

RHIC Machine/Detector Planning Meeting

1 December 2004

Agenda

- **Schedule Issues – update on D6-D8 Short (Montag)**
- **Budget update (Kirk/Lowenstein)**
- **General Remarks (Pile)**
- **Report from Accelerators (Pilat)**
- **Polarized Proton Update (Bai)**
- **Report from experiments (STAR,PHOBOS,PHENIX,BRAHMS)**
 - **Physics goals for Cu-Cu run (STAR)**
 - **Required run conditions to achieve goals – luminosity, β^* etc. (STAR)**
 - **Issues (all experiments)**
- **RCF Issues (Throwe)**
- **Other business**

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

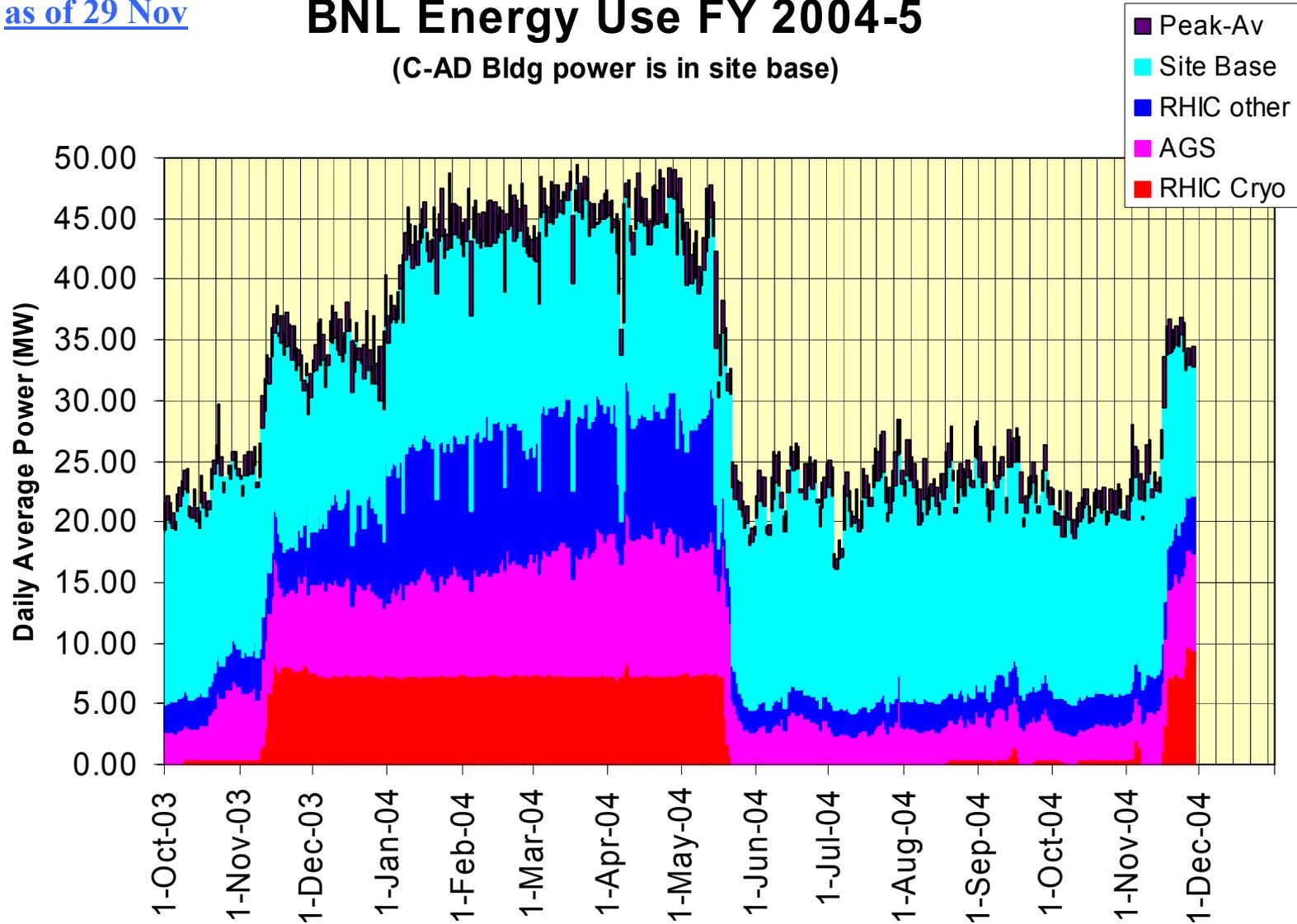
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- **Overall Plan** (based on presidential budget)
 - **18 Nov 04** - Cryo on
 - **19 May 04** – RHIC Run 4 ends
 - **26 May 04** – RHIC cryo switched to LN₂ (27 weeks total)
- **Details – as run/planned** (*some details based on '04 run and are subject to change*)
 - **18 Nov 04** – Cool down begins
 - ~~25~~ **23 Nov 04** – Blue Ring Cold
 - ~~2 Dec~~ **28 Nov 04** – Yellow Cold
 - **29 Nov 04** – Short in Yellow Ring, schedule delay
 - ~~3~~ **Dec ??** - “2 week” RHIC setup with beam begins
 - ~~16~~ **?? Dec 04** – “2 week” ramp-up with colliding beams begins
 - **Late evening stores for experiments**
 - **2, 8 hr accesses for experiments if needed (based on last year’s plan)**
 - ~~30~~ **?? Dec 04** – 8 week physics with 100 GeV/n x 100 GeV/n Cu-Cu begins
 - **12 Jan 05** - First experiment access, bi-weekly thereafter (all up to 8 hrs and only if needed)
 - **5 Jan 05** - First beam experiment, weekly thereafter (up to 12 hrs/week)
 - **24 Feb 05** – Nominal end of 8 week Cu-Cu run
 - **24 Feb 05** – begin 3 week pp setup
 - **17 Mar 05** – Begin 9 week pp Physics run
 - **19 May 05** – end 9 week pp run, RHIC Run 5 ends
 - **26 May 04** – Cryo switch to LN₂ complete, 27 weeks of RHIC cryo operation ends

[as of 29 Nov](#)

BNL Energy Use FY 2004-5

(C-AD Bldg power is in site base)



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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).

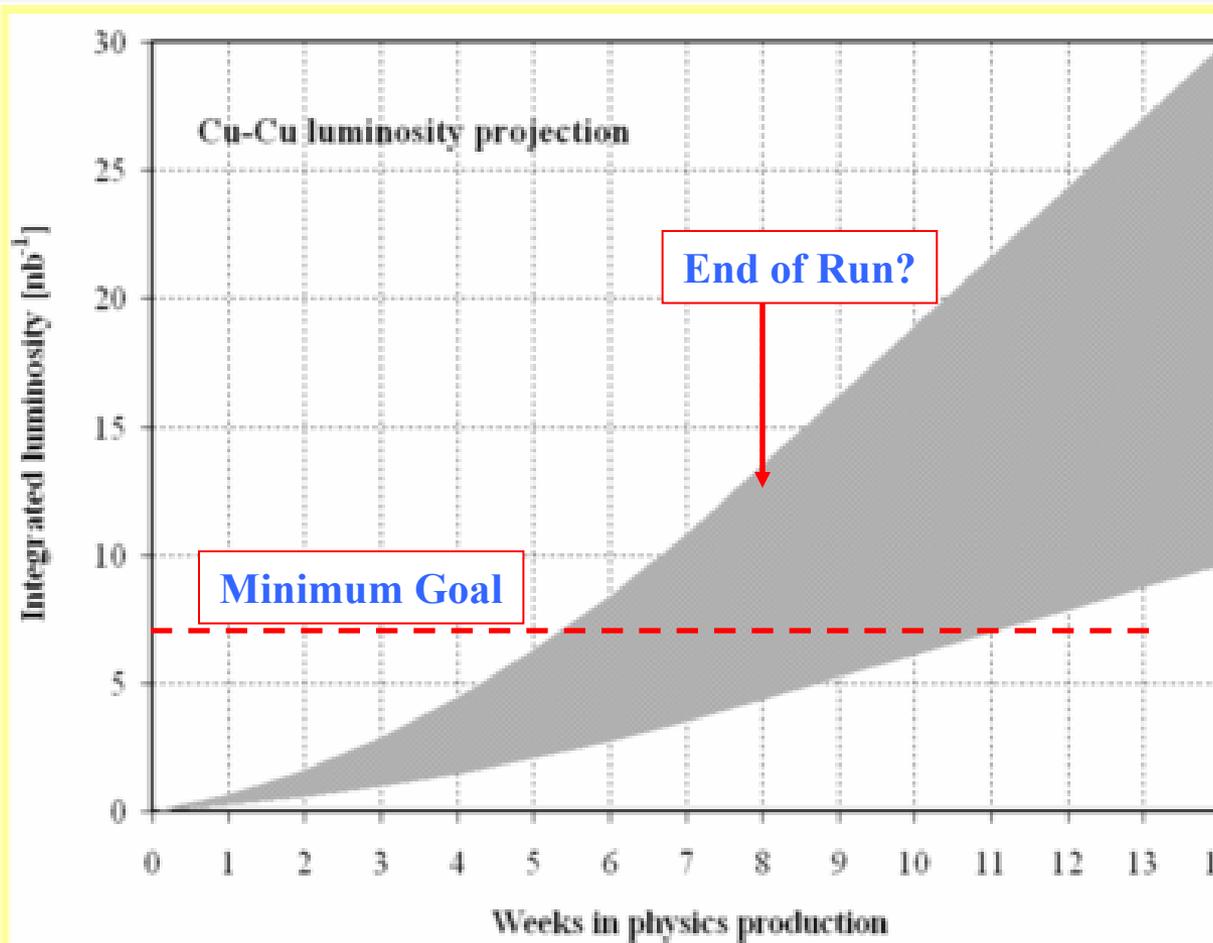
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PAC Recommendations (very short summary):

- 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

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Projections based on the following beam intensity:

Minimum :
 $45 * 2.9 \times 10^9$

Maximum:
 $28 * 6.6 \times 10^9$

Luminosity evolution:
8 weeks ramp-up during physics production

$\beta^* = 1$ meter