

Particle Post June 2012

"If you lack what you need, then use what you've got!"



Previous issues

Note from the Chair Thomas Roser



RHIC Run 12 is coming to an end and it is truly a spectacular success - probably the best run we had at RHIC. With the upcoming low energy gold-gold test run RHIC will have run in five different modes and set many records. The many modes were made possible by the very short switch-over and performance ramp-up time using the fully functional beam-based feed-back systems. The record luminosities during the heavy ion part of the run were achieved with the new EBIS injector together with a couple of additional bunch merges in the AGS and the Booster as well as the excellent performance of the 3-dimensional stochastic cooling systems in RHIC. Congratulations to everybody!

Administration Stephanie LaMontagne-McKeon



As we begin planning for maintenance and upgrade activities during RHIC's annual shutdown, please keep in mind that funding for M&S in the current year is constrained and is likely to be more so in FY 2013. We have advised the Nuclear Physics Program Office that a run of 15 weeks would be possible with on a flat-flat budget, however, continued spending at the current rate puts that plan at risk. Since a run of 15 cryo weeks provides only 11 weeks of Physics, at best, the experimental program is sensitive to even minor funding losses.

In addition to reducing material expenditures for RHIC Operations, it is important that we be attentive to the project numbers used on time cards, work orders, web reqs, etc. Many of our personnel are simultaneously involved in multiple efforts, some of which are funded by sources other than DOE Nuclear Physics. All resources, be they labor or material, should be charged to the appropriate program; in instances where the benefit is realized in multiple programs, expense should be shared amongst the programs in proportion to the benefit.

Each of us is responsible to the organization to understand what program(s) benefits from our efforts and when we are unsure, to seek clarification.

A DOE walk-through of the facility is planned for mid-to-late June. In earlier walk-throughs, C-AD was heavily criticized for issues related to both general housekeeping and security. Numerous meetings and discussions resulting in extensive and costly corrective actions ensued. It is imperative that the improvements we have made be evident. In particular each individual is asked to:

- Ensure that work areas are clear of idle equipment. Equipment not in use should be either securely stored for future use, reassigned or excessed through appropriate channels.
- Ensure that work areas are clean and materials are stored in an orderly manner. Valuable materials, including but not limited to copper, should be securely stored.
- Ensure that sensitive equipment not in use, is securely stored.
- Ensure that equipment is appropriately tagged. Government owned equipment should have either a barcode or red tag (U.S. Government tag). Identifying labels should also be affixed to any personally owned equipment

such as radios, microwaves, and refrigerators.

A review of on-site vehicle use will also occur in June. BNL has engaged a consultant to provide the Laboratory with an objective, third-party assessment of BNL's fleet utilization as well as current and future impacts of fleet reductions. Please be reminded that we have a responsibility to deploy vehicles effectively and efficiently and that the use of government vehicles for personal errands is strictly prohibited. Keep in mind also, that proper completion of vehicle logs could provide the documentation necessary to support retention of the vehicles currently assigned to the Department. Do not miss this opportunity to demonstrate that our vehicles are fully utilized in compliance with Laboratory policy.

Accelerator Division Wolfram Fischer



RHIC continues to set new records in heavy ion operation with Yun Luo coordinating the Run. We now finished the uranium-uranium part of the run. Uranium is the heaviest element ever used in a collider, and is interesting to the experiments because it is shaped like a football. Uranium only became available for collider operation with EBIS. During the uranium run we also saw for the first time the full 3-dimensional stochastic cooling at work. The cooling is so strong that the maximum luminosity is reached about 1h after a store starts, when the beam sizes are reduced to half of what they initially were. Together with a lattice that was optimized by Yun to have low off-momentum beam losses, all uranium ions were lost due to collisions with another uranium ion – one couldn't do any better. We are now in the middle of the copper-gold part of the operation, also a combination never used in a collider. Stochastic cooling and the low-loss lattice now make for rather flat luminosities, which allows to have stores as long as 14h. The excellent availability of the machine continues, despite an eagle and its prey landing in the wrong spot and causing a power dip.

Experimental Support & Facilities Division Phil Pile



The 96 GeV/n on 96 GeV/n uranium run ended on 15 May. Uranium beam collisions was a first for RHIC, made possible by our new EBIS, Electron Beam Ion Source. Both STAR and PHENIX reached their goals. The experiments are now beginning the fourth week of physics with 100 GeV/n copper on 100 GeV/n gold. Both ions are being supplied to RHIC using EBIS and is the first time RHIC has collided copper and gold. The copper-gold integrated luminosity has been tracking just over our "maximum" luminosity projection, thanks to the superb operation of the new stochastic cooling devices in RHIC. This part of the RHIC run will end on Monday, 25 June followed by two days of development work on very low energy (2.5 x 2.5 GeV/n) gold-gold collisions. These extra two days were added to the run thanks to continued lower than expected energy costs for the year. We plan to begin the cryo warm-up on 27 June and begin our summer/fall shutdown. Overall RHIC Run 12 was very successful, with new record 100 GeV and 255 GeV polarized proton luminosities and polarizations, first collisions using uranium beams and first copper-gold collisions. The total number of cryo weeks for Run 12 should be 23.6 with about 18 weeks of physics data taking, a great ratio

considering the number of ion/energy changes. We plan to begin operation for Run 13 about 1 January 2013.

The NASA Space Radiation Laboratory (NSRL) "summer" run began Wednesday, 16 May, and is scheduled to be completed on 27 June. The last three days of the month are reserved for another round of National Reconnaissance Office (NRO) experiments. The NSRL facility will then begin its summer shutdown with experiments beginning again in September.

NASA completed a test on 6 June that used a 5.6 MeV/n boron beam from one of our Tandem accelerators on human cells to compare the response to an NSRL iron beam with the same linear energy transfer (LET). The cells responded differently. The principal investigator for this test stated "Exactly what we were hoping for - Tandem will be an excellent addition to our capabilities." The Tandem team has a new satisfied customer!

The BLIP facility continues to operate with no issues. The present plan is to run the Linac for BLIP through July so the BLIP facility and the Linac will be operational during the first month of our RHIC summer shutdown.

Accelerator R&D Division Ilan Ben-Zvi



The 56 MHz cavity received Buffered Chemical Polishing (BCP) in the BNL/AES niobium processing facility. Following that it has been placed in the new UHV vacuum furnace, dedicated to niobium cavities, in building 912, which is served through the new clean room. More assembly of cryo sensors follows in the clean room. Thus the 56 MHz cavity inaugurated three new facilities in the C-AD complement of Superconducting RF facilities: Chemistry, furnace and clean-room.

In the ERL, the SRF gun cryogenic connections are mostly done, the relief header is in place and reliefs from cryostat are installed. The high-power couplers coax-to-waveguide adapters were mounted, to be followed by waveguide to the klystron.

CeC proof-of-principle experiment: The detailed layout drawings of the experiment and related equipment are nearly completed. Preparation for installing the infrastructure and two 500 MHz bunching cavities and their RF system during this RHIC shut-down progresses well. The proposals for assembling the 20 MeV 707 MHz SRF linac are arriving this week, while construction of 112 MHz SRF gun is underway with CDR scheduled for early July.

There is significant progress in both the eRHIC design and the first phase of the cost estimate. The later went through a thorough scrubbing process and will be followed by cost optimization. We also pursue novel ideas on potential cost saving designs, such as permanent-magnet FFAG arcs, and various options of boosting eRHIC luminosity to new highs.

Operations Paul Sampson



The RHIC program is running well in this, the final month of Run12.

Following the great success of the first ever U/U run, setup for Cu/Au collisions, yet another mode unique to RHIC, began. Progression was very quick, and within several days Physics was running. Since then progress has been steady. Delivered parameters such as peak luminosity, acceleration efficiency, intensity and store lifetime have either met or exceeded desired values. Only the copper bunch intensity is presently slightly below the ultimate goal.

Continued use of both transverse and longitudinal Stochastic Cooling has shown to be a key factor in producing both high peak and long luminosity lifetimes.

At present, the normal duration of a Physics store is 14 hours, longer than any previous run. This allows the execution of maintenance and repair in the injectors on scheduled running days without loss to the RHIC program.

At the end of this month, low energy Au/Au running will close out last 2 days of this RHIC run.

Accelerator Studies (APEX) and Maintenance periods continue on alternate Wednesdays. Continuing efforts are focused on performance as well as installation, commissioning and testing of new systems.

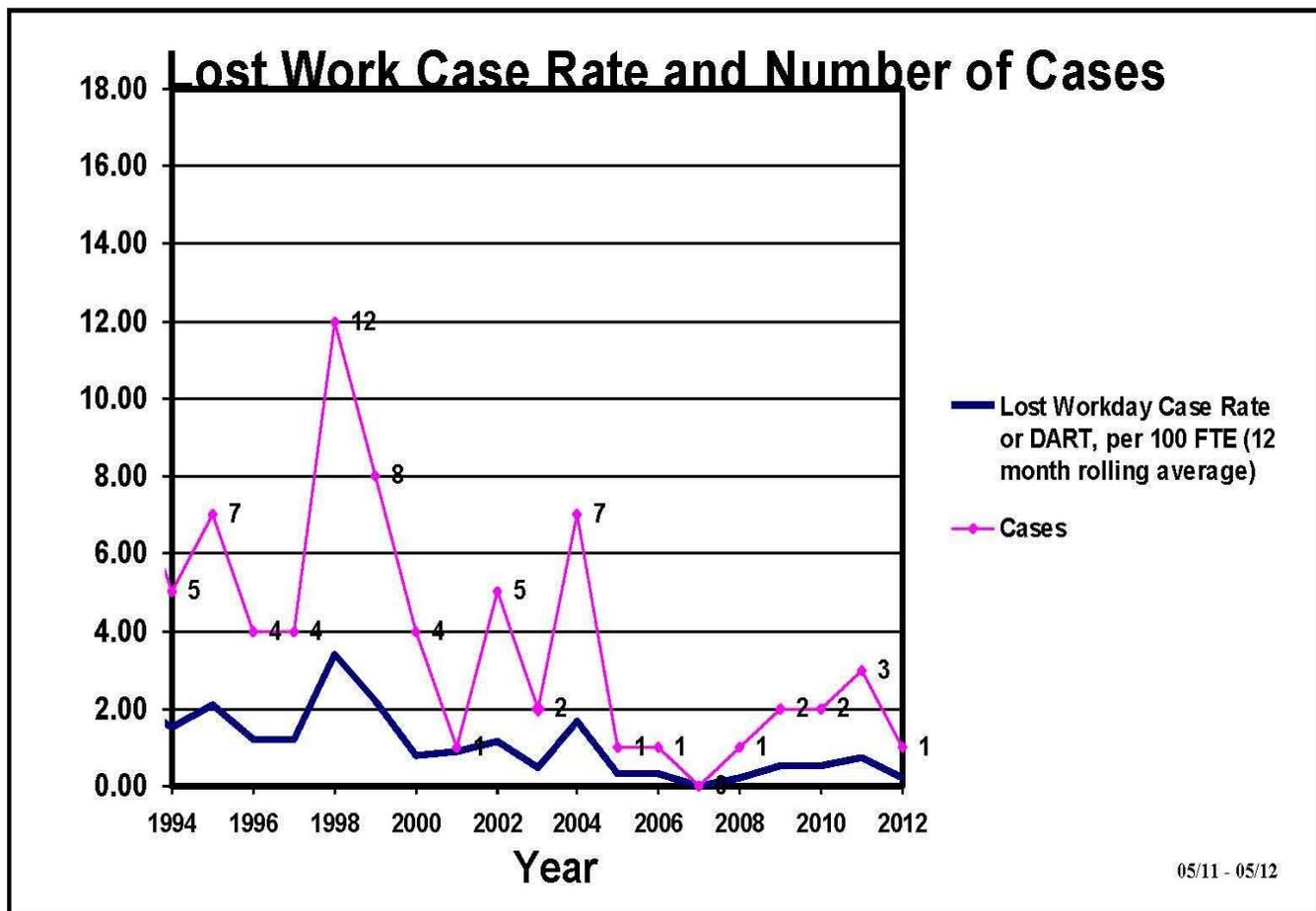
Injector development continues behind stores and when possible on Maintenance Days, producing continued improvements to both Gold and Copper beams. At the end of this month, commissioning of He3 from EBIS will take place in the Booster and AGS.

Multi species running at NSRL continues on a parallel user in the Booster. EBIS beams utilized at NSRL include Tantalum, Krypton, Uranium and Gold, while all other ions are delivered from the Tandem and protons from the LINAC. NSRL12B will close out with another session dedicated to NRO, which will last several days and end before July 1st.

BLIP is running very well utilizing high intensity protons from LINAC. This year, the BLIP program will continue to run until the end of July.

For schedule updates see: [This Week](#)

Safety Stats



C-AD Occupational Injury Statistics

For Year 2011 For Year* 2012

| | | |
|------------------|---|---|
| First Aid Cases | 4 | 1 |
| Recordable Cases | 3 | 0 |
| Lost Work Cases | 3 | 0 |

* Calendar Year through 5/12

REMINDER: TLD exchange is done the *FIRST FRIDAY* of the Month.

EXCHANGE DATE: FRIDAY, July 6, 2012

Fete Cirrigiano

ARRIVALS

Jean Clifford Brutus joined the department on June 4 working with Lou Snyder in the Mechanical Systems Group.

Theodoro Samms joined the department on June 4 working with Don Bruno in the Collider Electrical Power Supplies Group.

STUDENT ARRIVALS

Adeel Butt joined the department on June 4 working with Omar Gould in the Preinjector Systems Group.

Bryan Callaghan joined the department on June 4 working with Nick Franco in the Communications & Electronics Support Group.

Juan Casillas-Plazola joined the department on June 4 working with Vincent Castillo in the Access Controls Group.

Anshu Chawla joined the department on June 4 working with Mike Brennan in the Stochastic Cooling Group.

Shushanna Cherian joined the department on June 4 working with Joe Tuozzolo in the Accelerator Division.

William Christie joined the department on June 4 working with Joe Tuozzolo in the Accelerator Division.

Eric Cushing joined the department on June 4 working with Masahiro Okamura in the Preinjector Systems Group.

Nora Goscinski joined the department on June 4 working with Suzanne Smith in the Radiopharmaceutical Research & Development Group.

Peter Jandovits joined the department on June 4 working with Masahiro Okamura in the Preinjector Systems Group.

Allison Matus joined the department on June 4 working with Kin Yip in the Experimental Support & Facilities Division.

Amita Patel joined the department on June 4 working with Vincent Castillo in the Access Controls Group.

Simon Peggs joined the department on June 4 working with Dejan Trbojevic in the Accelerator R&D Division.

Denzel Pressey joined the department on June 4 working with Lee Hammons in the Machine Operations Group.

Heather Savage joined the department on June 4 working with Carl Schultheiss in the Electrical Systems Group.

Katherine Skinner joined the department on June 4 working with Mike Mapes in the Vacuum System Group.

Isaac Stein joined the department on June 4 working with Nick Franco in the Communications & Electronics Support Group.

Brian Streckenbach joined the department on June 4 working with Jonathan Hock in the Mechanical System Group.

Jordan Stubleski joined the department on June 4 working with Suzanne Smith in the Radiopharmaceutical Research & Development Group.

Nouze Takougang joined the department on June 4 working with Nick Franco in the Communications & Electronics Support Group.

Steven Trabocchi joined the department on June 4 working with George Mahler in the Mechanical Support Group.

Adam Vorwald joined the department on June 4 working with Steve Bellavia in the Mechanical Support Group.

WELCOME!



Inside RHIC. Please click on link to the left to view the latest web publication of Inside RHIC.



*We wish all of you born in **June**
a happy and healthy year ahead.
Birthday people ONLY click on cake*



DID YOU KNOW



Diana Boyle, daughter of Nancy in the Administrative Group and Brian of Photon Sciences, is graduating from Longwood High School in June. She plans a career in Elementary Education and will be attending Suffolk County Community College in the fall.



Karim Hamdi graduated on May 11 from North Carolina State University with a Master's Degree in Mechanical and Aerospace Engineering.

CONGRATULATIONS!!

By [Liz Seubert](#) | May 18, 2012

Update From RHIC Run 12: One World Record, Three World Firsts



[+ ENLARGE](#)

Photo above: Some of the Collider-Accelerator Department team who worked on Run 12 at the Relativistic Heavy Ion Collider are: (front, from left) Mei Bai, Michiko Minty, Ernest Courant, Vincent Schoeffer (Polarized Proton Run Coordinator), Yun Luo (Heavy Ion Run Coordinator), Christoph Montag, Chuyu Liu, Kevin Mernick (stochastic cooling), Mike Blaskiewicz (stochastic cooling, sitting), and Mike Brennan (stochastic cooling, sitting); (second row, from left) Wolfram Fischer, Francois Meot, Tasha Summers, Vahid Ranjbar, Brian Van Kuik, Gregory Marr, Will Jackson, Angela Drees, Travis Shrey, Jordan Ziegler, Guillaume Robert-Demolaize, Yue Hao, and Xiaofeng Gu.

Luminosity, Polarization, Time-in-store Ratio... What do they mean?

“Luminosity” is a measure of the number of particle collisions that a collider generates. To increase luminosity, or number of collisions, the colliding beams must contain more particles, be more densely packed, or collide more often.

“Polarization” indicates how well the tiny magnets that all protons carry inside are lined up relative to each other. A polarization of 100 percent means that all the tiny magnets point in the same direction.

The “time-in-store ratio” gives the fraction of calendar time that beams are colliding. Time is also needed for set-up

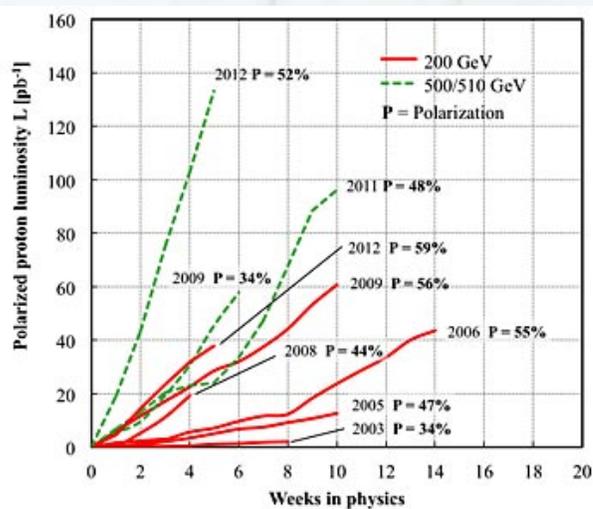
and development, maintenance, and accelerator physics experiments. The time-in-store ratio can also be reduced if equipment fails. Typically RHIC has a time-in-store ratio of 55 percent. It reached 65.5 percent with 200 GeV polarized protons this year, and even 70 percent with uranium-uranium collisions.

BNL's Relativistic Heavy Ion Collider (RHIC), the only collider in the world that can collide polarized protons and the only collider in the world that can offer any particle combination from protons to uranium, again showed its versatility and strength this year.

RHIC was not only colliding polarized protons at two different energies, including the world's highest at 510 billion electron volts (GeV), but also two new combinations of heavy ion collisions: uranium on uranium and copper on gold with new records in luminosity, polarization, and the time-in-store ratio.

Luminosity, polarization, and the time-in-store (see sidebar) are attributes that are among the most vital for successful experiments using colliding beams. Using these beams are the RHIC scientists who probe the mysteries of the strong force (one of the four natural forces that act on matter) and the quark-gluon plasma that existed at the dawn of the universe, as revealed in the detectors at RHIC.

Associate Laboratory Director for Nuclear & Particle Physics Steven Vigdor said, "Summarizing the entire 2012 run, RHIC is not only the sole operating collider facility in the U.S. at this point, but is also the most versatile collider ever operated. Its versatility will be one of the key arguments we make to ensure that RHIC funding remains healthy, even in a very tight budget climate going forward. The 2012 run will make a very strong case for this argument, as we've added new energies and new colliding beam species that bring new dimensions of control to our experiments studying early-universe matter. This run has seen a beautiful confluence of many efforts on R&D and improving machine and detector reliability over many years. It has met or exceeded all the goals of the experimental collaborations, and at the same time, provided sufficient time to carry out accelerator physics experiments that inform our plans for future improvements."



[+ENLARGE](#)

Polarized Proton Beams Run at RHIC, 2003-2012

Figure showing the percentage of polarization and the amount of luminosity achieved in polarized proton running at two collision energies: 200 and 500 billion electron volts (GeV), at the Relativistic Heavy Ion Collider in the years 2003-2012. In 2012, the proton beam polarization at 250 GeV reached 52 percent. (Luminosity is measured in units of an inverse pico-barn, scientifically noted as pb⁻¹, which is a billion times a billion times a billion per square centimeter.)

Record Polarized Proton Luminosity, Polarization

This year's operation started with polarized protons slamming into each other with a total energy of 200 GeV. Said Thomas Roser, Collider-Accelerator Department chair, "The 200-GeV portion of the RHIC polarized proton Run 12

ended very successfully on March 12. The number of collision events was very close to the maximum we had projected, and the polarization was a little higher than in 2009, which was the last time that we ran at this energy. In addition, all the accelerator systems ran so reliably that the time-in-store ratio was at an all-time high.”

510 GeV: World Record

On March 12 the collision energy was changed to 510 GeV, the highest energy ever reached with polarized protons. It took only 3.5 days until going into physics mode, which is when experimentalists can take data.

Said Wolfram Fischer, who heads the Accelerator Division in the Collider-Accelerator Department, “Last year we faced a number of unusual failures and the many improvements we put in place did not result in the performance we wanted to see — we did not quite reach our goals at 500 GeV. This year we had to prove ourselves.”

And indeed, this year RHIC produced 40 percent more collision events in only five weeks than were produced last year in ten weeks. The higher event number also came with higher polarization.

Fischer continued, “Vincent Schoefer, the Run Coordinator, and the whole team really did an outstanding job.”

Schoefer explained, “This year we are seeing the results of all the development efforts of last year’s polarized proton run. We have developed many new tools that allow for fast start-up and efficient development, and we have taken full advantage of them.”

“Not only did the RHIC collider perform exceptionally well this year, but the STAR detector also performed very well, with record values for the detector uptime and efficiency for sampling the luminosity delivered by RHIC,” said Bill Christie, the STAR operations coordinator. “The combination of the record luminosity delivered by RHIC, and the high operational efficiency for the STAR detector allowed us to exceed our physics data goals by about 40 percent for the 200 GeV proton-proton run, and by a factor of two for the 510 GeV proton-proton run.”

“RHIC is not only the sole operating collider facility in the U.S. at this point, but is also the most versatile collider ever operated.”

— Steven Vigdor,
Associate Laboratory
Director for Nuclear &
Particle Physics at BNL

“Our next task will be to prepare for next year, when we plan to commission a new polarized proton source and the electron lenses,” said Schoefer. “Both devices will allow for higher beam intensity and therefore higher luminosity.”

Because the experimentalists at RHIC’s two detectors, STAR and PHENIX, obtained enough polarized proton data quickly, the data-taking period could be shorter than planned. In addition, the Lab was granted a significant rebate on the electric power bill, and this saved enough time and funds to allow two more particle combinations to follow before the collider takes its summer break. Neither of these combinations of particle collisions — uranium on uranium, and copper on gold — ever ran before in a collider.

Uranium on Uranium

After this successful 510 GeV polarized proton run, Yun Luo of C-AD took over as Run Coordinator on April 19 for another world first. Two uranium beams were collided — the first time that uranium ions have been used in a collider. Because uranium nuclei are so heavy, that is, they contain so many nucleons (protons and neutrons), and have a football-like shape, they can create a denser quark-gluon plasma than any other species. This gives the experimenters a new tool.

The uranium beams are only now available because a new [Electron Beam Ion Source](#) (EBIS) was commissioned.



The RHIC stochastic cooling team: (from left) Mike Brennan, Mike Blaskiewicz, and Kevin Mernick (seated)

Increasing Luminosity With U-U

In addition, during the uranium run, full three-dimensional stochastic cooling was implemented for the first time. This sophisticated technique shrinks the colliding beams, resulting in a collision rate that progressively increases. This too is a world first for colliders like RHIC — thanks to the work of Mike Brennan, Kevin Mernick and their team, and the theoretical work of Mike Blaskiewicz. Stochastic cooling combined with a special RHIC configuration developed by Luo prevents the loss of any uranium particles stored in the beam until they collide with the uranium particles in the other beam.

Said Luo, “We are running the ultimate collider — we are only ‘losing’ particles in collisions.”

“The unique collision geometries that we get for the first time ever with uranium on uranium collisions allow us to perform a careful systematic study of a signature observed in gold on gold collisions interpreted as being related to parity violation,” explained Christie. “We wouldn’t have been able to reach our goal for this important data set if not for the success of the RHIC stochastic cooling system.”

Copper on Gold

Said Roser, “In addition, because we finished the polarized proton part of Run 12 early and we had the electric power rebate, three more weeks of running time could be fitted in than was initially planned. This is for copper-on-gold collisions, also a combination that has never run in a collider. With each new type of collision, we can further explore the mysterious world of the strong force and the quark-gluon plasma.”

To All

Walter Shaffer has been promoted to Technical Research Supervisor of the Linac. He will also continue to serve as our Group’s Research Space Manager. We wish Wally great success in this new and very important CAD position.

It is with Great Pleasure that after 35+ years as Linac’s Supervisor I am able to transfer this responsibility to him. I ask all at CAD to help and support Walter as you have helped me all these years.

I will continue, full-time, in the Preinjector Group as Deputy Linac Group Leader to Deepak Raparia as well as Linac Project Engineer.



Best Regards, Vinnie

RHIC's First Uranium Collisions

By Wolfram Fischer



Wolfram Fischer

At Brookhaven Lab's Relativistic Heavy Ion Collider (RHIC), we recently finished our first run colliding beams of uranium ions, the heaviest ions ever used in a collider. Heavy ions contain large numbers of protons and neutrons and, when colliding at high energies, create the quark-gluon plasma, the state of matter at the dawn of the universe.

Physicists at RHIC's STAR and PHENIX detectors are particularly interested in uranium nuclei because they are shaped like a football, not like a sphere. Some of these nuclei will collide along their longest axes, creating a quark-gluon plasma even denser than the plasma that has been discovered and is now routinely created at RHIC in collisions of spherical gold nuclei. So uranium collisions could produce exciting new results.

The three-week-long exploratory uranium run was made possible because two years ago, Jim Alessi and his team commissioned a new [Electron Beam Ion Source](#) (EBIS). The BNL EBIS produces beams with more particles than any EBIS-type source ever built anywhere in the world. In addition to serving the [NASA Space Radiation Laboratory](#) with light ions since last year, EBIS has now been used for the first time for RHIC beams. It can provide uranium beams containing more particles than previously available. Only with these greatly increased particle numbers could uranium become a viable option for collider operations at RHIC.

In addition, the amount of data created for the STAR and PHENIX experiments was increased five-fold by stochastic cooling, a sophisticated technique that shrinks the ion beams while they are colliding. This technique was developed by a team including Mike Brennan, Mike Blaskiewicz, and Kevin Mernick. The cooling is so strong that the

beam size is reduced by half after one hour of storage time, almost tripling the luminosity (collision rate). This has never been achieved before in a collider that operates, like RHIC, with heavy particles.

We also used new settings for the magnet currents, developed by Yun Luo, that minimize particle losses. The combination of stochastic cooling and these new settings was so successful that no uranium particles stored in the beam were lost until they collided with another uranium ion — also a first for a collider of heavy particles.

'Frontiers of RHIC Physics' at the RHIC & AGS Annual Users' Meeting

By Mei Bai



Mei Bai

The Brookhaven Lab community is welcome to attend the Relativistic Heavy Ion Collider (RHIC) and Alternating Gradient Synchrotron (AGS) Annual Users' Meeting from June 12 to 15. This year's theme is "The Frontiers of RHIC Physics," a topic of great importance to the RHIC community.

The meeting will focus on the latest results from a variety of RHIC operating conditions -- such as varying energy levels -- that we have explored in recent years as well as possibly extending RHIC physics to uncharted territories as we continue to explore the mysteries of the universe.

During the sessions, attendees can learn about future research goals and share their own viewpoints about RHIC's future.

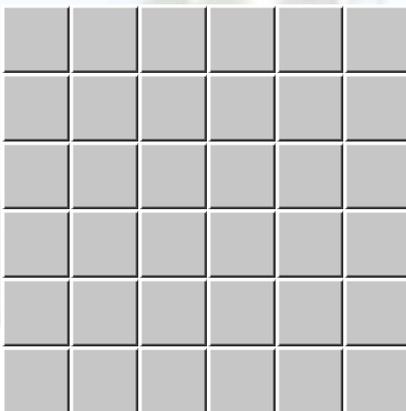
- Day One, June 12, will be devoted to a set of workshops on heavy ion and spin physics. These two workshops will run in parallel.
- Day Two, June 13, will be dedicated to a workshop on both machine and detector upgrades and a workshop on eRHIC, the proposed future electron collider. Topics will include overviews of current machine and detector plans, discussion of the long-term future of heavy ion physics at RHIC, the decadal plans of the existing experiments, and discussions of machine and detector options for eRHIC. The day will close with an hour-long distinguished lecture from the Department of Energy's Timothy Hallman, Associate Director of Science for Nuclear Physics, who will speak on "The Future of Nuclear Physics in the U.S."
- Day Three, June 14, will feature the Plenary Session, with presentations from all RHIC experiments and funding agencies. This session will also include talks on machine operations, thesis awards, and the accomplishments of the National User Facility Organization (NUFO).
- Day Four, June 15, which will conclude the Plenary Session, will focus on the outlook of RHIC physics and machine upgrade plans looking toward the future physics at RHIC and eRHIC. This session will also include updates from the Users' Executive Committee (UEC) and Association of Students and Postdocs, UEC election results, and poster awards.



Fun Time

Uncover all the blocks in this version of the classic memory game concentration. You uncover all the blocks by successfully matching the image pairs. Click the Timer button below to start a new game whenever you want.

Concentration



3:01

Free JavaScripts provided

by [The JavaScript Source](#)



Folks,

Once again, I'd like to thank everyone at C-AD for your continued support, donations and contributions that you so freely give to the Food Drive throughout the year. It means a lot to so many families.

If everyone can bring in at least one non-perishable food item, this would help the local food pantries in our area. There are so many families who are in need of food and depend on their local food pantry to have at least one meal a day. With the food supply so low,

the volunteer's who help out at our local food pantries can't help those in need. So please.....bring whatever you can to replenish the food supply for those in need.

Your donation of any non-perishable food item can be left in the box marked "Food Drive" located in the 911A Lobby.

Your continued support is appreciated.

Thank you.

Anne Marie Luhrs

June has arrived & BERA's ready for SUMMER FUN!

NEW TRIPS: All tickets go on sale Wed. June 6. Limits apply, see BERA Store or website for participation rules & details. Visiting summer students must be 18 & over.

<http://www.bnl.gov/bera/recreation/events.asp>

Just for fun.....:

Wednesday, June 27, 2012

ANNUAL PLANT SWAP @ Berkner Parking lot front row under the trees from Noon-1pm. Calling all gardening enthusiasts!!! Have something to swap or want to talk plants?

Stop over ~ all are welcome!!!

Sun. July 8 Brooklyn Flea 100's of vendors+ Do as You Please, browse the famous Flea or take your own tour of the Brooklyn Brewery. Bus leaves 9am from Brookhaven Center and at a designated area from Brooklyn at 4pm. \$15pp children under 2 free. Includes for coach bus & driver tip. <http://www.brooklynflea.com/> 54 max on this trip.

Sat. July 14 Montauk Downs Horseback Riding, Enjoy the day at the famous Deep Hollow Ranch starting at 11am for a 1.5 hour trail & beach ride, then we'll picnic afterwards at the T. Roosevelt National Park, then bus over to the ocean as a group for couple of hours. If the weather is poor, we'll go to the Montauk Lighthouse.

You must bring along a picnic lunch for this trip. Leave Brookhaven Center at 8:30am, Leave Montauk at 4pm. Not recommended for children under 10 years old. \$85pp includes a full day excursion with horseback ride, coach bus & driver tip. 40 max on this trip. <http://www.deephollowranch.com/>

Sat. July 21 NY RED BULLS SOCCER (Harrison, New Jersey) Red Bulls vs. Philadelphia. Depart Brookhaven Center at 12noon and leave after the game around 5pm.

Game time is 2:30pm. 50 tickets in section 224. 50 tickets only - \$40 pp. for coach bus & driver tip, ticket.

Sun. July 22 Brooklyn Cyclones Baseball vs. the Staten Island Yankees. Everyone gets a ball cap & bat and can run the bases after the game. Spend the day on the beach, at the boardwalk or the world famous Luna Park and Brooklyn Cyclone Roller Coaster! (amusement park charges aren't included) 40 tickets only, and very family friendly day, with the coach bus departing Brookhaven Center at 11am, game time is 5pm, leave after the game at about 8pm. <http://www.brooklyncyclones.com/> \$20 pp adult or child includes bus, driver tip & game ticket..

FRIDAY July 27 Dorney Park & Wildwater Kingdom Allentown, PA. Admission is for both parks 2 busses, 100 tickets max. Not suggested for children under 10.

\$33 pp for adult or children includes ticket, coach & driver tip. Luxury coach bus will leave Brookhaven Center at 7am and leave the park at 6pm. NOTE: An approved leave day must be used as this is a regularly scheduled work day. <http://www.dorneypark.com/plan-a-visit>

Friday August 17 Skyline Princess Dinner Cruise of the NYC skyline & NY Harbor, departing from the World's Fair Marina, NY. Cruise from 7-11pm and enjoy a full dinner buffet including Prime Rib, full bar, dessert/coffee & DJ on the private 2nd Deck. 21 & over only. \$100pp includes luxury bus, driver tip, dinner cruise & all gratuities. An awesome night!

***Membership Drives in Berkner Hall 488:**

~June 28 **Costco** 10am-2pm

~June 29 **BJ's** 11am-1:30pm

~July 31 **Sam's** 11am-1:30pm

***MONEY SAVING DISCOUNTS** are added all the time, so check back often! SPLISH SPLASH, Atlantis Marine World, local restaurants, etc. Go to <http://intranet.bnl.gov/bera/recreation/>

***WAIT LIST names are being taken for the Yankee & Mets games at the BERA Store.**
<http://www.bnl.gov/bera/>

Recreation Information: <http://www.bnl.gov/bera/recreation/pool.asp>

The Gym & Swimming Pool are closed on Saturdays during July & August.

During BERA Summer Camp Recreation Program the Gym, Swimming Pool & Locker Rooms are closed & unavailable for use from 2-5pm daily July & August.



ALUMNI NEWS: AGS/RHIC/C-AD RETIRED CROWD - We'd enjoy hearing from you and what you have been up to. Please send your notes to pmanning@bnl.gov

You can catch up on all of Eric Forsyth's travels by clicking on his sailing yacht below.



June 2012

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|--------|--|-----------|--|--------|----------|
| | | | | | 1 | 2 |
| 3 | 4 | 5 Physics Colloquium "Developing Laser-Driven Ion Beams for Medical Applications", Igor Pogorelsky, 3:30pm, Bldg. 555, Hamilton | 6 | 7 BWIS Colloquia Series, "Surfing with Wavelets", Ingrid Daubechies, 4pm, Berkner | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |

| | | | | | | |
|---------------------------|-----------|---|---|--|-----------|-----------|
| | | | |  | | |
| | | | | Flag Day | | |
| 17 Father's Day | 18 | 19 BNL Blood Drive 9:30am Center C-AD Annual BBQ, Noon, Gazebo Physics Colloquium "TBA", Ken Drill, SBU, 3:00pm, Bldg. 555, Hamilton | 20 BNL Blood Drive 9:30am Center Summer Begins Brookhaven Lecture, Jorg Schwender, BNL, 4pm, Berkner | 21 | 22 | 23 |
| 24 | 25 | 26 C-AD Accelerator Physics Seminar "Superconducting LINAC and other SRF Activities at IUAC", 4:00pm, Bldg. 911B | 27 Instrumentation Division Seminar, "Operation of the RHIC Proton-Carbon Polarimeters", A. Zelenski, C-AD, 11am, Bldg. 535 LCR Pianofest Noon Recital, Berkner | 28 | 29 | 30 |



July 2012

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------------------|--------|---------|---|----------|------------------------|----------|
| 1 | 2 | 3 | 4 Holiday  | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 First of Ramadan | 21 |
| 22 Parents' Day | 23 | 24 | 25 Pianofest Noon Recital, Berkner | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |



We Remember

USS New York - A ship forged from the steel of the World Trade Center

Sept. 11, 2001

Editor: Pamela Manning x4072

