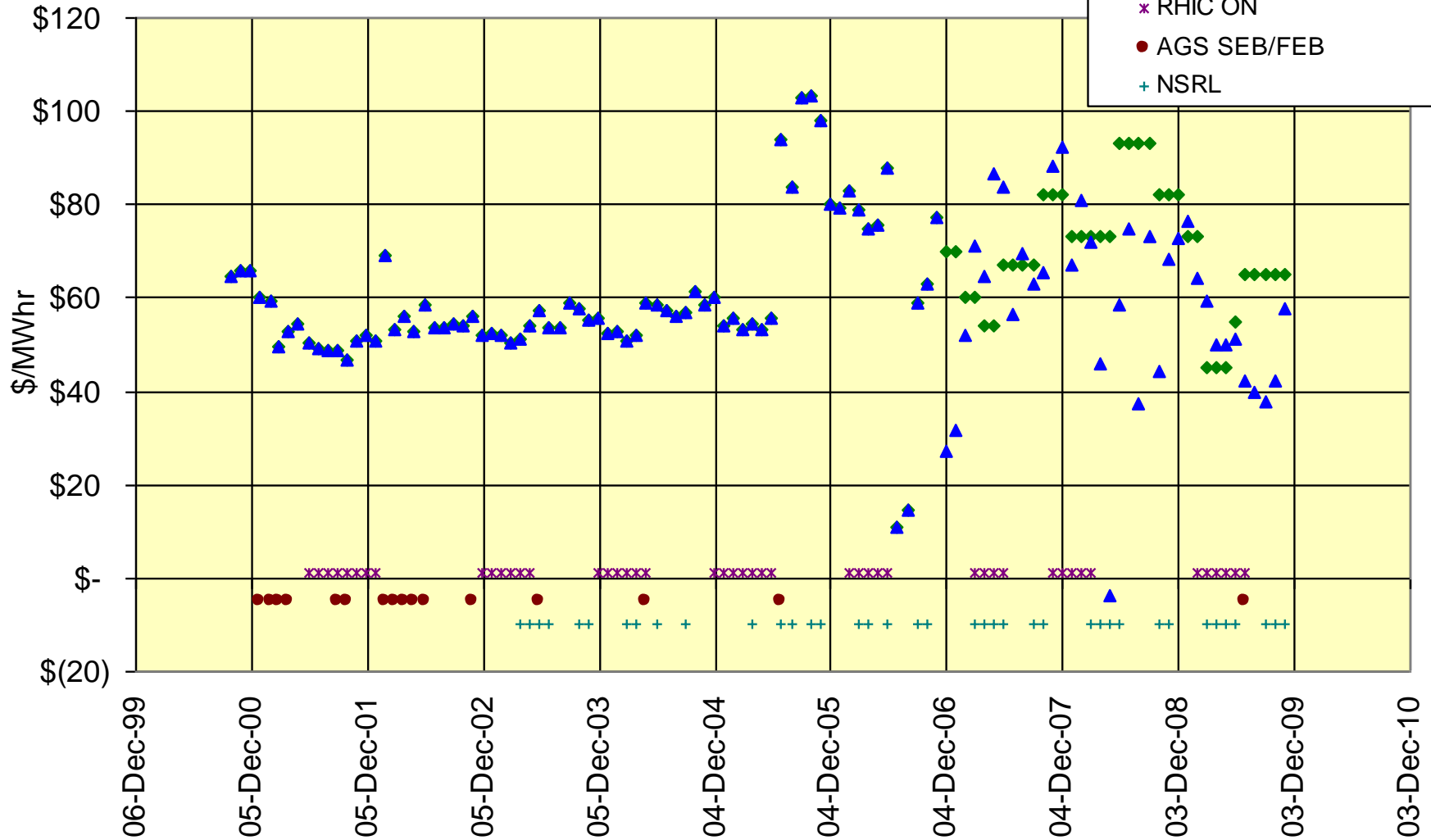


Revised Run 10 Plan, Nov 25, 2009

	Physics production or beam studies weeks	
$\sqrt{s_{NN}}$ (GeV)	25-cryoweeek run	27-cryoweeek run
200	10	10
62.4	4	4
39	1.5	1.5
27	0	0
18	0	0
11.5 @ STAR	0	2
7.7	4	4
Beam studies @ 5 GeV and @ $v \approx 0.67$	0.5	0.5

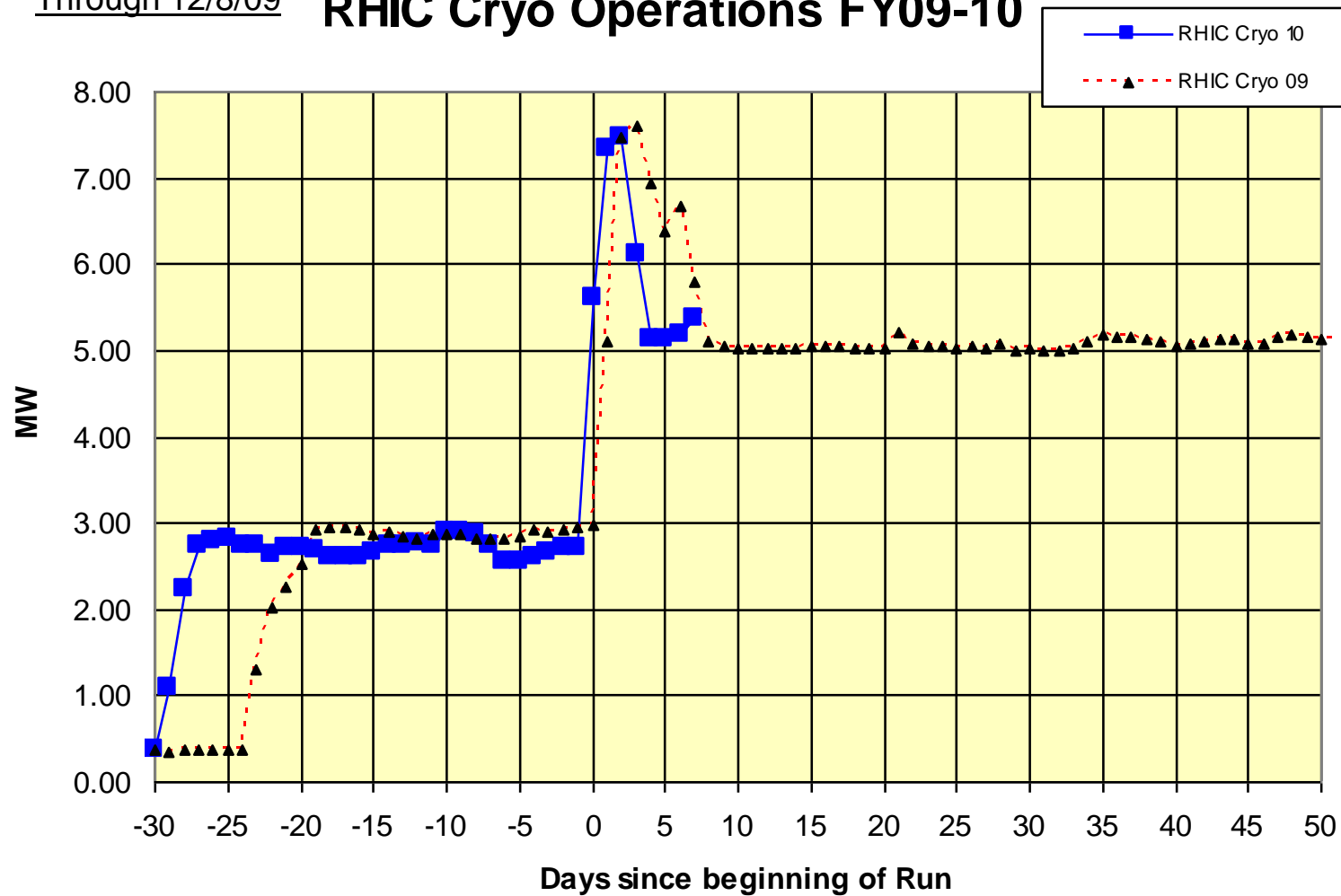
BNL Energy Cost

Through Nov 09



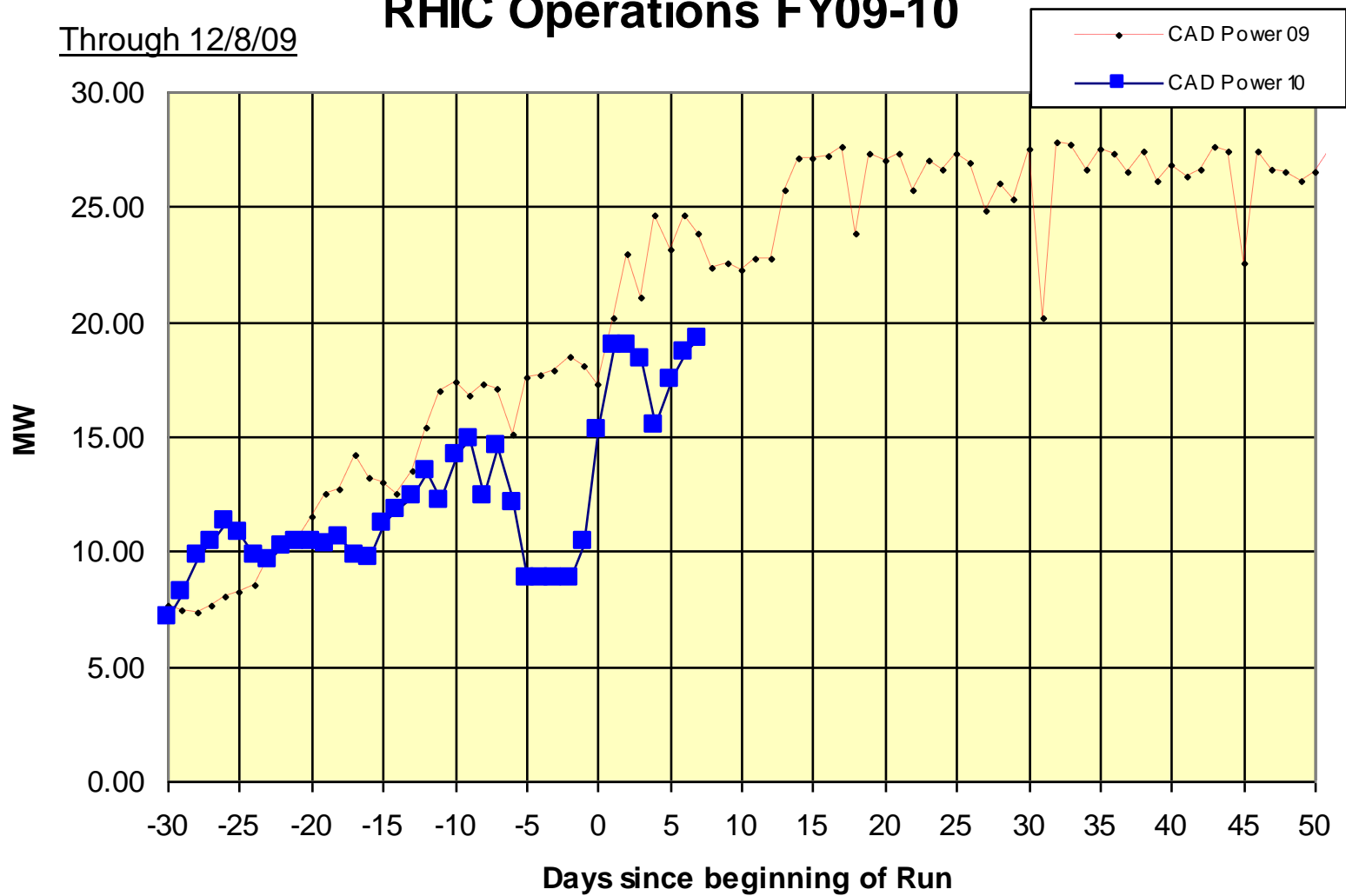
Through 12/8/09

RHIC Cryo Operations FY09-10



RHIC Operations FY09-10

Through 12/8/09



Run 10 Au-Au Goals

11/19/09

- STAR

- $\sqrt{s} = 200 \text{ GeV/n}$

- Luminosity Sampled/Delivered = 2/4 nb⁻¹
 - 250M Central Events
 - 300M Min-bias events

- PHENIX

- $\sqrt{s} = 200 \text{ GeV/n}$

- Luminosity Recorded/Delivered = 1.4/>6 nb⁻¹
 - Minimum Goal:
 - Luminosity Recorded/Delivered = 1.1/3.9 nb⁻¹

Run 10 Setup

- Oct. 5, N2 scrubbing
- Oct. 30, Temp. Control devices in and ready (required for 45 K wave cooldown).
- Nov. 2, 45 K wave begins.
- Nov. 12, AGS Testing.
- Nov. 12-13, APEX Workshop
- Nov. 16, beam setup in Booster and AGS
- Nov. 16-20, RHIC Dry Run
- Nov 22, Beam extracted from AGS to W dump

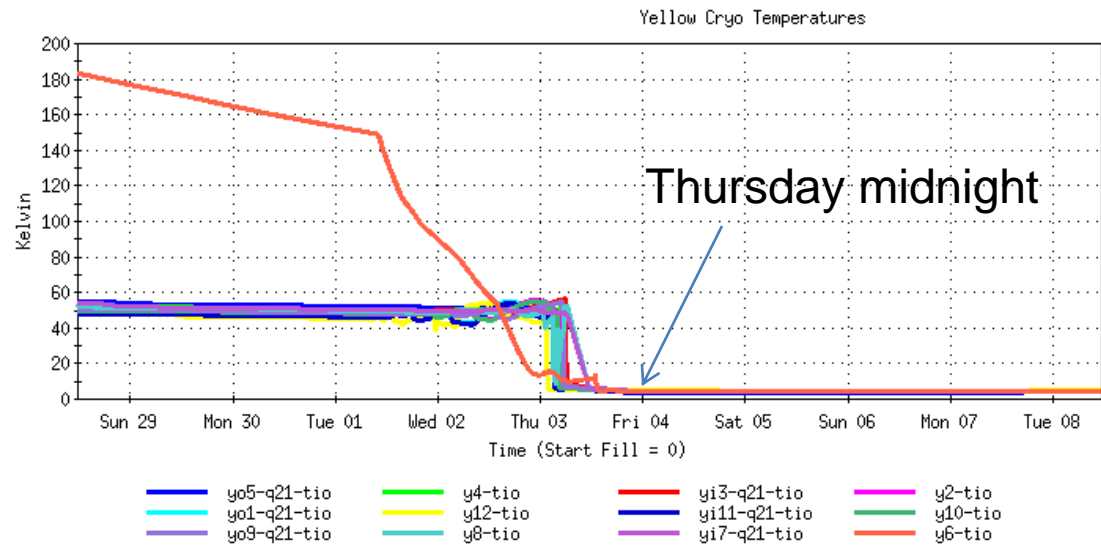
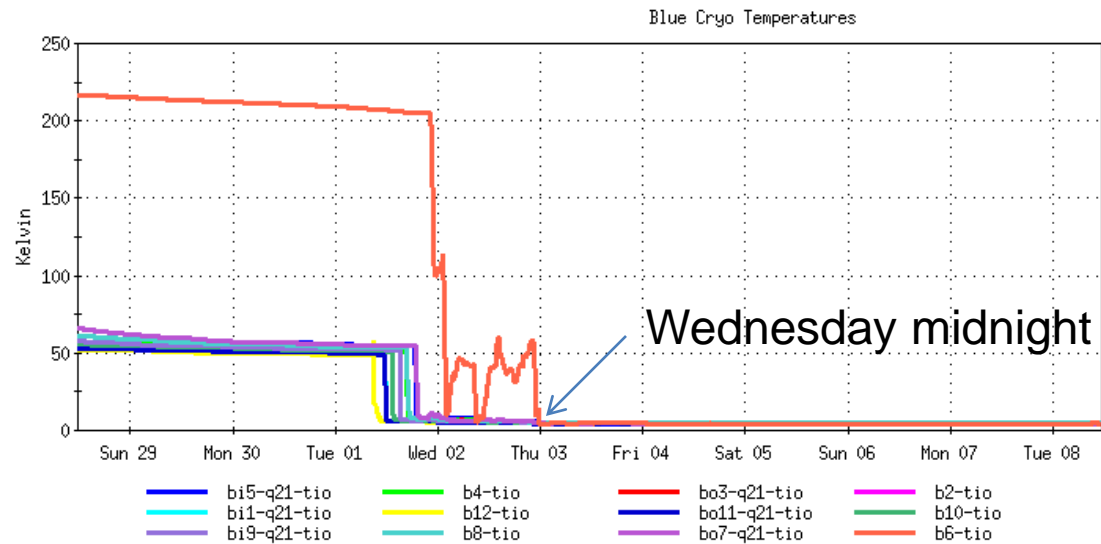
Cryogenic Blue & Yellow Rings (14 days)

[Ring Summary \(1 day\)](#)

[Sector Plots \(1 day\)](#)

[Sector Plots \(14 days\)](#)




Window Markers Analysis

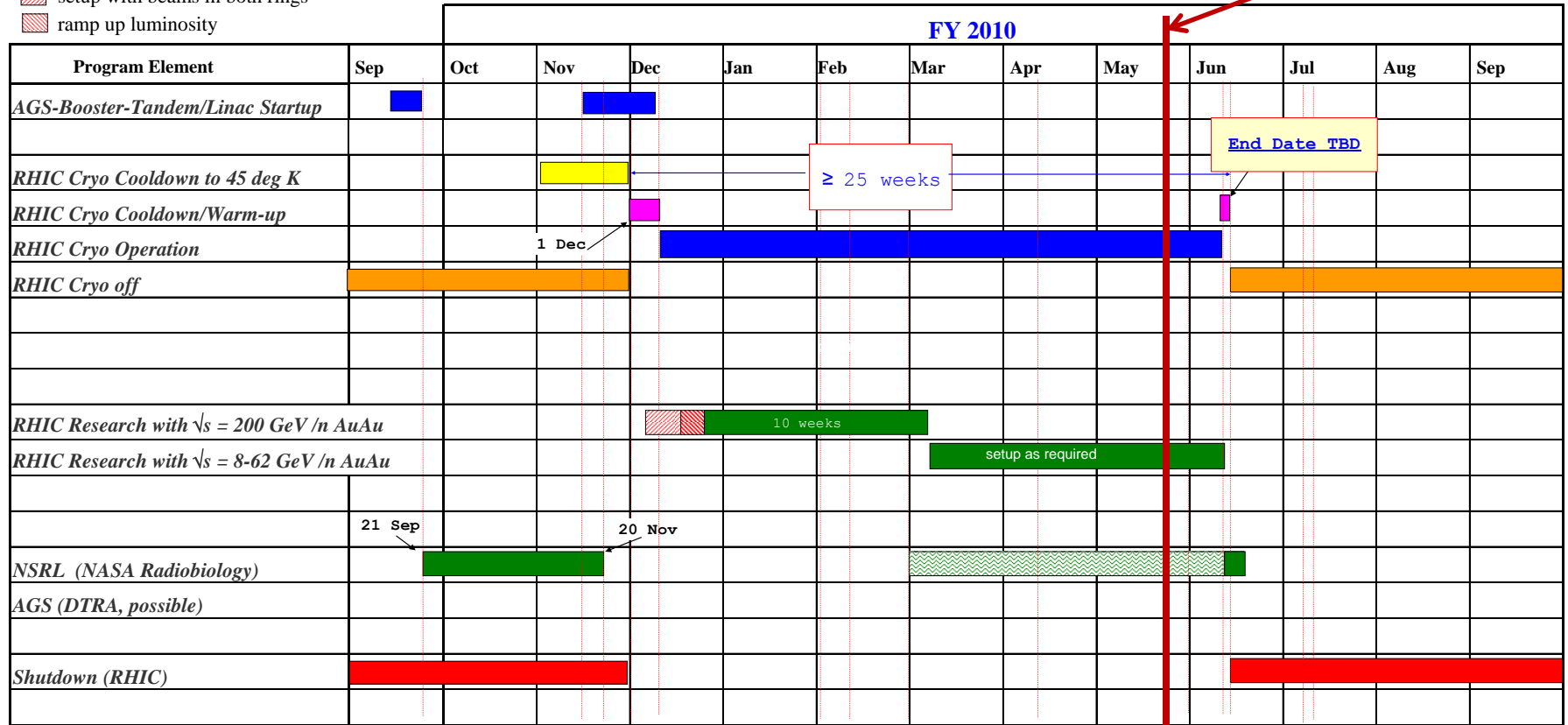


C-A Operations-FY10

Planned (budget permitting)

25 Cryo Weeks

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



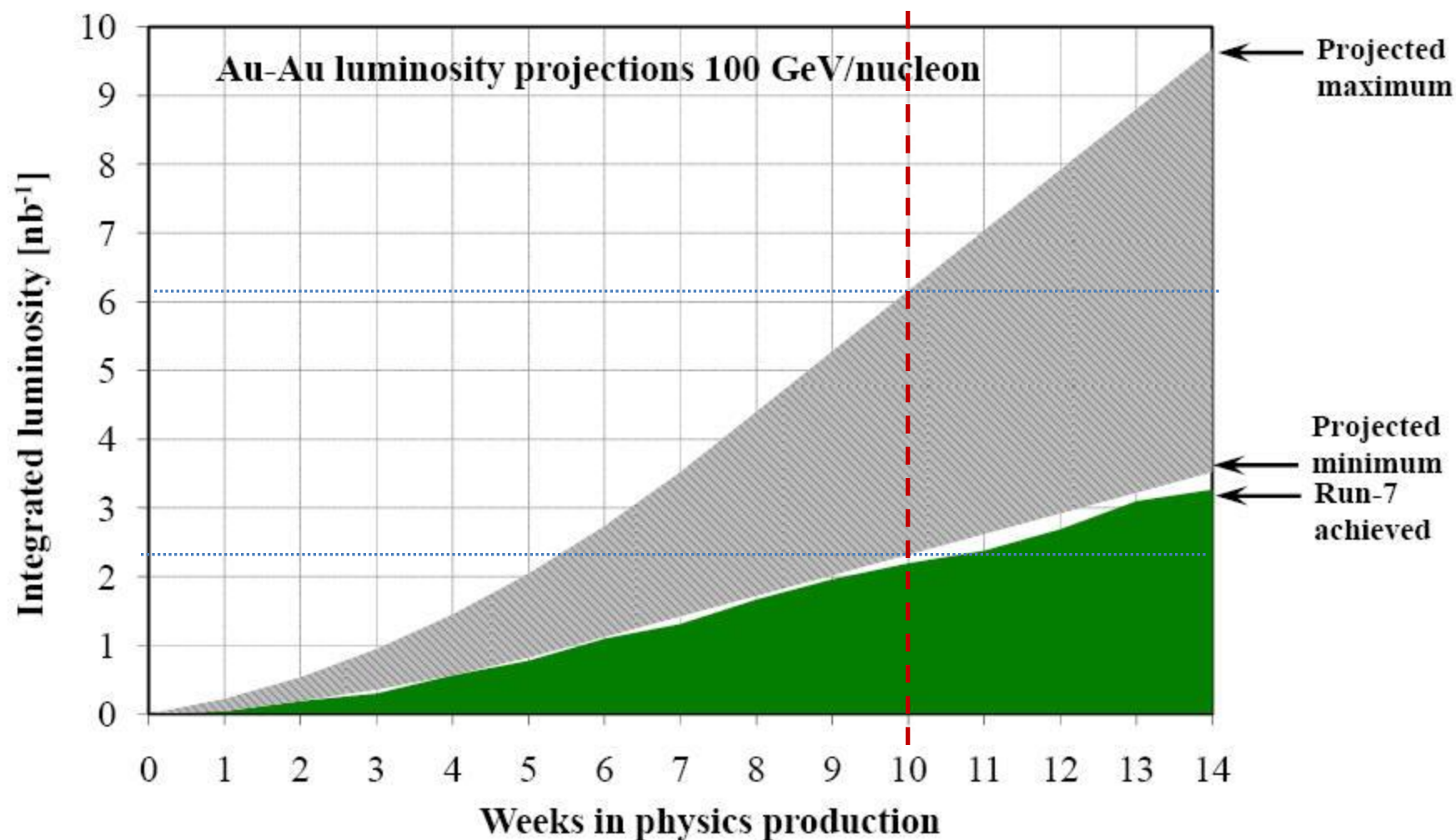


Figure 2: Projected minimum and maximum integrated luminosities for gold-gold collisions at 100 GeV beam energy, assuming linear weekly luminosity ramp-up in 6 weeks for the minimum and 8 weeks for the maximum.