RHIC/AGS UEC: Business Meeting

Peter Steinberg, BNL / 13 May 2026 / 2026 RHIC/AGS Users Meeting

Full membership list (& expiration!)

- **Chairs**
  - Peter Steinberg (27) - sPHENIX
  - Daniel Brandenburg (28) - STAR
  - Anders Knospe (26) - sPHENIX & STAR
- **Elected members**
  - Ron Belmont (27) - sPHENIX
  - Ross Corliss (26) - sPHENIX
  - Yeonju Go (27) - sPHENIX
  - Christine Nattrass (26) - sPHENIX
  - Stacyann Nelson (28) - sPHENIX
  - Rosi Reed (27) - sPHENIX & STAR
  - Marzia Rosati (28) -sPHENIX
  - Maya Shimomura (26) - sPHENIX
  - Richard Witt (28) - STAR
- **Early-career**
  - Olaiya Olokunboyo (26) - ePIC
  - Dekrayat Almaalol (26) - Theory
  - Alexander Patton (26) - sPHENIX
- **Appointed**
  - Rithya Kunnawalkam Elayavalli (28)
- **GUV**
  - Kelly Giuffreda (BNL)
  - Kathy Nasta (BNL)
  - Teri Lazar

We represent the RHIC Complex:
Need more representation
from **CAD, BLIP, NSRL, Theory!**

A time of great transition

- **Big changes in the scientific activities at the lab**
  - RHIC has ended operations
  - EIC construction is beginning
  - End of the STAR and sPHENIX groups at the lab
  - ePIC construction
  - (TBD: expand the RHIC/AGS UEC to accommodate EIC/ePIC!)

- **However, while some things are ending, many just beginning**
  - RHIC science mission is still underway, and has (at least) 7-10 years to go

- **All of this will affect the way users (you guys) interact with the lab**
  - There is always a need for users to articulate what they need to have vital scientific lives at BNL

- **And this is what the UEC is for!**

Our basic functions

- **We have five subgroups, which highlight our goals**
  - FPP - Funding, Politics and Programmatics
    - *Congressional visits, representation at town meetings*
  - SAS - Site Access and Science
    - *Interactions with guest services/facilities/etc.*
  - QOL - Quality of life
    - *Cafeteria, gym, child care*
  - Meetings, Communications, Outreach
    - *DNP Open Forum, Annual Users Meeting*
    - *Awards: Merit, Thesis, Sambamurti*
  - Workforce support and development
    - *Just as important as ever*

Guest & Facilities discussions

- **Traffic Circle safety concerns**
  - New guard booth at end of FY26
- **Access to lab with Uber/Lyft**
  - New policies in FY26: if you have an actual building destination, front gate will allow pickup/dropoff (I've tested this) if your driver has a REAL ID
- **Status of cafeteria/food service**
  - Cafeteria is viable so far (phew!)
  - 2025 summer late hours did not get much use, so scaled down
  - Lunch delivery available - requested to expand service, e.g. to RHIC buildings
- **Status of lab transportation**
  - Lab very concerned with transportation to experiments, but shuttle hours still limited to evening (9:45 pm)
  - Bus ordered to help with capacity at Ronkonkoma
  - On-site shuttle: easy access with TripShot, even for non-staff?
- **Status of new "Yaphank-BNL" LIRR train station**
  - Construction proceedings - opening soon (this week?), but concern about limited trains to/from station
- **Bike access, e.g. to Walmart, but not being on Wm Floyd (F&O working on bike program - SAS task)**
- **Coffee service**
  - New coffee service in SUSC/101
  - RHIC users consistently want coffee service back in 400 (easier to reach)

Yaphank-BNL, this week :)

May 11

View in Browser

Plan Ahead New Yaphank-BNL Opens May 15

The new **Yaphank-BNL** Station opens on Friday, May 15

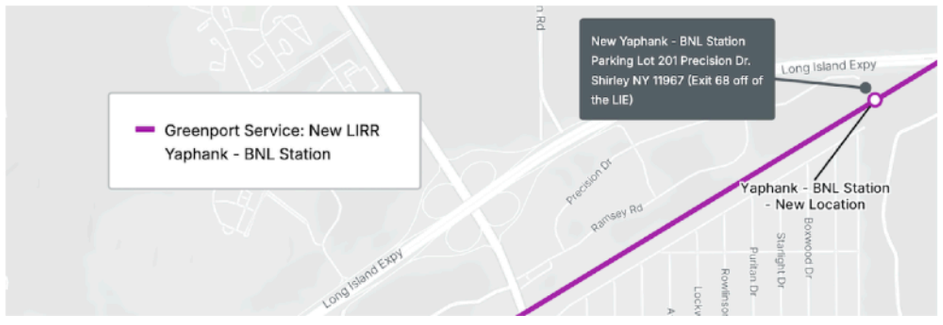
The new station has a Kiss & Ride with a bus-loop, Shelter Shed, ADA Compliant Parking and Access, Information Totem and a Help Point System.

The new station is located at 201 Precision Dr, Shirley, NY 11967, 3 miles east of the old **Yaphank** station. It is closer to both the William Floyd Parkway, the Long Island Expressway, and Brookhaven National Laboratory.

See below for a map showing the location of the old and new station.

What's Happening?

We're opening a new station.



May 12

View in Browser

Current Yaphank Station Remains Open

The opening of the new **Yaphank-BNL** Station has been postponed.

Please continue to use the current **Yaphank** station until further notice.

Metropolitan Transportation Authority
2 Broadway, New York, NY 10004

DNP Open Forum

- **Organized yearly by chair-elect**
  - Primarily a great way for younger members of the community to interact with senior colleagues, and lab management

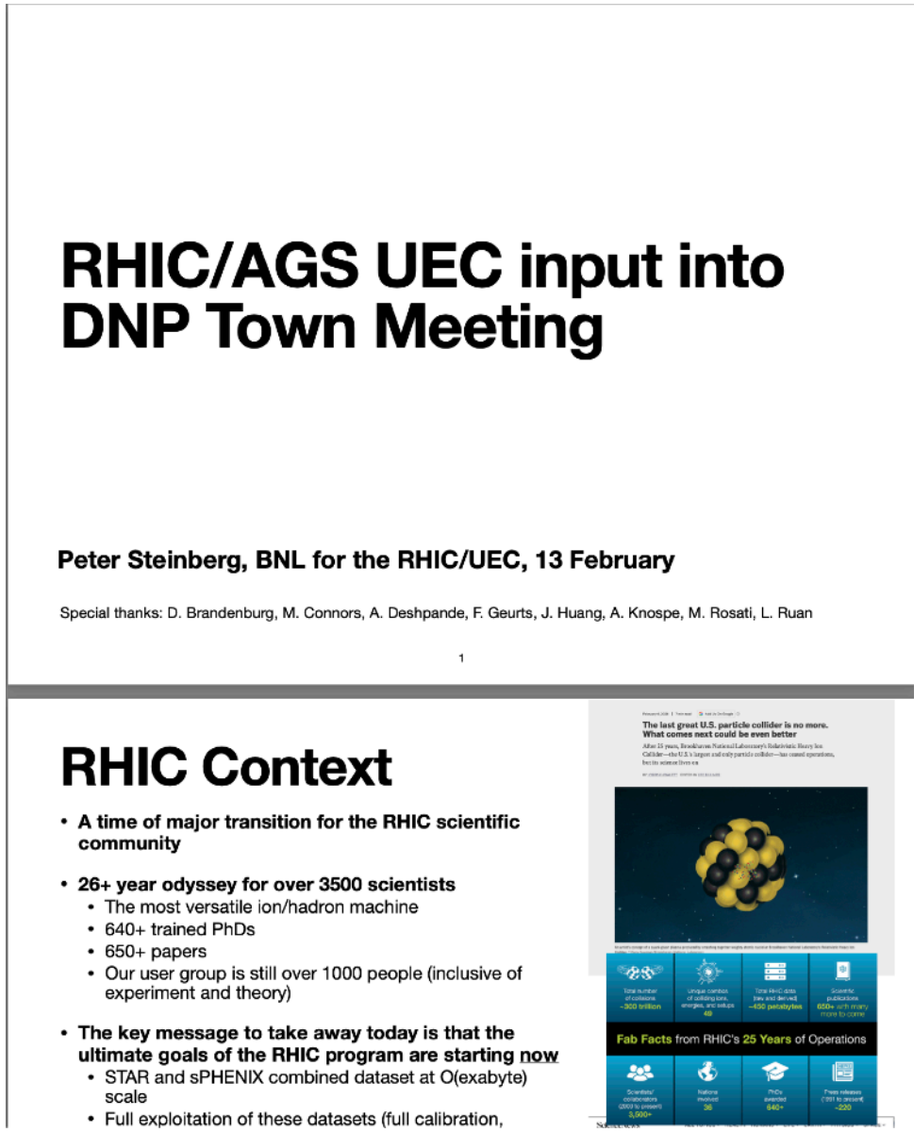
- **Last few topics**
  - October 2024: Q&A about the EIC with Abhay Deshpande and Or Hen
  - October 2025: Symposium on completing the RHIC mission and NP in the next decade

- **2025 had a very notable Q&A panel**
  - Cuts to LHC HI upgrades
  - Awareness of changes in DOE, e.g. NP/HEP merger
  - But highlighted that we needed to be more organized, both internally and with other UGs (JLab, FRIB, etc.)

DNP Town Halls

- **With the funding challenges faced by the community in FY26, the DNP town halls became very significant**

- **While we were not involved in the organization of those meetings, we took a very active role in making sure the RHIC community was properly represented**
  - Open letters to DNP management, with support from RHIC & LHC experimental community
  - Short uninvited presentation during the January meeting
  - Official report in the February meeting (https://indico.phys.utk.edu/event/297/timetable/#20260213.detailed)



RHIC/AGS UEC input into DNP Town Meeting

Peter Steinberg, BNL for the RHIC/UEC, 13 February

Special thanks: D. Brandenburg, M. Connors, A. Deshpande, F. Geurts, J. Huang, A. Knospe, M. Rosati, L. Ruan

1

RHIC Context

- **A time of major transition for the RHIC scientific community**
- **26+ year odyssey for over 3500 scientists**
  - The most versatile ion/hadron machine
  - 640+ trained PhDs
  - 650+ papers
  - Our user group is still over 1000 people (inclusive of experiment and theory)
- **The key message to take away today is that the ultimate goals of the RHIC program are starting now**
  - STAR and sPHENIX combined dataset at O(exabyte) scale
  - Full exploitation of these datasets (full calibration,

The last great U.S. particle collider is no more. What comes next could be even better

Fab Facts from RHIC's 25 Years of Operations

DC Day 2026

- **A crucial responsibility of the US NP community**
  - The offices we visit reliably support science and understand its value for society, the economy and national security
  - They always value hearing and seeing who we are, what we do, and why we do it

- **RHIC UEC plays a strong role with the preparations**
  - Rustling up the RHIC community to attend
  - Coordinating with the other user groups
  - Coordinating with Battelle (BNL Government relations) and the lobbyists who coordinate the day and set up the meeting

- **We cannot thank you all enough, both the participants, and the lab support!**
  - BNL & NPP offered crucial travel support for both lab employees

DC Day 2026 👊🇺🇸🔥

- **April 21, 2026 with over 80 attendees and many many meetings with Congressional offices, from staffers to senators**

- **We came with 3 “asks”, each after *intense* debate among the users, the labs, and the lobbyists**

Our Requests for FY 2027:

1. Support at least $887 million for the DOE-SC Nuclear Physics program in FY 2027. This amount is consistent with the funding levels provided for FY 2026, plus a 2.4% inflation adjustment, in support of the priorities of the 2023 NSAC Long Range Plan. This request for FY 2027 focuses on maintaining balance within the program’s budget portfolio among research across the spectrum of the Nuclear Physics community, workforce development, facility operations, new facility construction, and support for the application of artificial intelligence (AI). Ensuring this balance in FY 2027 will help guarantee long-term innovation in nuclear physics and support the innovative use of AI in nuclear physics to aid the success of the Genesis Mission.

2. Support overall funding for the Office of Science in FY 2027 at $9.5 billion, which is the same level supported by the Energy Sciences Coalition of academic and industry organizations.

3. Support science funding for the NSF in FY 2027. NSF funding supports essential components of the nuclear physics portfolio within the 2023 NSAC Long Range Plan. NSF funding would support research on neutrinoless double beta decay, spanning both theory and experiment, as well as new approaches in theoretical, computational, and experimental research that explore the fundamental laws of physics, the behavior of physical systems, and astrophysical phenomena.

- **Please note that RHIC being a “past” facility changes our role in some discussions, and in the messaging**
  - However, we still represent 1000+ users
  - This gives us a vital seat at the table

Next steps post-DC day

- **It is important that all participants follow up, even now**
  - We have a template going out this week

- **Non participants should contact their local offices, and visit if possible, to explain RHIC science and the importance of the research program**
  - We can provide electronic versions of the materials
  - NP “ask" FY27:
    - *https://drive.google.com/file/d/1m2HBCsBgFLKTKjdEPiKHbbc16HKxtKVm/view?usp=sharing*
  - RHIC “one pager”
    - *https://drive.google.com/file/d/1MV7SWJfl8uycA4l_UU4Jg29JUifOgGhU/view?usp=sharing*

- **Chairs will have bimonthly meeting with Battelle team, to identify further opportunities to contact congress to urge support of the FY27 NP ask**
  - Next one is next week May 21st, 1pm
  - Hearing that House markup to the FY27 budget (9% cut to NP) is coming next week

Engagement with US NP

- **In the current environment, good communication between the users, labs, and DOE is crucial**

- **The “5 chairs” (RHIC, JLab, FRIB, EIC and ATLAS/ANL) have been meeting regularly in 2026**
  - Organization for DC day
  - Meetings with DOE-SC before DC day
  - Meetings with lab directors

- **This is a new, evolving aspect of the UEC, which is based on constant discussions between NPP, UEC, and the RHIC experiments**
  - Worked well for DC day, and we hope to maintain this momentum going forward

- **RHIC/AGS UEC is officially representative body, and we plan to represent as best we can…**

2026 UEC Elections

- **Now is your chance to help out, as an elected member of the RHIC community: nominations are open until June 1, with elections to follow in mid-June**
  - Improve the quality of life at the lab
  - Help the lab understand the particular issues users face
  - Represent the NP community in DC
  - Represent the NP community to DOE

- **Time commitment is not large, but the opportunities are**
  - 1 hour meeting/month - always on Zoom (for now)
  - We constantly find issues that we need the UEC members to investigate - get involved with how the lab works!

- **Please hit the link above to nominate yourself or a colleague to be chair-elect, regular member, or junior (EC) member**
  - Need more representation from **CAD, BLIP, NSRL, Theory**!

Special thanks…

Kelly Guiffreda

Teri Lazar

Angela Melocoton

Kathy Nasta

RHIC 1-pager

RHIC

Total number of collisions
~300 trillion

Unique combos of colliding ions, energies, and setups
49

Total RHIC data
~half a billion gigabytes

Scientific publications
650+ with many more to come

Newsworthy announcements
~225

Annual economic impact
$180+ million

Relativistic Heavy Ion Collider

A quarter century of smashing success and ongoing impact in nuclear physics

The Relativistic Heavy Ion Collider (RHIC) started smashing atoms at the U.S. Department of Energy's (DOE) Brookhaven National Laboratory in the summer of 2000. Final collisions took place in February 2026, capping a quarter century of remarkable experiments producing groundbreaking discoveries and a treasure trove of data on the building blocks of matter.

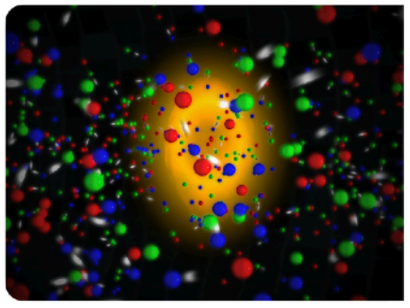
The research conducted at RHIC attracts the world's best and brightest minds, inspires a new generation of scientists, and drives technological advances in many fields.

The Goals:

Recreate and study matter as it existed in the early universe and explore proton spin, a still mysterious quantum property relevant to medical imaging, chemistry, and astrophysics.

The Results:

- Discovery that the early universe was a nearly "perfect" liquid with ultra-low viscosity and a temperature 250,000 times hotter than the center of the sun
- Insight into how early-universe "quark-gluon plasma" transforms into ordinary protons and neutrons that make up our world
- New knowledge of how gluons contribute to proton spin
- Heaviest antimatter ever created in a lab, offering insight into distant neutron stars without ever leaving Earth
- Advances in accelerators, detectors, and computing that far surpass what was imagined when RHIC turned on

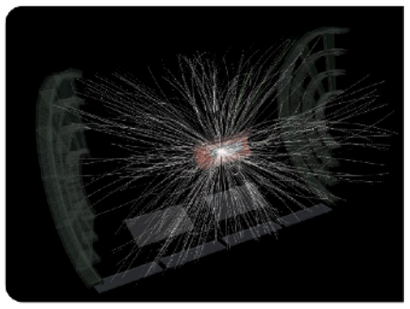


The perfect liquid quark-gluon plasma discovered at RHIC offers insight into the strongest force in nature.

The Future:

Nuclear physicists will continue to mine nearly half a billion gigabytes of RHIC data, aided by artificial intelligence (AI), to make new discoveries for years to come. This critical ongoing analysis — carried out by RHIC scientists at universities and labs across the nation and around the world — will answer outstanding questions to advance our understanding of the strongest force in nature.

RHIC's huge datasets and well-trained scientific workforce will be crucial for maintaining U.S. dominance in this AI-enabled science — and will lead to transformational increases in scientific productivity. RHIC's unique infrastructure and the community of scientists, engineers, university faculty, and students who made this DOE user facility such a success also pave the way for future discoveries at the Electron-Ion Collider (EIC), a new machine for exploring the next frontier in nuclear physics.



RHIC produced thousands of collisions per second, each with thousands of outgoing particles. Physicists are developing new AI approaches for taming this deluge of data with future applications at the EIC and elsewhere.

Brookhaven National Laboratory

U.S. DEPARTMENT of ENERGY | Office of Science

RHIC's Benefits to Science and Society

- U.S. leadership in nuclear science
- Inspiration and training opportunities for hundreds of students for careers in science, technology, engineering, and mathematics (STEM)
- Pipeline for high-tech workforce needed to address technical challenges in communications, energy technologies, national security, medicine, and more
- Advances in theory, high-performance computing, and AI methods for analyzing "big data"
- Huge datasets for training new AI algorithms and innovative infrastructure for data storage and sharing
- Development of accelerator technologies with potential spin-off benefits in cancer treatment, nuclear reactor safety, and other accelerator-based science
- R&D to advance energy storage
- Symbiotic production of medical isotopes for diagnostic scans and therapies, as well as space radiation research to protect astronauts and electronics
- Worldwide research community engaged in advancing key areas in nuclear science

RHIC research has provided leadership, educational opportunities, and technology developments that help advance medicine, AI, energy systems, national security, and more.

All these benefits will continue at the EIC!

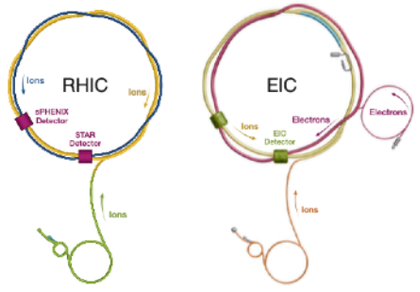
RHIC Fast Facts

- Only U.S. particle collider; operated 2000-2026
- Two large collaborations of lab and university scientists and students actively analyzing data from the STAR and sPHENIX detectors
- Enormous versatility in colliding ions from single protons to nuclei of helium, oxygen, gold, uranium, and more to answer key questions in nuclear physics
- More than 300 trillion collisions with 1000s of outgoing particles each, revealing information about the building blocks of matter and the strongest force in nature
- Sponsored by the Nuclear Physics Program of the DOE Office of Science
- Key infrastructure — a $2 billion investment — and scientific foundation for building future EIC

Key to the EIC

RHIC provides the infrastructure, workforce, and critical expertise needed to build and operate the EIC, America's next and only planned particle collider. Instead of recreating the matter of the early universe, the EIC will explore how quarks and gluons interact within the matter that makes up our world today. Like the 20th century discoveries about electrons that paved the way for today's technologies, unlocking the secrets of quarks, gluons, and the strong force could spark the technologies of tomorrow.

EIC will leverage the entire RHIC tunnel, one ion ring, the ion pre-accelerator chain, and other major RHIC infrastructure, while adding new electron accelerator components, upgrades to existing equipment, and a new detector.



Much of the infrastructure of the 2.4-mile-circumference RHIC facility and its highly skilled technical and scientific workforce will be essential to the success of the EIC.

To ensure a smooth RHIC-to-EIC transition, it's essential to maintain and support the highly-skilled workforce — and the university faculty who create the pipeline of future scientists, technicians, and engineers needed to realize the EIC's scientific promise and ongoing U.S. leadership in nuclear physics.

Brookhaven National Laboratory

U.S. DEPARTMENT of ENERGY | Office of Science

www.bnl.gov/rhic

Full-time equivalent jobs
~700

Scientists/ collaborators
3,500+

PhDs awarded
640+

Tenured or tenure-track faculty across U.S.
200+

U.S. universities/ institutions with faculty/students conducting research at RHIC
62 in 25 states

Nations involved
36

New idea: RHIC/AGS “Winter Meeting”

- **There is a lot of concern about how to maintain momentum in the RHIC science program, and the community that supports it, in the next years**

- **The RHIC year has generally been anchored by two events**
  - The annual RHIC run in the winter/spring
  - The RHIC/AGS AUM in the late spring/early summer

- **We now expect the science program to be all year, and with people visiting periodically for collaboration meetings, etc.**
  - However, without the run, there will be less motivation for people to be here in the fall/winter

- **Should we have a new meeting for the late Fall, e.g. a “RHIC/AGS Winter Meeting”**
  - Falls in line with the typical STAR/sPHENIX collaboration meeting schedule
  - Can be a bit shorter (3 days) and focused 100% on science
  - e.g. 2 days of half/full day workshops (like AUM) and one plenary day
  - Ideally encouraging mixing of STAR/sPHENIX discussions

- **Supported and funded through the RHIC/AGS UEC, but organized by the Early Career community?**

- **Thoughts?**