

NPP All Hands Meeting

6 April 2016

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BROOKHAVEN
NATIONAL LABORATORY
a passion for discovery



Agenda

- Safety
- Property Presentation (Donna King, Aundrea Clifton)
- News: RHIC, sPHENIX, EIC, ATLAS, Management
- Strategic Planning and Growth Opportunities

Safety

- FY 2016 started out well, but we cannot let our guards down
- Several recent incidents at NSLS-II have raised concerns about electrical safety and LOTO implementation:
 - Need to improve work planning and implementation
 - Do not take shortcuts
- Policy highlights:
 - We are all responsible for safety; consider the safety of others
 - Integrate environmental protection, safety and security into our research and operations
 - Adhere to SBMS requirements
 - Reduce risks, conserve resources, protect property, prevent pollution

U.S. Government Property

Property @ BNL

- Property is a high concern to DOE and BSA:
 - Loss, damage, theft, fraud (even if only attempted) are serious matters
 - If you notice or suspect a violation of BNL ethics standards with regard to property, you need to report it to your supervisor
 - Don't cover up for loose ethics standards of others – you may become part of the problem, not part of the solution
- Let's welcome Donna King & Aundrea Clifton

News

RHIC Run 16

- High luminosity 200 GeV Au-Au run (10 weeks)
- Goal: Study heavy flavor flow, especially charmed baryons, parton energy loss in QGP, quarkonium studies (for NP milestone DM12)
- d+Au beam energy scan (5 weeks)
- Goal: Study beam energy dependence of small system collectivity and QGP properties
- Proof of Principle test of coherent electron cooling (1 week)

- Run-16 went very well until a diode inside a dipole magnet in the blue ring malfunctioned on March 18.
- Repair required warm-up of sector 10-11, opening of dipole, replacement of the diode, and cool-down. Work is ahead of schedule and Run-16 is close to resume. Amazing team work – congratulations & thank you!
- Low power costs may allow us to extend the run to make up for (most of the) lost time

sPHENIX & iTPC Status

New detector collaboration:

- Institutional Board formed in August 2015; By-Laws approved
- First collaboration meeting in December 2015 at Rutgers
 - Collaboration spokesperson team (Morrison/Roland) elected

sPHENIX Project progress:

- Science case recommended in new NSAC LRP
- Preliminary CDR completed
- Director's cost and schedule review in November 2015
- DOE Baseline design scope due end of May 2016
- sPHENIX solenoid successfully operated at 100 A
- Ongoing discussions with DOE about project structure and official project start

STAR iTPC upgrade project launched (Project Manager: F. Videbaek)

EIC Planning

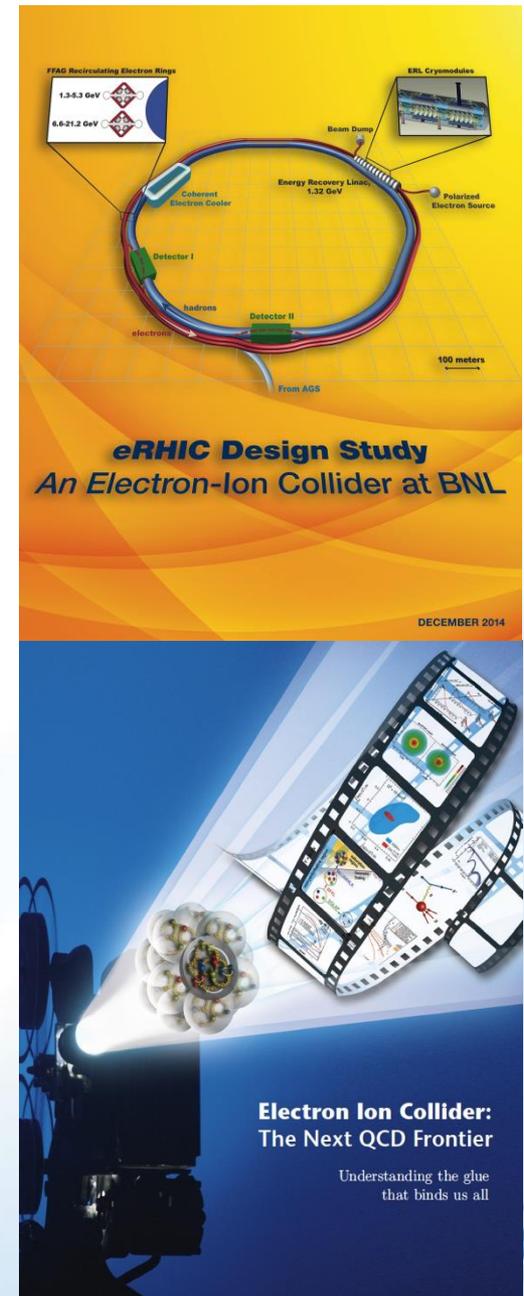
EIC Users Group kick-off meeting held at UC Berkeley in January 2016; next meeting at ANL in July.

NRC study of EIC science case to commence soon; report expected in mid-2017.

DOE will convene a panel advising on EIC accelerator R&D and launch a national R&D program. Generic EIC Detector R&D Program continues.

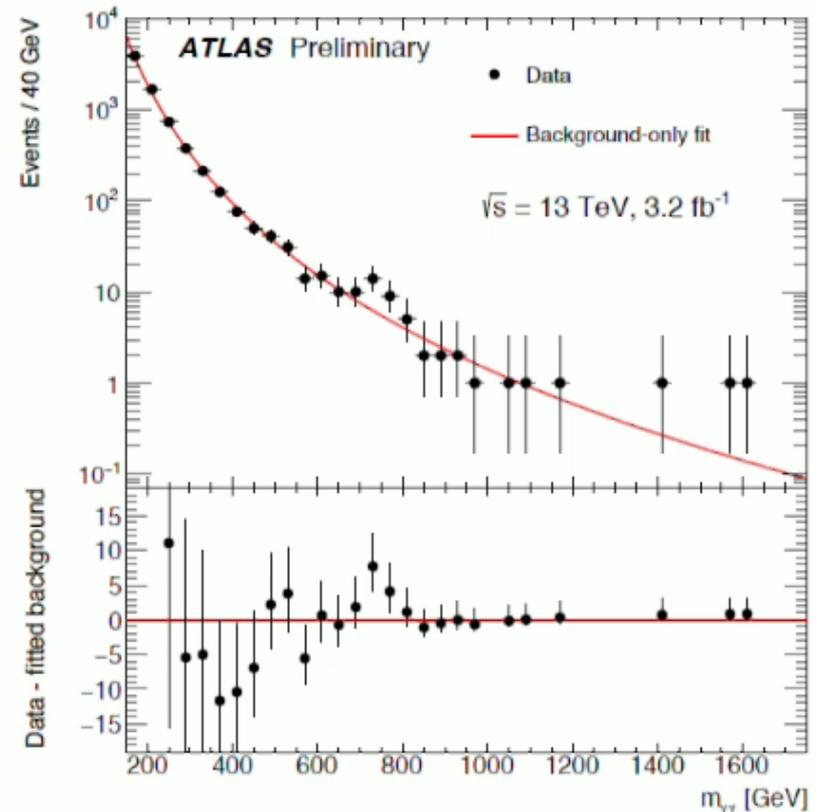
NY State funding for Cbeta project with Cornell to start in June 2016.

eRHIC R&D Advisory Committee meets April 7-8, 2016.



ATLAS News

- ATLAS Phase II Director's review and NSF review went very well – next hurdle is NSF MREFC decision
- Search for permanent Phase II Project Manager is under way
- ATLAS (and CMS) see hints of a new boson with mass ~ 750 GeV in $\gamma\gamma$ channel
- LHC Run 2 resuming
- 2016 data will bring clarity



Management News

- Laur Littenberg will step down from Chair's position and retire from BNL on June 30,2016
- Task Force (Aschenauer, Bishai, Dawson, Gordon, Kettell, Morrison) has been formed to advise on possible internal and external candidates for Chair
- Michael Ernst retires from BNL on June 30, 2016
- Eric Lançon (currently head of ATLAS computing at CERN) is joining BNL and will take over as RACF Director
- Mark Palmer is new Director of the ATF
- Search for Director of eRHIC R&D is under way

Growth

Why Growth?

- BNL cannot prosper when basic science budgets are flat
- Rising salaries and other costs threaten the traditional scientific programs
- Large carryovers from ARRA and NSLS-II have allowed us to postpone facing reality – until now
 - Example: RIF in RHIC experimental operations
 - Ameliorated by SSVSP and actions by Physics Dept management
- Only viable path forward is to secure existing scientific programs and grow applied programs
 - Other Labs are far ahead of us
 - Can be achieved without sacrificing quality of discovery science
 - Focus on areas of NPP strength
 - Applications: NSRL expansion, medical accelerators, medical isotopes, SC magnets, ASICs, etc.
 - Strategic planning at Lab level led by Lee Cheatham

NPP Growth Opportunities

Opportunity for Growth	Funding (\$k)	%Probability	Fiscal Years
LHC Hi-Lumi Crab Cavities	\$20,000	90%	FY 2018 - FY 2021
NSRL Expansion	\$750	80%	FY2018 cont.
Hadron Therapy Facility	\$2,000	40%	FY 2018 - FY 2020
Isotope Facility Upgrade	\$20,000	40%	FY 2018 - FY 2020
Tandem Applications	\$500	60%	FY2017 cont.
eRHIC	\$1,000,000	80%	FY 2018 - FY 2027
ASIC Development	\$5,000	80%	FY2017 cont.
ATLAS Phase II	\$30,908	90%	FY 2017 - FY 2025
LBNF/DUNE	\$19,750	90%	FY 2016 - FY 2020
Computing Initiatives (Physics)	\$13,232	60%	FY 2016 - FY 2020
sPHENIX	Re-direct	90%	FY 2016 - FY 2022
LHC Hi-Lumi Magnets	\$25,000	90%	FY 2018 - FY 2021
KEK Correctors	\$3,000	80%	FY 2018 - FY 2020