NPP All Hands (Minds) Meeting

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BROOKHAVEN NATIONAL LABORATORY

a passion for discovery

Office of Science
U.S. DEPARTMENT OF ENERGY

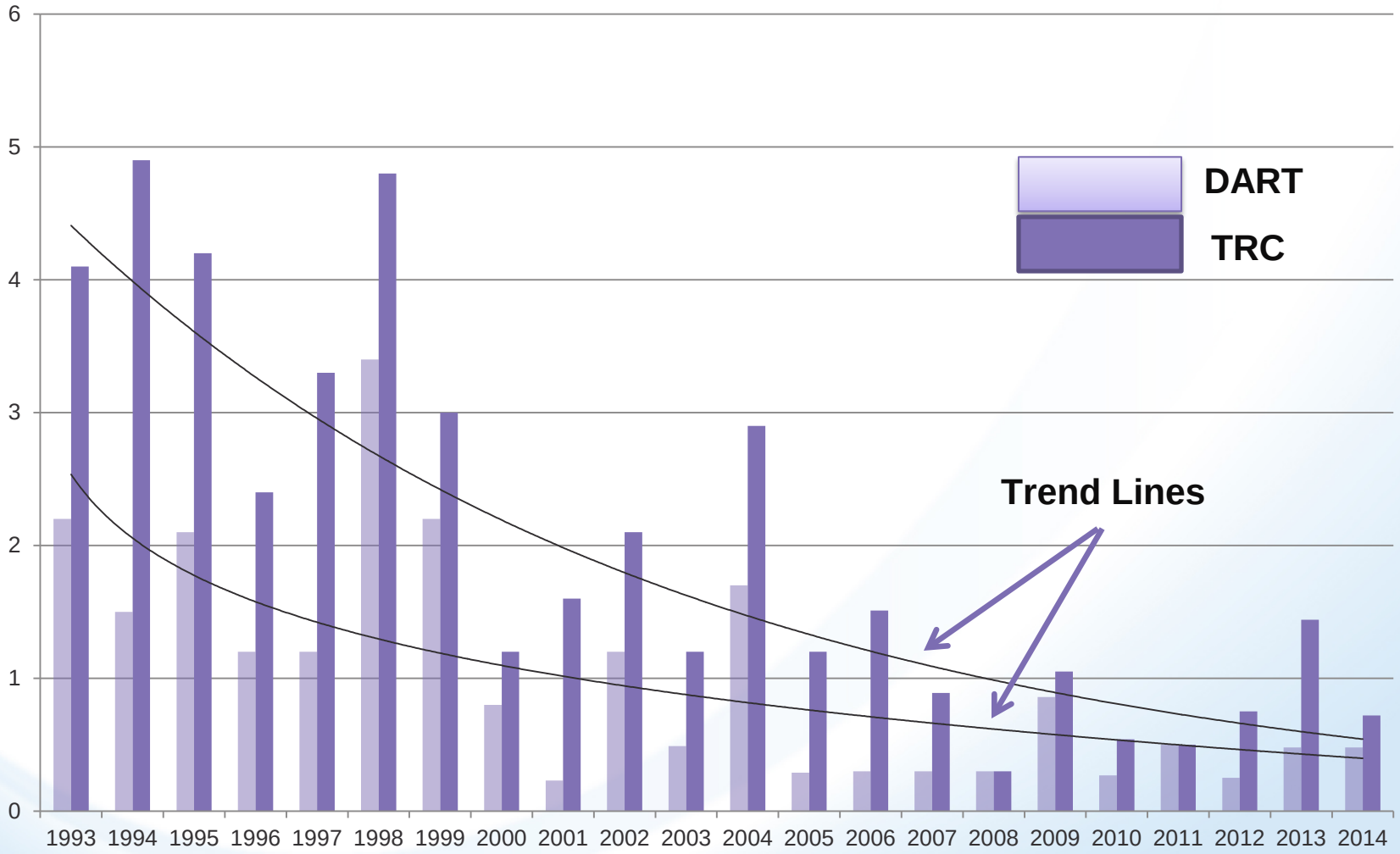
Thank you!

- For another excellent year with outstanding performance in all respects:
  - SAFETY
  - FACILITY OPERATIONS
  - SCIENTIFIC OUTPUT
  - ENGAGEMENT

Recordable Occupational Injuries FY14

Organization	DART Rate per 100 FTE	TRC Rate per 100 FTE
C-AD	2 cases *0.48*	3 cases *0.72*
FermiLab Employees	7 cases *0.39*	18 cases *1.01*
BNL	15 cases *0.52*	31 cases *1.08*

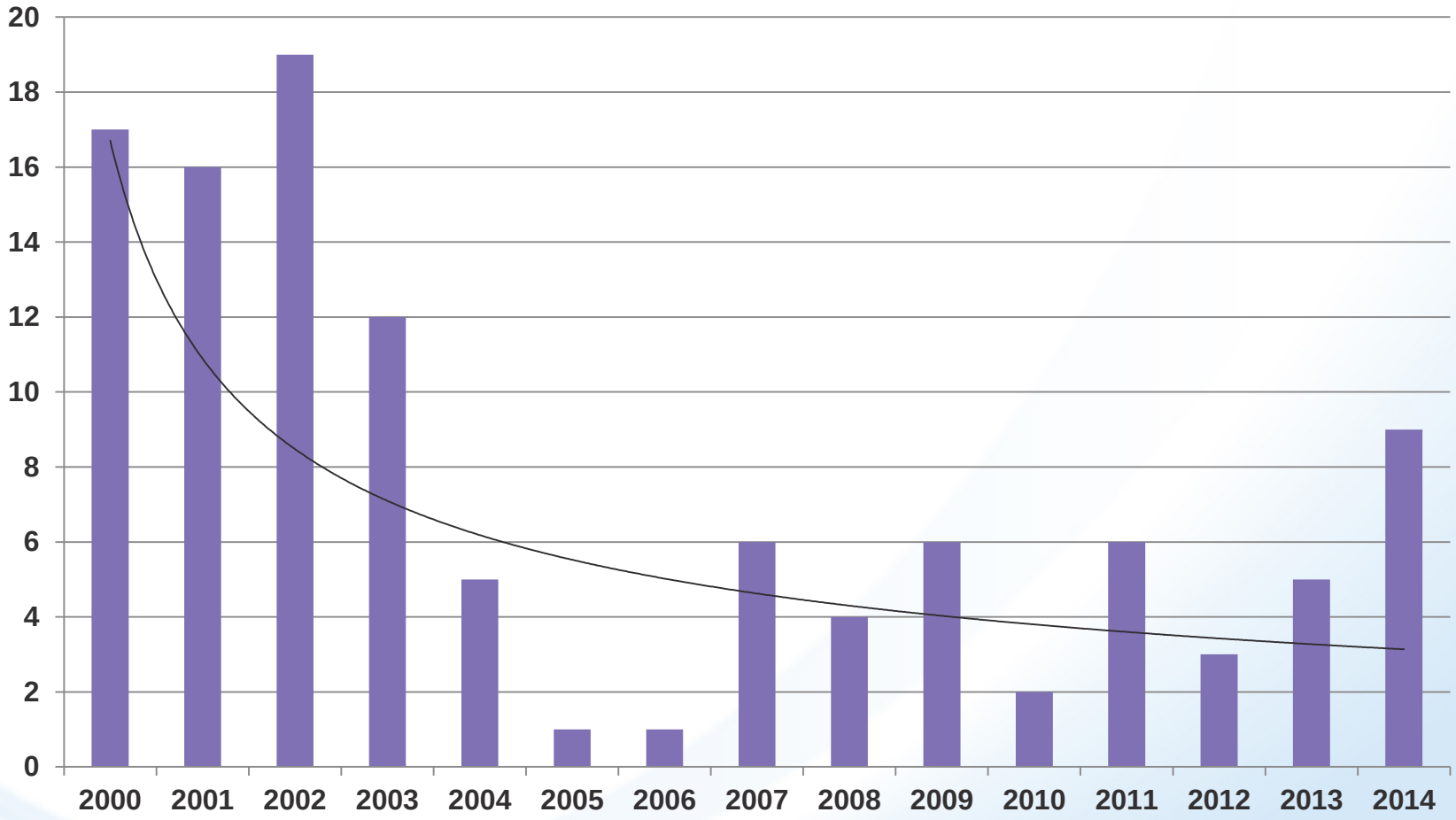
C-AD DART and TRC Rate TREND



C-AD FY14 Recordable Injury Incidents

C-AD DART and TRC	• A technician performing leak checks injured his foot and received first aid at the OMC. Later went to an orthopedist and returned to work on restrictions
Assigned F&O DART and TRC	• An employee slipped and fell on a water and ice covered surface. At the OMC, first aid was given. The worker was sent home and lost time from work
C-AD TRC	• An employee lacerated his fingers against equipment in the Machine Shop. He was sent to a local ER for sutures

C-AD First-Aid Case Trend



Budget Outlook

- Neither dramatically good nor bad
- Any budget (Presidential, House, Senate) would be good for NP
- Hope for some improvements in HEP after P5
- Year-long CR possible

- Standard Labor Rate increase of ~5% is a problem

HEP Planning

- May 22-23: HEPAP meeting with P5 Report release
- June 23-24: BNL OHEP Site Review
- July 23-20: HEP Theory Review
- Sept 18-19: ATLAS Phase 1 Upgrade CD-2/3 review

- BNL HEP Program is very well aligned with P5 rec's
- BNL HEP budgets have seen *increases* in select areas

NP LRP Charge

The new NSAC Long Range Plan (LRP) should articulate the scope and the scientific challenges of nuclear physics today, what progress has been made since the last LRP, and the impacts of these accomplishments both within and outside of the field. It should identify and prioritize the most compelling scientific opportunities for the U.S. program to pursue over the next decade and articulate their scientific impact. A national coordinated strategy for the use of existing and planned capabilities, both domestic and international, and the rationale for new investments should be articulated. To be most helpful, the LRP should indicate what resources and funding levels would be required (including construction of new facilities, mid-scale instrumentation, and Major Items of Equipment) to maintain a world-leadership position in nuclear physics research and what the impacts are and priorities should be if the funding available provides for constant level of effort from the FY 2015 President's Budget Request into the out-years (FY 2016-2025), with constant level of effort defined using the published OMB inflators for FY 2016 through FY 2025. A key element of the new NSAC LRP should be the Program's sustainability under the budget scenarios considered.

Budget guidance: FY 2015 + Cost of Living

LRP Timeline

- Town Meetings Complete
  - Joint QCD (hadrons and QCD matter, EIC)
  - Nuclear structure & related astrophysics
  - Fundamental symmetries, neutrinos & astrophysics
  - Computational NP, Education

- White papers due January 2015
- LRP Resolution meeting 16-20 April 2015
- LRP from NSAC to DOE in October 2015

- QCD Town meeting was very successful
  - Good recommendation for RHIC
  - Unanimous joint recommendation for EIC

Hot QCD Recommendation 1

The discoveries of the past decade have posed or sharpened questions that are central to understanding the nature, structure, and origin of the hottest liquid form of matter that the universe has ever seen. As our highest priority we recommend a program to complete the search for the critical point in the QCD phase diagram and to exploit the newly realized potential of exploring the QGP's structure at multiple length scales with jets at RHIC and LHC energies. This requires implementation of new capabilities of the RHIC facility (a state-of-the-art jet detector such as sPHENIX and luminosity upgrades for running at low energies) needed to complete its scientific mission, continued strong U.S. participation in the LHC heavy-ion program, and strong investment in a broad range of theoretical efforts employing various analytical and computational methods.

Joint QCD Recommendation

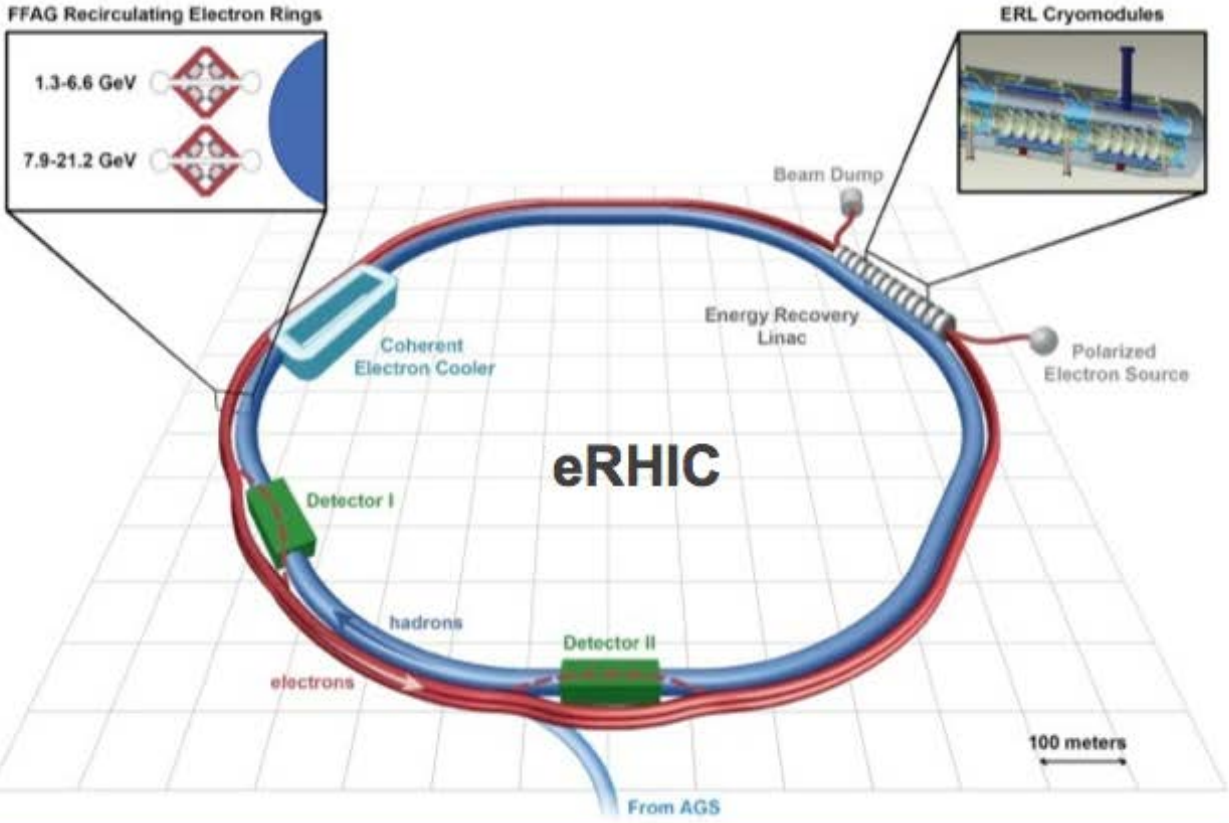
A high luminosity, high-energy polarized Electron Ion Collider (EIC) is the U.S. QCD Community's highest priority for future construction.

The EIC will, for the first time, precisely image the gluons and sea quarks in the proton and nuclei, resolve the proton's internal structure including the origin of its spin, and explore a new QCD frontier of ultra-dense gluon fields in nuclei at high energy. These advances are made possible by the EIC's unique capability to collide polarized electrons with polarized protons and light ions at unprecedented luminosity and with heavy nuclei at high energy. EIC will be absolutely essential to maintain U.S. leadership in fundamental nuclear physics research in the coming decades.

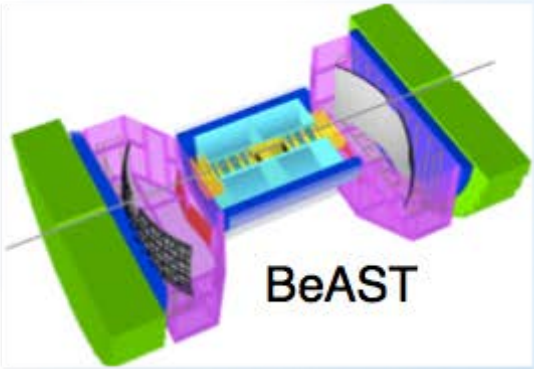
EIC Design

eRHIC ERL + FFAG ring design @ $10^{33}/cm^2s$

21.2 GeV e^- + 255 GeV p or 100 GeV/u Au.



Detector Options



When completed, eRHIC will be the most advanced and energy efficient accelerator in the world

Laboratory Work Week and Chargeable Time

- The Laboratory work week starts on Monday at 12:00 a.m. and ends the following Sunday at 11:59 p.m.
- Although the Laboratory operates continuously, the normal work day consists ***of eight (8) hours per day*** between 7:30 a.m. and 5:30 p.m., Monday through Friday, with an unpaid lunch break.
- Supervisors may modify the normal schedule of individual employees to meet the needs of the organization
- Staff may take any amount of time for lunch which they and their supervisor agree to, however, staff member must record all actual hours worked and meet the minimum target hours

Accountability Initiative

Six Source Influence Model

BNL Barriers

	Motivation	Ability
Personal	Why bother? Fear of person and/or repercussions	Lack the skill to hold difficult conversations
Social	Peer pressure	Could make the task more complicated
Structural	Resources – time, funding	Don't know who to go to? Accessibility of management

Ongoing Activities

- Small groups of “opinion leaders” have identified action items addressing each of the 6 sources:
  - Source 1 & 3: Building trust
  - Source 2: Employee and supervisor training
  - Source 4: 360° and upward performance feedback
  - Source 5: Simplified and transparent reward system
  - Source 6: Increased worker involvement
    - in corrective actions and SBMS revisions
    - 311 Solutions Center
    - Idea sharing by supervisors & opinion leaders
    - Increased staff consultation on decisions
    - Publish Policy Council minutes

Various

- BNL management contract award announcement expected November 5-15
- Science Task Force on food service
- Reminder: Submit published version of manuscripts to Information Services

- Time to begin thinking about goal setting for FY15

- Let’s make this the safest year ever
  - Keep your head in the game
  - Be wary of slips, trips, and falls - especially in winter