

# RHIC Machine/Detector Planning Meeting

9 Feb 05

## Agenda

- **Schedule Issues – (Montag)**
- **Report from experiments (STAR,PHOBOS,PHENIX,BRAHMS)**
  - **Progress toward goals - plot that shows goal(s) and progress toward goal(s).**
  - **Update or corrections to Experiment Requests - slides 2&3**
  - **Can we “finalize” CuCu schedule, slide 7?**
  - **Other**
- **Report from Accelerators (Pilat)**
- **Polarized Proton Update (Bai)**
- **RCF Issues (Throwe)**
- **Other business**

Planning Meeting Web Site: [http://www.c-ad.bnl.gov/esfd/RMEM/rhic\\_planning.htm](http://www.c-ad.bnl.gov/esfd/RMEM/rhic_planning.htm)

# Experiment Requests

(based on 2 Feb input from experiments)

- **PHOBOS**

- Goal 10 nb<sup>-1</sup> Delivered Luminosity (1B events)
  - 0.4B events considered adequate (~ 4 nb<sup>-1</sup> Delivered)
  - Recorded Luminosity/Delivered ~ 25%
  - Delivered Luminosity offset (Physics start 12 Jan) = 0.2 nb<sup>-1</sup>
- Prefer uptime to Luminosity development
- Strongly request 2-3 week 62.4 GeV CuCu run
- Strongly request 1 day of CuCu at injection (22.4 GeV)

- **PHENIX**

- 7 week (to 2 Mar) CuCu 200 GeV should reach goal
  - Recorded Luminosity/Delivered ~ 24%
  - Delivered Luminosity offset (Physics start 18 Jan) = 2 nb<sup>-1</sup>
  - Goal Delivered Luminosity = 12 nb<sup>-1</sup>
- Prefer Luminosity development continue through ~ 11 Feb
- Request 2 week 62.4 GeV CuCu physics run (very interested)

# Experiment Requests

- **BRAHMS**

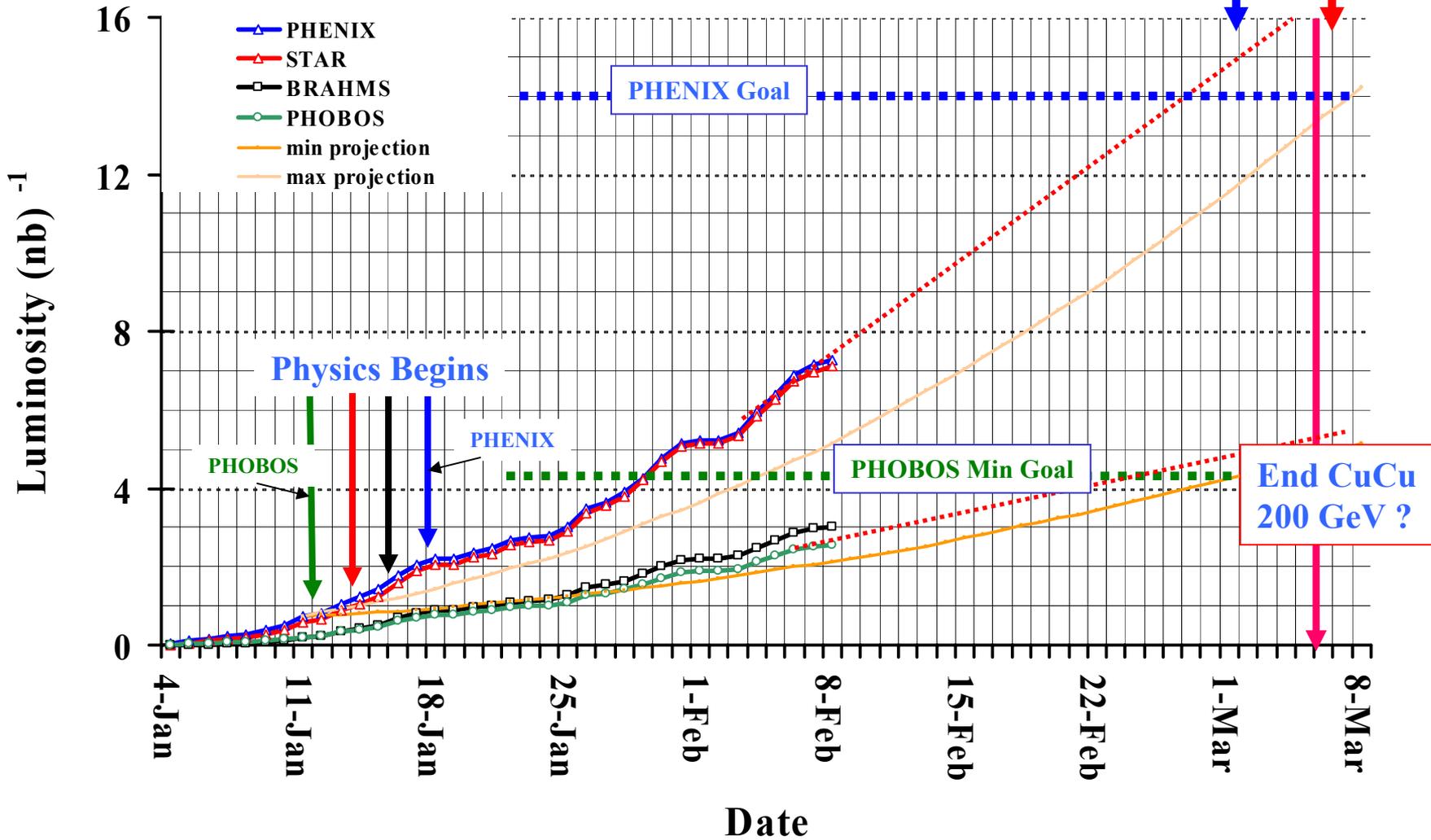
- Soft Physics goal 2 nb<sup>-1</sup> Delivered
  - Recorded Luminosity/Delivered ~ 0.4
- High-pT goal 4 nb<sup>-1</sup> Delivered (runs after completion of soft physics)
  - Delivered Luminosity offset (Physics start 16 Jan) = 0.5 nb<sup>-1</sup>
  - Recorded Luminosity/Delivered ~ 0.4 (?)
- Luminosity development and/or  $\beta^*$  reduction important
- Request minimum 2 week 62.4 GeV CuCu run

- **STAR**

- 8 week (to 7 Mar) CuCu 200 GeV assumed
  - Recorded Luminosity/Delivered *not specified*
  - Min-Bias Delivered Luminosity offset (Physics start 14 Jan) = 1 nb<sup>-1</sup>
  - Rare Trigger Delivered Luminosity offset (Physics start 31 Jan) = 5 nb<sup>-1</sup>
  - Goal Delivered Luminosity = *not specified*
  - Prefer uptime to Luminosity development
  - Request 10-14 days 62.4 GeV CuCu physics run

# RHIC Run 5 Delivered Cu-Cu Luminosity

PHENIX and STAR  
Estimate when goals will  
be reached





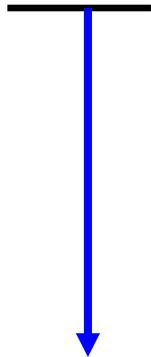
# RHIC Machine/Detector Planning Meeting

- *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 – *10* week physics with Cu-Cu began
  - 23 Mar 05 – End of 10.1 week Cu-Cu run
  - 23-24 Mar 05 – Jet Installation etc
  - 24 Mar 05 – begin 3 week pp setup
  - 14 Apr 05 – Begin 10.3 week pp Physics run
  - 25 Jun 05 – end pp run, RHIC Run 5 ends
  - 30 Jun 05 – Cryo switch to LN<sub>2</sub> complete, 32.0 weeks of RHIC cryo operation ends

# RHIC Machine/Detector Planning Meeting

- **Details – as run/planned**

- *11 Jan 05 – Physics with Cu-Cu began*
- *6 Mar 05 – end 200 GeV/n Cu-Cu*
- *6-7 Mar 05 – Setup 62.4 GeV/n Cu-Cu*
- *8-22 Mar 05 - 62.4 GeV/n Cu-Cu Physics*
- *23 March Cu-Cu Physics at RHIC Injection*
- **23 Mar 05 – End of 10.1 week Cu-Cu run**
- **23-24 (wed-thurs) Mar 05 Jet Installation etc**
- *24 Mar 05 – begin 3 week pp setup*
- *14 Apr 05 – Begin **10.3** week pp Physics run*
- **25 Jun 05 – end pp run, RHIC Run 5 ends**
- **30 Jun 05 – Cryo switch to LN<sub>2</sub> complete, **32.0** weeks of RHIC cryo operation ends**

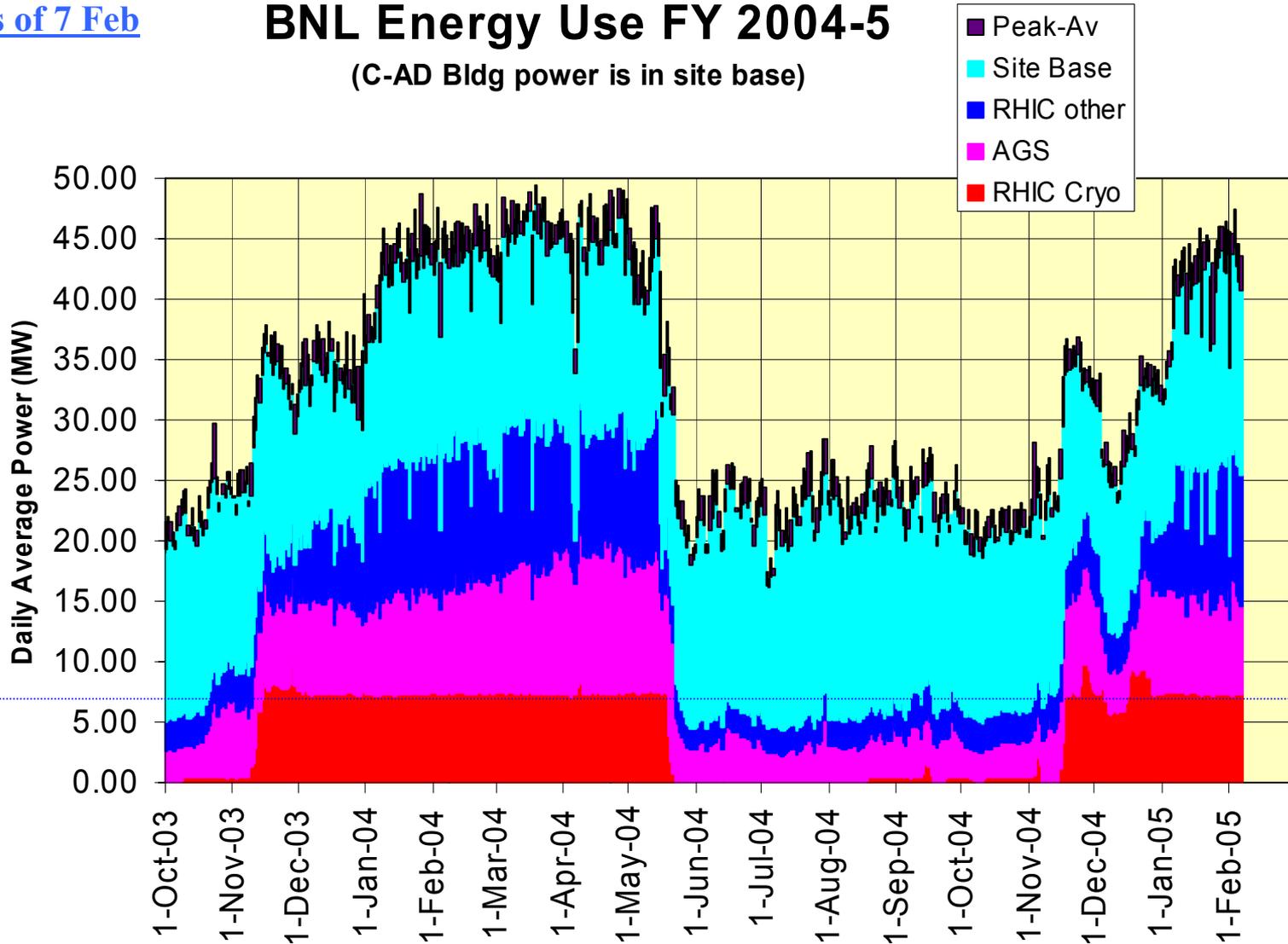


To be finalized

[as of 7 Feb](#)

# BNL Energy Use FY 2004-5

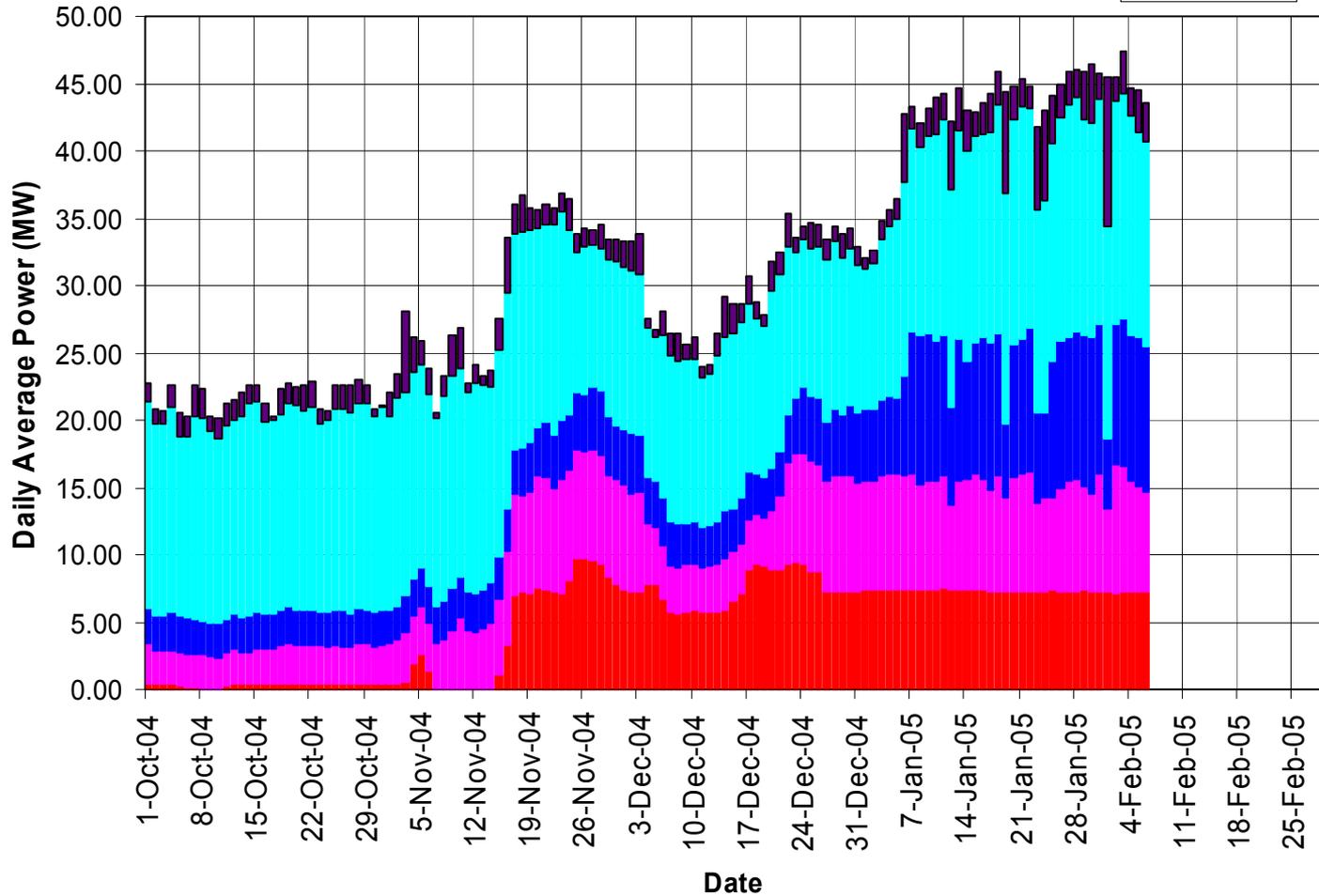
(C-AD Bldg power is in site base)



# BNL Energy Use FY 2005

(C-AD Bldg power is in site base)

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



# RHIC Machine/Detector Planning Meeting

**Archive**

# 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).

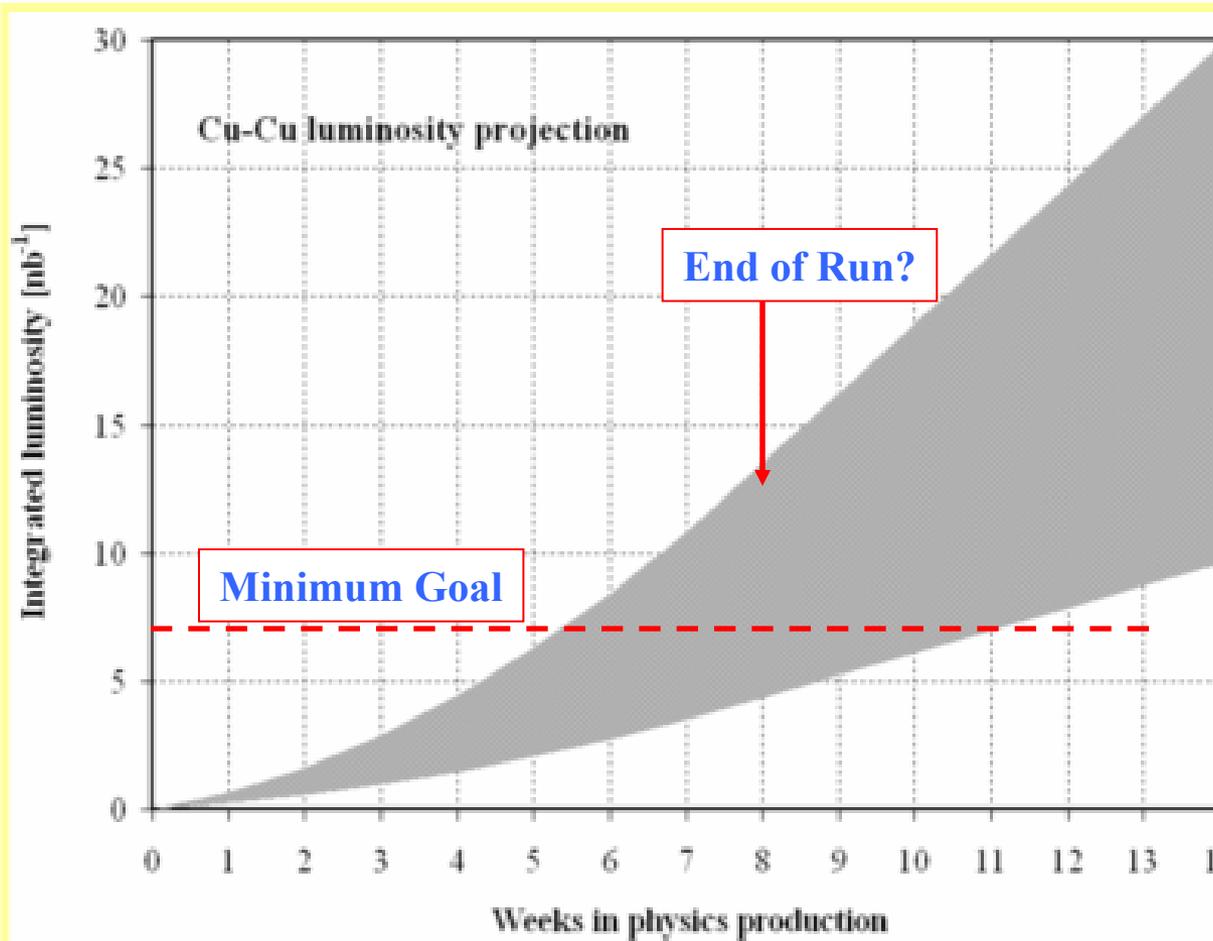
# RHIC Machine/Detector Planning Meeting

17 November 2004

## 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  $7 \text{ nb}^{-1}$  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

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Projections based on the following beam intensity:

Minimum :  
 $45 * 2.9 * 10^9$

Maximum:  
 $28 * 6.6 * 10^9$

Luminosity evolution:  
**8 weeks ramp-up** during physics production

$\beta^* = 1$  meter