

RHIC Machine/Detector Planning Meeting

16 Mar 05

Agenda

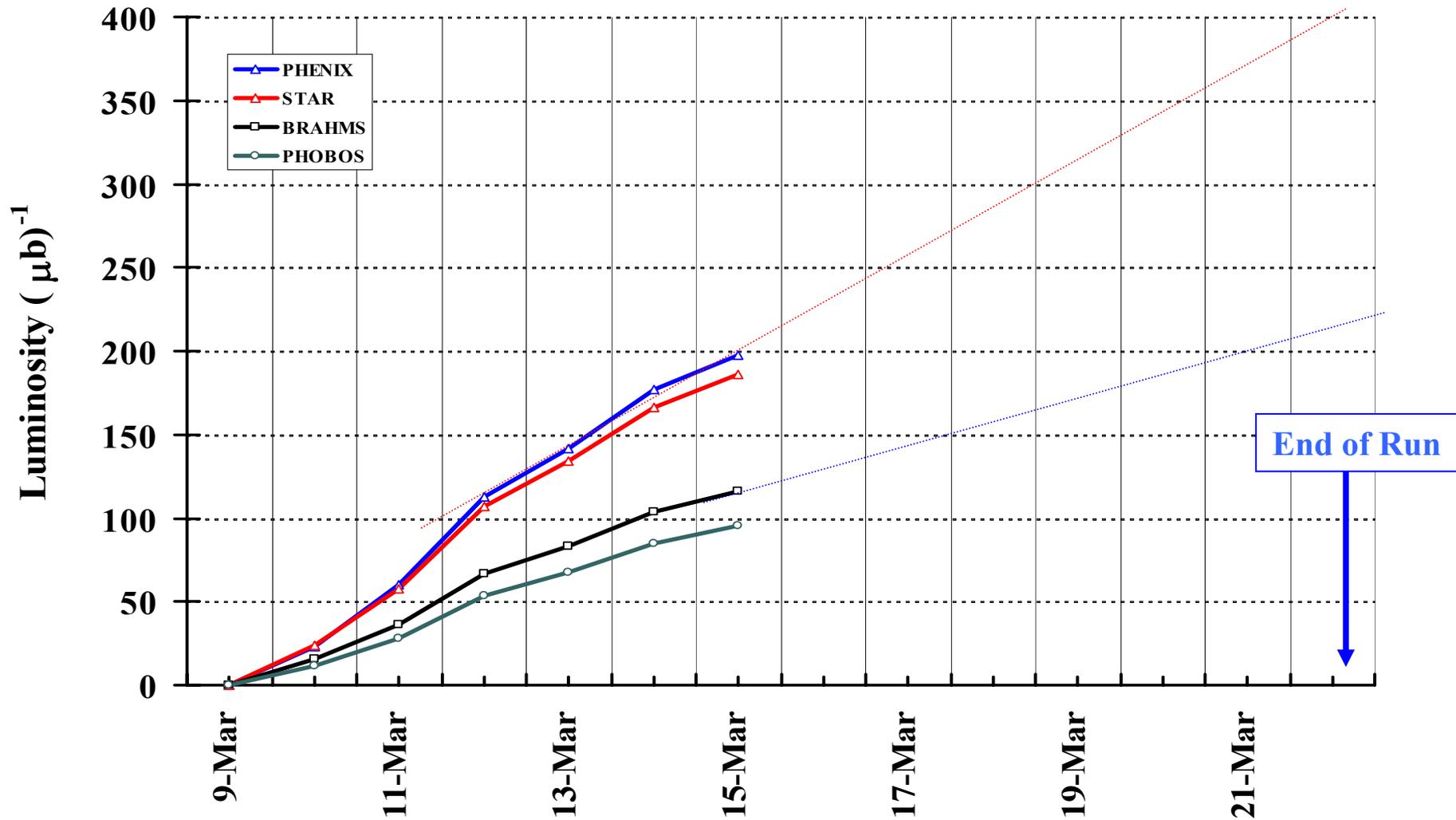
- **Schedule Issues – (Montag)**
- **Report from experiments (STAR,PHOBOS,PHENIX,BRAHMS)**
 - **Status of 62 GeV Cu-Cu run**
 - **Expectations for 22 GeV Cu-Cu run and assessment of yesterday's preliminary run at injection**
 - **Other**
- **62 GeV Cu-Cu Machine Status (Pilat)**
- **Polarized Proton Update (Bai)**
 - **AGS pp development**
 - **AGS Cold Snake**
 - **CNI Polarimeter**
 - **Jet Target**
 - **Other**
- **RCF Issues (Throwe)**
- **Other business**

Planning Meeting Web Site: http://www.c-ad.bnl.gov/esfd/RMEM/rhic_planning.htm

Experiment Goals RHIC Run 5, 31.2 x31.2 GeV/n and 11.2x11.2 GeV/n CuCu (as of 3/9/05)

- **BRAHMS**
 - Goals ?
- **PHENIX**
 - 62 GeV,
 - Delivered integrated luminosity goal ?
 - Integrated recorded luminosity goal $92 \mu\text{b}^{-1}$
 - 22 GeV, Goal ?
- **PHOBOS**
 - 62 GeV, Goal 250 M events to tape
 - 22 GeV, Goal ~ 37M events to tape
- **STAR**
 - 62 GeV, Min bias, Goal 20M events to tape
 - 22 GeV, Goal ?

RHIC Run 5 (62 GeV) Delivered Cu-Cu Luminosity (PHENIX and STAR $\beta^*=3$ m, BRAHMS and PHOBOS $\beta^*=5$ m)



Time at store – 10 Mar (0126) to 15 Mar (0945) = 86.2 hours \rightarrow 113 hrs/week

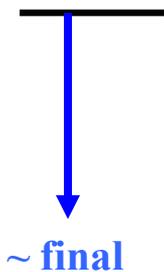
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- *RHIC Run5 Plan (estimate based on present understanding of budget)*
 - **18 Nov 04 – Cool down begins**
 - **23 Nov 04 – Blue Ring Cold**
 - **28 Nov 04 – Yellow Cold**
 - **29 Nov 04 – Short in D6-D8 dipoles Yellow Ring, schedule delay**
 - **3 Dec 04 – quad bus-bus short in sector 12, shutdown to repair**
 - **27 Dec 04 – short problem resolved, rings at 4 degrees again**
 - **27 Dec 04 - “2 week” RHIC setup with beam began**
 - **28-29 Dec 04 – found & fixed aperture problem in Yellow Ring (Al foil)**
 - ***5 Jan 05 – “2 week” ramp-up with colliding beams began***
 - ***11 Jan 05 – Physics with 100x100 GeV/n Cu-Cu began***
 - **24 Mar 05 – End of 10.3 week Cu-Cu run**
 - ***24-30 Mar 05 – begin 3 week pp setup***
 - **30 Mar – 1 Apr 05 – Jet Installation etc**
 - ***1-16 April – pp setup resumes***
 - ***16 Apr 05 – Begin 10.0 week pp Physics run***
 - **25 Jun 05 – end pp run, RHIC Run 5 ends**
 - **30 Jun 05 – Cryo switch to LN₂ complete, 32.0 weeks of RHIC cryo operation ends**

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- **Details – as run/planned**

- *11 Jan – Physics with Cu-Cu began*
- *7 Mar (0800) – end 200 GeV/n Cu-Cu*
- *7-9 Mar – Setup 62.4 GeV/n Cu-Cu*
- *9-15 Mar - 62.4 GeV/n Cu-Cu Physics*
- *15 Mar – 8 hours at injection*
- *15-22 (1600) Mar - 62.4 GeV/n Cu-Cu Physics*
- *22 (1800)-24 (0800) March Cu-Cu Physics at RHIC Injection*
- *24 Mar (0800) – End of 10.3 week Cu-Cu run*
- *24-30 Mar – begin 3 week pp setup*
- *30 Mar - 1 Apr 05 Cold Snake/Jet Installation/CNI etc*
- *1-16 Apr – complete 3 week pp setup*
- *16 Apr – Begin 10.0 week pp Physics run*
- *25 Jun – end pp run, RHIC Run 5 ends*
- *30 Jun – Cryo switch to LN₂ complete, **32.0** weeks of RHIC cryo operation ends*

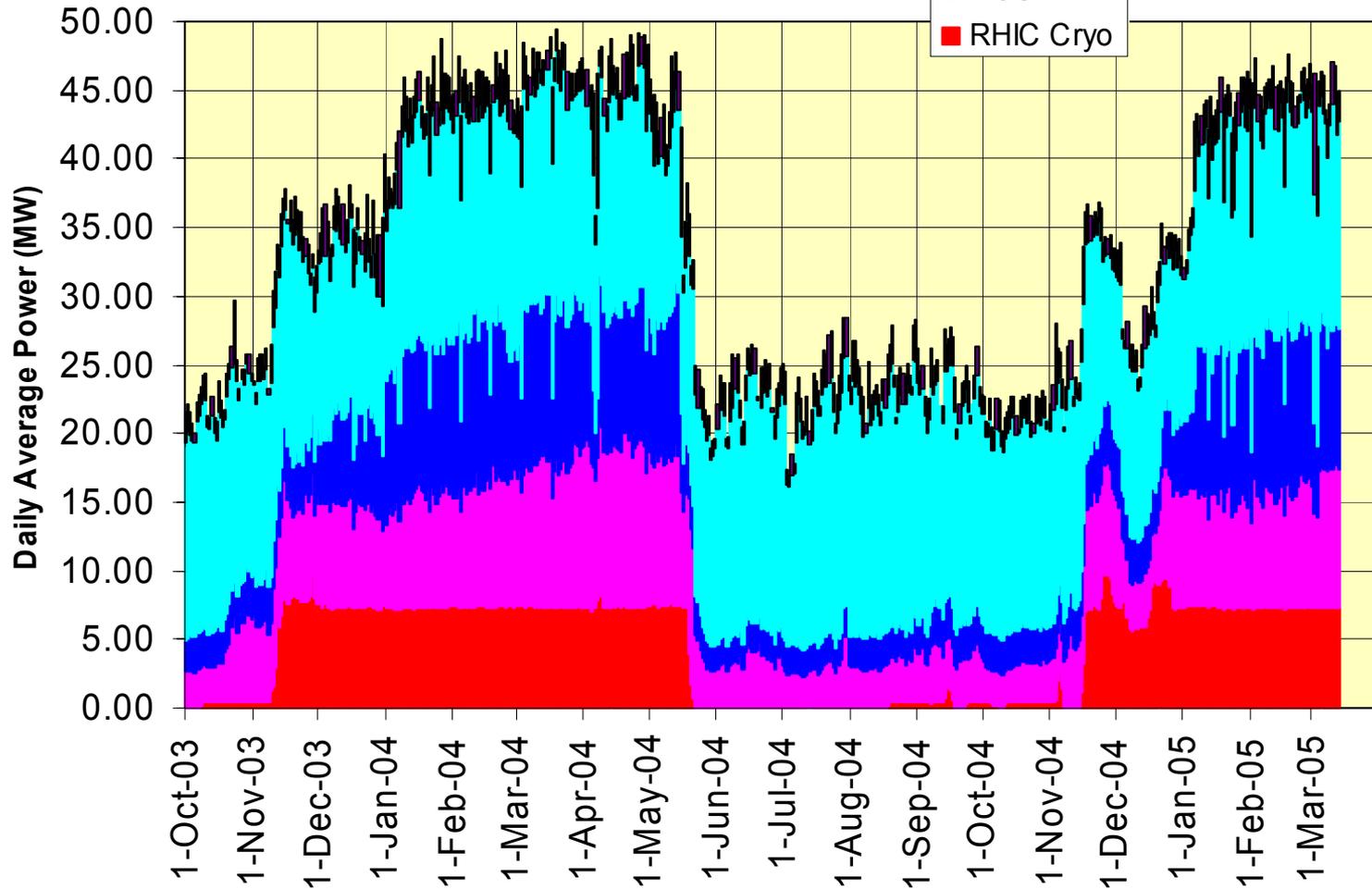


BNL Energy Use FY 2004-

as of 13 Mar

(C-AD Bldg power is in site base)

- Peak-Av
- Site Base
- RHIC other
- AGS
- RHIC Cryo



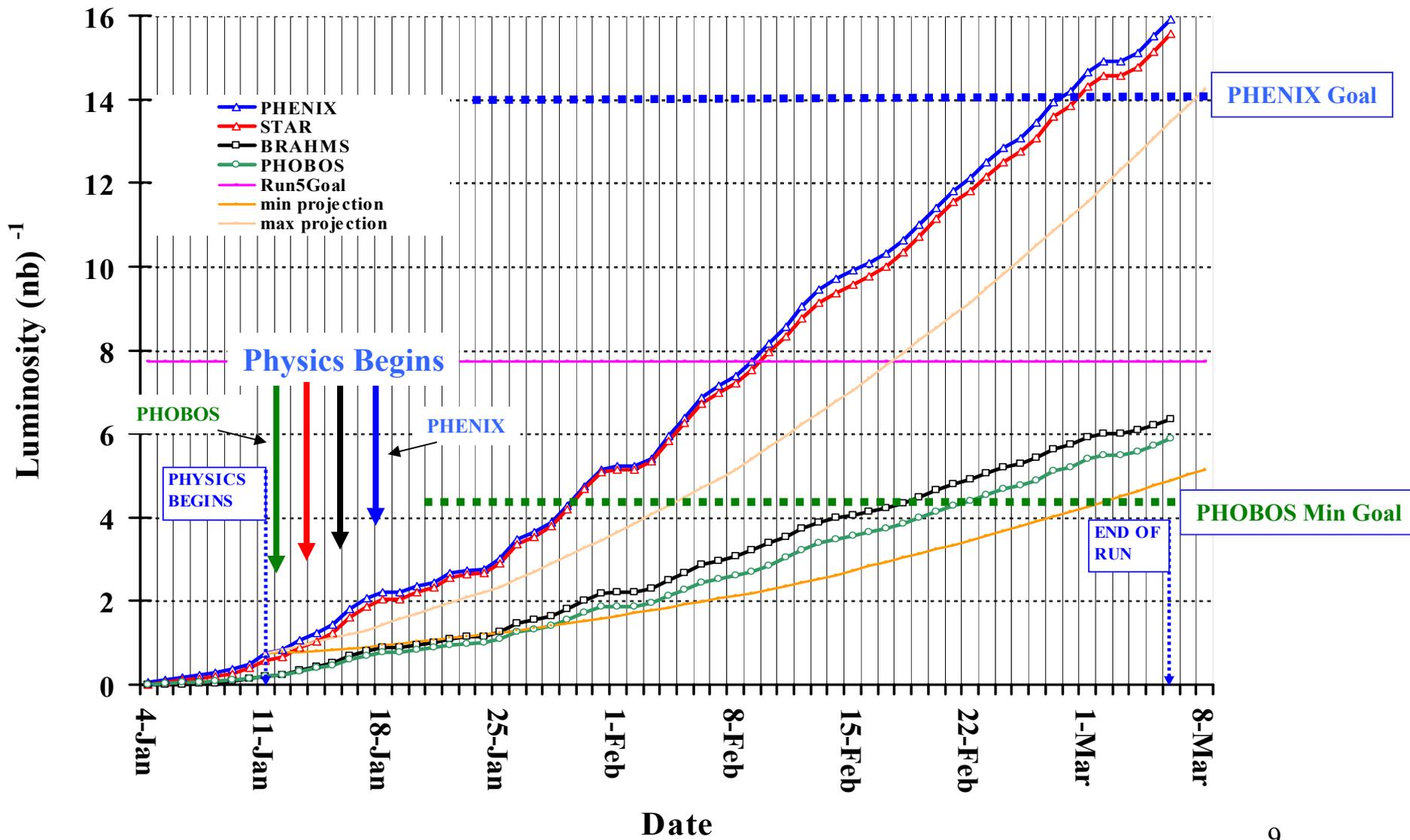
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Archive

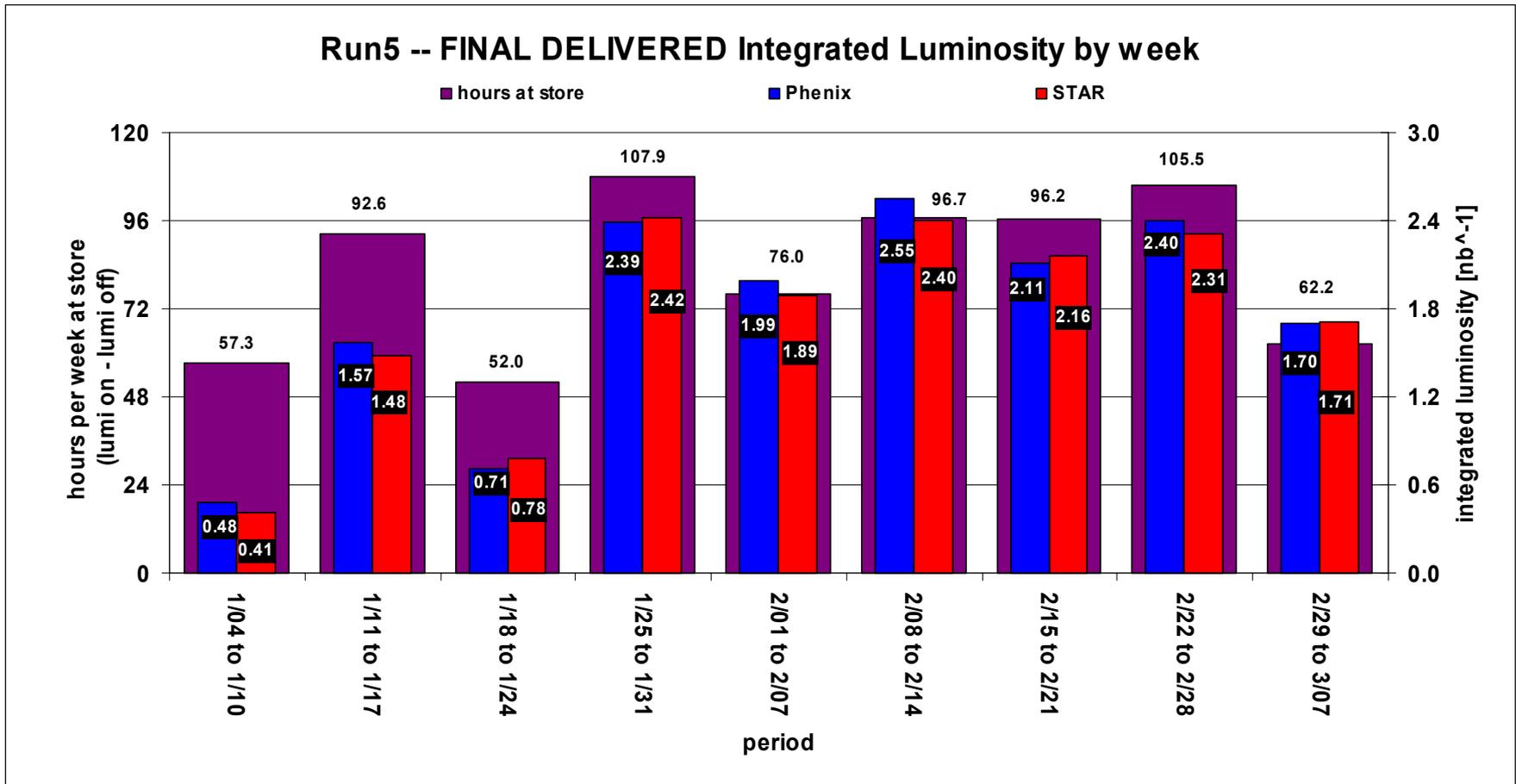
Experiment Goals RHIC Run 5, 100x100 GeV/n CuCu, Summary of Results

- **BRAHMS**
 - Soft physics goal 0.8 nb^{-1} recorded, achieved $0.8 \text{ nb}^{-1} \rightarrow 100\%$ of goal
 - High-Pt goal 2.4 nb^{-1} recorded, achieved $1.75 \text{ nb}^{-1} \rightarrow 73\%$ of goal
- **PHENIX**
 - Integrated recorded luminosity goal (live BBCLL1) 2.9 nb^{-1} , achieved $3.06 \text{ nb}^{-1} \rightarrow 105\%$ of goal
- **PHOBOS**
 - Goal 1000M events to tape, achieved 500M $\rightarrow 50\%$ of minimum goal
 - Minimum Goal 400M events to tape, achieved 500M $\rightarrow 125\%$ of minimum goal
- **STAR**
 - Min bias, Goal 80M events, recorded 64.5M events $\rightarrow 80\%$ of goal
 - High Pt Trigger (BEMC HT18), Goal 6.5M events, recorded 4.53 $\rightarrow 70\%$ of goal

RHIC Run 5 Final Delivered 100x100 GeV/n Cu-Cu Luminosity



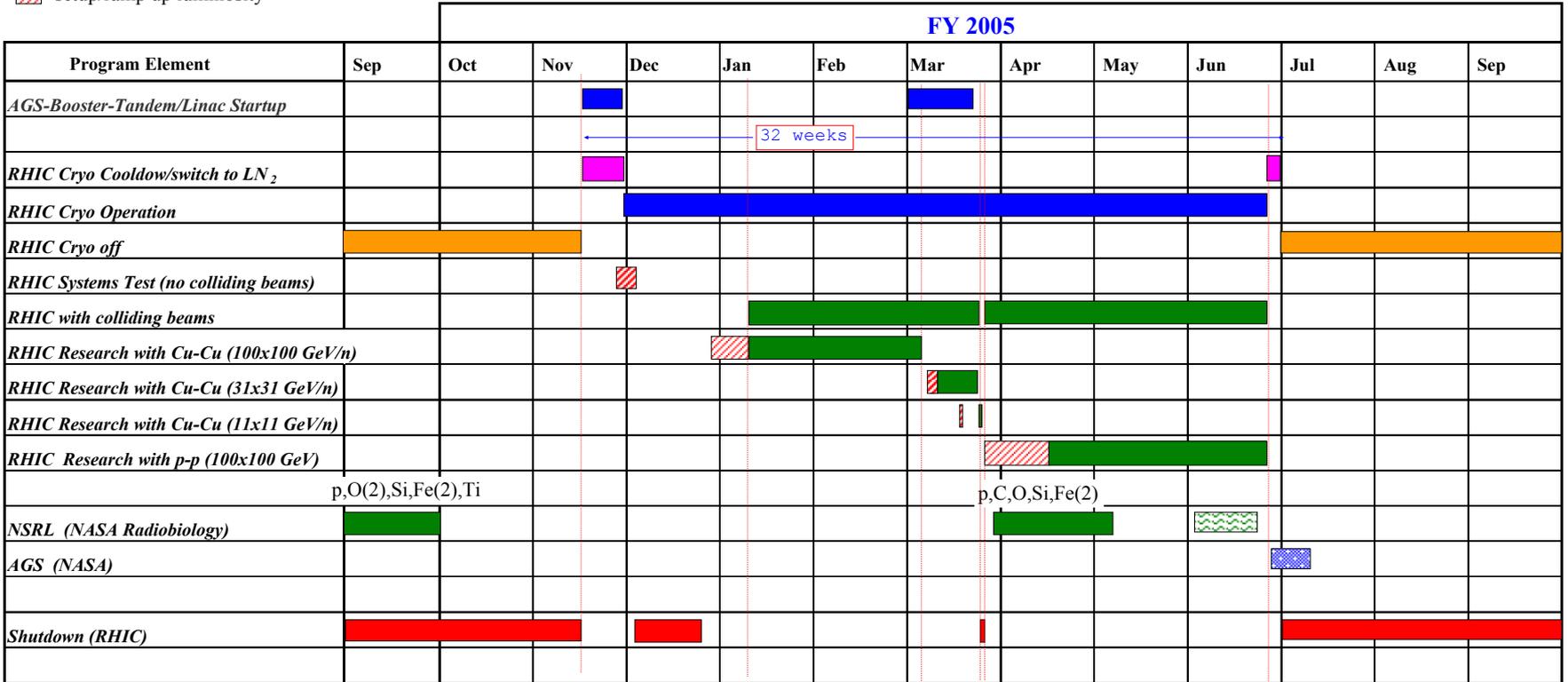
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C-A Operations-FY05

-  pending approval/funding
-  schedule to be determined
-  setup/ramp up luminosity

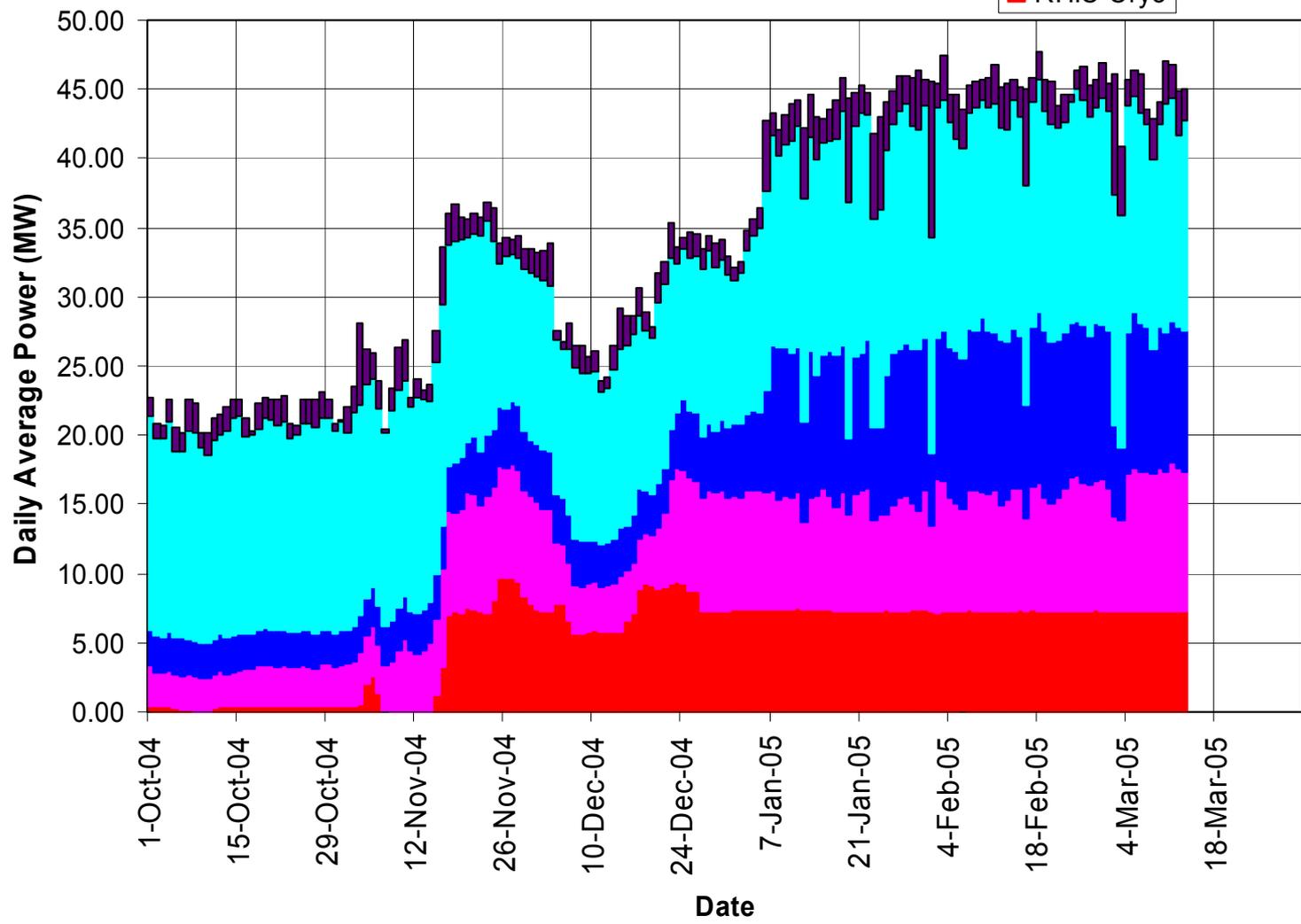
Schedule - subject to change



BNL Energy Use FY 2005

(C-AD Bldg power is in site base)

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RHIC Machine/Detector Planning Meeting

17 November 2004

Purpose of this meeting:

- To address issues and priorities relating to the optimization of physics output from RHIC experiments.
- To discuss and promulgate policy (when needed).

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PAC Recommendations (very short summary):

- 8-10 week pp run should have highest priority
- Cu-Cu run should accumulate an integrated delivered luminosity of at least 7 nb^{-1} at $\sqrt{s} = 200 \text{ GeV}$
- Cu-Cu at $\sqrt{s} = 62.4 \text{ GeV}$ and 1 day at injection is advisable if above goals are met
- 1-2 day pp (unpolarized) run at $\sqrt{s} = 400\text{-}500 \text{ GeV}$ desirable