RHIC Planning Group: Goal/Charge

Map the broad scientific priorities of the RHIC community onto a realistic schedule for facility operations and upgrades.

Starting points…

- Beam Use Requests and Decadal Plans
- PAC and Detector Adv. Comm. Recommendations
- Requirements for machine operation and evolution
- DOE Budget Guidance
- NSAC Long Range Planning process

5 Year Plan

10 Year Outlook

- **Optimize ops scenarios**
- **Re-establish RHIC II**
- **Update plans for eRHIC**

Input to BNL plan for DOE Review

RHIC Planning Group

Convenors: T. Kirk, T. Ludlam

PHENIX	**STAR**	**PHOBOS**	**BRAHMS**
A. Drees	W. Christie	M. Baker	F. Videbaek
E. O'Brien	T. Hallman	G. Roland	J.H. Lee
W. Zajc	R. Majka	P. Steinberg	
	S. Vigdor		
Accelerator	**Theory**	**Computing**	**PAC Invited**
J. Alessi	D. Kharzeev	B. Gibbard	P. Jacobs*
I. Ben Zvi	W. Vogelsang*	T. Throwe	S.-Y. Lee
W. Fischer			J. Nagle
P. Pile			
V. Ptitsyn			
T. Roser			

Ex Officio: S. Aronson, D. Lowenstein, P. Paul

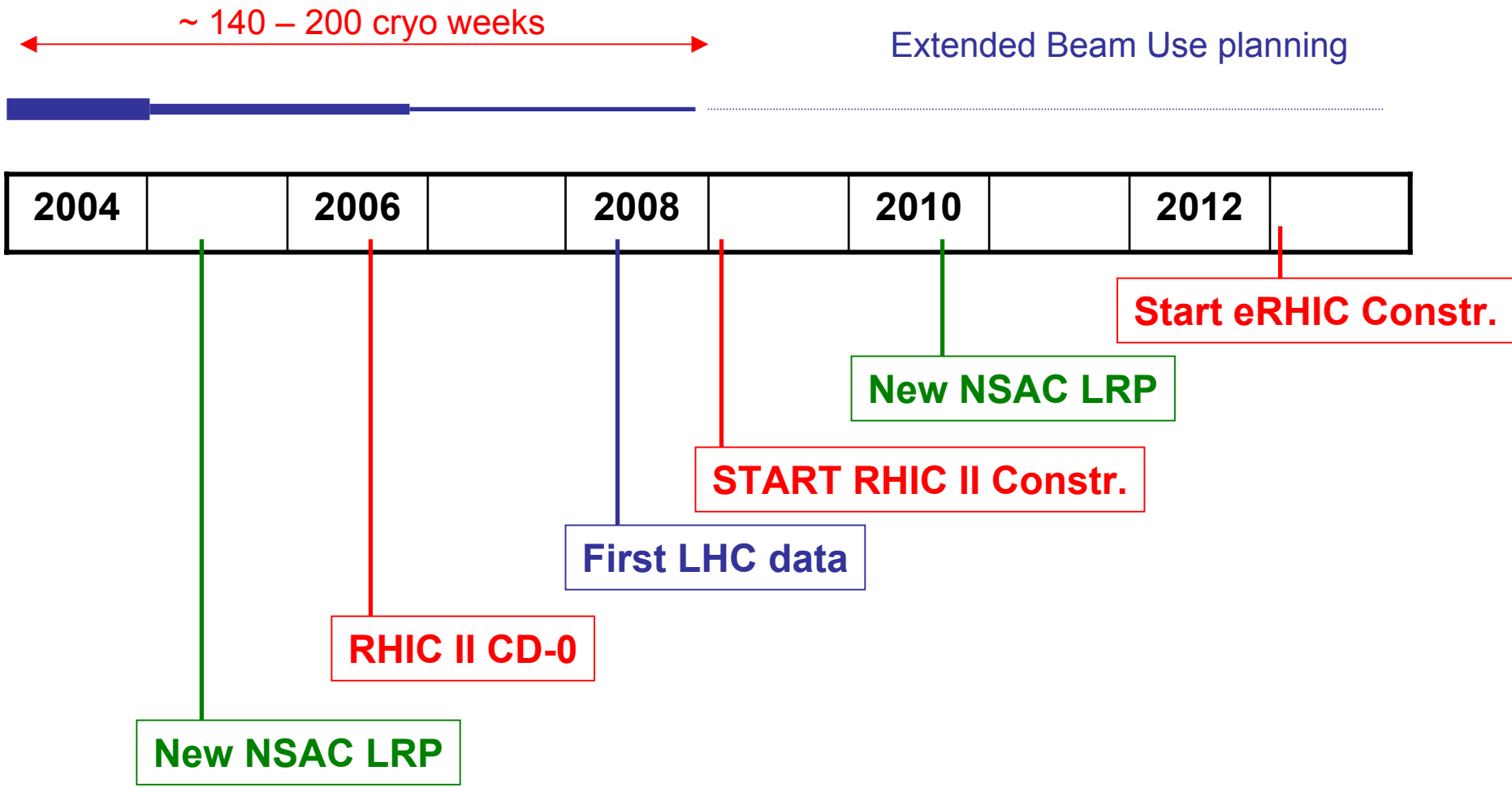
* Not confirmed

Physics Questions

We have long lists of important measurements…

For this exercise we need to distill a few key questions to convey the general importance of the program.

Some planning mileposts…



RHIC Planning Group: Deliverables

Short document:

- Physics
- 5-year ops scenarios
- R&D and near-term Upgrades
- RHIC II Project
  - Scope, cost, timescale
- Path to eRHIC

Open Workshop

Planning group tasks

1. Fill out straw-man operations scenario – 5 years
   - C-A guidance for machine operations & lum development
     Significant changes to “design” expectations
   - Beam Use Proposals and PAC recommendations
   - Range of budget scenarios
   - Heavy ions/Spin

2. Machine Improvements
   R&D EBIS AIP

3. Detector Improvements
   R&D Schedule of upgrades

Increased ops costs

Planning Group Tasks… cont'd

4. RHIC II Project
   Scope Cost Need
   - Prep for CD-0; position the project in 2005 LRP
   - New detectors?
   - Computing
     - Moore's law growth o.k.?
     - Upgrade RCF? GRID?

5. eRHIC
   Timeline prep for CD-0 Position in LRP
   - Scientific collaboration
   - Machine Collaboration

6. Organize "Open Workshop"
   ~Mid-November

Strawman Run Plan – May 2003

Year	Run Plan	Physics
2000	Au-Au at 130A GeV	First look at HI collisions at in the new energy range
2001–2002	Au-Au at 200A GeV Comm./run pp at 200 GeV Au-Au at low E: 19A GeV	Global properties; particle spectra; first look at hard scattering. Comparison data and first spin run Global connection to SPS energy range
2003	d-Au at 100A GeV pp at 200 GeV	Comparison data for Au-Au analysis; low-x physics in cold nuclear matter Spin run/Commission rotators
2004	Au-Au at 200A GeV pp at 200 GeV	"Long Run" for high statistics, rare events Spin Run/Commission jet target
2005	Si-Si/Cu-Cu at 100A GeV pp at 200 & 500 GeV	Comparison studies: surface/volume & impact parameter effects First "full capability" spin run
2006-2010	Long Au+Au, p+p, p(d)+Au pp at 200 & 500 GeV	High-statistics runs with upgraded detectors and luminosity. Explore hot QCD matter with rare probes: Open Charm, Beauty, tagged jets Extended study: nucleon spin structure