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A WORD FROM THE:

[Administration](#)

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Quote of the Month: "Man is an artifact designed for space travel. He is not designed to remain in his present biologic state any more than a tadpole is designed to remain a tadpole." - William S. Burroughs

NOTE FROM OUR CHAIR: Thomas Roser

SAFETY STATS: Peter Cirnigliaro

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RHIC just finished the first proton-gold run and running RHIC in this mode also well exceeded the projected integrated luminosity goal. Operating RHIC in this highly asymmetric configuration requires that the DX magnets are physically moved and, still, the aperture for the beams is severely limited inside the IR triplets and the DX magnets. During unexpected beam excursions, such as from abort kicker pre-fires, the tails of the beams can hit the vacuum chamber and the beam spray can cause damage of the electronics of the detectors. This has happened for the PHENIX detector. To protect PHENIX from further damage a significant part of the PHENIX detector will be turned off for the remaining asymmetric running of this year. For the last two weeks of this run proton-aluminum collisions will set up.

There has been a lot of activity with the eRHIC R&D efforts as Ilan describes it in his Particle Post contribution. I would like to highlight the success of producing intense electron beam bunches with the ERL superconducting rf electron source. This has been a high priority R&D effort of the Department for many years. Congratulations to the whole team for this great success.

This month we are also welcoming Cathy Cutler to the Collider-Accelerator Department as the new Director of the Medical Isotope Research and Production program (MIRP). Cathy comes to us from the University of Missouri, where she very successfully directed the radiopharmaceutical laboratories of the University of Missouri Research Reactor.

VIEW [CONFERENCE PROJECTIONS FOR 2015](#): DUE ASAP -

[CONFERENCES SHOULD BE PROJECTED THROUGH DECEMBER 2015](#)

DID YOU KNOW??

Check out who received an employee Service Award this year! Collider~Accelerator Dept. employees who received a [Service Award](#).

Check out who received an employee [Spotlight Award](#) this year!

Congratulations goes out Frank Scheifele - Introducing the newest addition to his family!~ His son and daughter-in-law had made him a grandpa again! Anthony Thomas Scheifele born May 6th, 2015 .Below is a picture is his one grandchild Gabriella holding the new baby [See more pictures.](#)



Congratulations to Mei Bai, recipient of the 2014 Ernest Orlando Lawrence Award – May 1, 2015

Steve Bellevia captured a few astronomy photos the weekend on May 22 at Cherry Springs State Park, PA- See the pictures

<https://www.flickr.com/photos/125134422@N06/sets/72157652966367919>

EVENTS/SEMINARS...



Check out the [BNL Calendar](#) for upcoming events & Seminars or the [Upcoming Conferences & Workshops](#) page for workshops and Conferences happening at BNL.

June 16- (Bldg 463 - JDSR | 10:30am)
Center for Data-Driven Discovery
Seminar "Data Driven Modeling on Scientific Applications" Presented by Shinjae Yoo, BNL.

June 17-18 (Brookhaven Center) Blood Drive

June 29 - (Bldg 734 - SSR | 1:30pm)
Condensed-Matter Physics & Materials Science Seminar "TBA" Presented by Derek Meyers, University of Arkansas

Do you have to give a talk?

Public Speaking Techniques:

Verbal & Non-verbal

Presented by:

Theodore Sampieri Ext: 4894

12:00 – 1:00 Fridays

CAD Building 911

Large Conference Room: 2nd Floor



Optimizing the Use of the Limited Funds Available

Funding for RHIC purchases is constrained and with a creative and highly motivated workforce of 400+ C-AD employees, appeals to limit purchase requests are simply not sufficient. So, beyond limiting purchases, what can you do to optimize our use of the limited funding available?

There are two relatively simple things you can do.

The first is to be attentive to the projects to which you charge both your time and materials. C-AD receives funding from multiple agencies/entities, e.g. DOE Nuclear Physics, DOE High Energy Physics, other DOE Laboratories, NASA and even some private industry. All funds are linked by the source to a specific work scope and within BNL's financial system, the project numbers we utilize are each linked to a single funding source. While, in any given year, the vast majority of our labor and procurement activity supports the RHIC Program, annual cost on non-RHIC related efforts is still substantial. If your labor or purchase is related to a non-RHIC effort, charge it appropriately. If you are unsure of the project number to be used, consult your supervisor and/or someone on the administrative staff. Our RHIC project numbers have been in use for more than a decade and are easily recalled

but are not universally appropriate. We are all, individually and collectively, responsible for ensuring that cost is appropriately reflected in the Laboratory's financial systems. The project number used on time card entry, a WEB Requisition or Work Order must be consistent with the program receiving the benefit of the effort or purchase. Keep in mind also, that daily or weekly entry of hours worked is more likely to provide an accurate record by project.

The second way in which you can work to optimize our use of funds is to critically review the transactional reports available on the system. On a monthly basis, the Administrative Group generates reports that detail labor hours charged by project, cost by work order number, withdrawals from the onsite inventory system and credit card purchases. A truly critical review of these transactional reports can only be performed by an individual close to the work. Just last month, an erroneous withdrawal of \$8K was identified by an individual who recognized that the quantity of gas withdrawn was greater than the known capacity for storage.

In summary, your participation in efforts to limit cost to the extent possible and accurately charge cost incurred is critical.

NOTE FROM OUR ACCELERATOR DIVISION: Wolfram Fischer



The first RHIC Run colliding polarized protons with gold ions ended on Monday morning, 8 June 2015. This is the first run that required moving the DX magnets to accommodate orbits of beams of rather different rigidity, and a very careful analysis of all aperture limitation with these orbits. Chuyu Liu, the Run Coordinator, made sure we found all limitations and the run delivered close to the maximum luminosity projected. We are now transitioning to the last modes of Run-15, colliding polarized protons with aluminum ions. This too is a combination never done in a collider.

The catalog of all Technical Notes is <http://www.rhichome.bnl.gov/AGS/InternalReports.html>, and it is linked from both the Department and Accelerator Division home pages.



Our new “Director of the Medical Isotope Research and Production program (MIRP)”, Cathy Cutler, came on board on 3 June. Cathy was a Research Professor and group leader of the Research and Education group at the University of Missouri Research Reactor (MURR). She comes to us with extensive research experience and a deep knowledge of cGMP, QA and QC as it applies to isotope production. Cathy will report directly to Thomas as reflected in the latest C-AD Organization Chart on the web. You will note a dashed line connecting the Isotope Group with the Experiment and Facilities Support Division indicating the Division will continue to support the isotope effort as needed. My support (short term) for the group will continue in a new role as Cathy’s deputy. I welcome Cathy to BNL!

We are now beginning the last physics run for the year in RHIC with protons on aluminum at 100 x 100 GeV. The proton-gold run ended on 8 June and was a success with the experiments, for the most part, exceeding goals. Near the end of the proton-gold run the MPC-EX, a key detector system in PHENIX, suffered a direct hit from an abort kicker misfire in the Yellow ring. The machine was setup with protection bumps that were effective in past runs but appears to not work well with the machine running asymmetric species. Fortunately the PHENIX proton gold physics program was nearly complete with most goals in hand. With this, however, PHENIX has lost ~90% of an important detector system needed for the proton aluminum run so the physics reach for this run will

be compromised as the detector system cannot be repaired until this summer. Nevertheless, the PHENIX experiment will continue operation during this last phase of the RHIC run. It took less than 24 hours to establish a proton aluminum store, a record for a species change in RHIC. This will then give us about 13 days of physics before we shut down for the year on 22 June. The luminosity for the proton aluminum run appears to be tracking along the “maximum” trajectory.

BLIP operation continues in support of strontium-82 production and R&D. The second of two 10 day irradiations of thorium targets began on 4 June. As before, the irradiated targets will be shipped to ORNL for processing. BNL is part of a three lab consortium (with ORNL and LANL) collaborating on advancing the production of actinium-225. BLIP will continue operations through July with processing through mid-August. Tentative plans for next year call for commissioning the new beam raster system in late December with strontium production using the raster system beginning in early January. With the raster fully commissioned and operational BLIP will be able to accept the full LINAC beam current.

The NSRL run 15A ended on 10 May and after a short break NSRL-15B began (16 May) and will continue operations until the end of this month. A project to raise the maximum beam energy to 1.5 GeV/n is set for installation during the upcoming 2015 shutdown period. This project will allow for higher energy heavy ion beams to better simulate the galactic cosmic ray spectra that will be encountered by future deep space explorers.

Link to: [ATF Newsletter](#)

NOTE FROM ACCELERATOR R&D DIVISION: Ilan Ben-Zvi



ERL

The ERL Accelerator Readiness Review for full ERL loop operations took place on May 19-21. It was very successful, and this event marks the end of construction of the ERL (with very few minor outstanding items). The few pre-operations recommendations will be concluded soon, and in the meantime “Gun to Dump” commissioning is in progress.

The multipacting-free cathode stalk was coated with a photocathode. The quantum efficiency (QE) at room temperature was very good, settling at 3.8%. The cathode was transferred to the gun with no loss in QE. The gun was then conditioned and beam sent to a Faraday cup (the power handling capacity of the Faraday cup places a limit of beam current until the beam will be sent to the beam dump). Pulsed operations yielded bunches with up to 0.55nC per single bunch. No QE degradation was seen due to gun conditioning.

The gun was operated in pulsed mode at 0.85MV beam energy. The measurements confirmed a QE=1% at low current, and after running for a couple of days there was no observed degradation of the QE.

eRHIC R&D

An eRHIC R&D retreat took place on May 26-27. A large number of presentations and four long discussion sessions made up the bulk of the retreat, which had 77 participants, mostly from BNL but also a few from Cornell University. The objective of the retreat was to evaluate the higher risk items in the design of eRHIC and prioritize the R&D missions, some already in place and a few new ones, aimed at reducing the risks. The retreat was highly successful and work is now proceeding in a few working groups aiming at producing detailed deliverables, resource loaded schedules, milestones and bottoms-up cost estimates which will be reviewed internally.

NOTE FROM OPERATIONS: Paul Sampson



The RHIC p-Au run continued throughout the remainder of April and throughout May with good running conditions.

The p-Au run concluded on the 8th of June, as scheduled. Change over to the Aluminum-Polarized Proton Run immediately followed. With a quick turnaround expected, the first Physics Stores should be early in the week of the 8th.

Preparation for the End-of-run and Shutdown continues. Focus is presently on the end of the run testing and commissioning for which some of the RHIC ring will remain cold. Work on Major projects in RHIC, including CeC and the new 9MHz RF system continues behind maintenance and failures.

LINAC continues to run very well, providing beams for the Booster and BLIP. NSRL run 15B will continue to the end of June. Various beams and energies are being delivered from the Booster for NSRL users. BLIP will run through July.

Maintenance periods continue to be done bi-weekly, alternating with APEX.

The “[RHIC Broadcast](#)” link displays the latest schedules for testing, power disruptions, outages and daily schedules.

To view a list of approved work for the next maintenance or to review past results, go the [Job Request System](#) and select the appropriate date. This link is behind the firewall and requires privileges to view.

For weekly schedule updates see: [This Week, which can be viewed by all.](#)

ARRIVALS: Welcome!

Zhi Zhao - Working with John Skaritka in Photocathode R&D Group - Started May 27
Roger Smith - Working with John Morris in the Software/Applications Group - Started June 1
David Paulraj - Working with Robert Lehen in the Technical Support Group - Started June 2
Cathy Cutler - NEW Director for the MIRP/BLIP Group - Started June 3
Dominic Bianco and Recep Kuraca joined C-AD as student assistants on June 8th

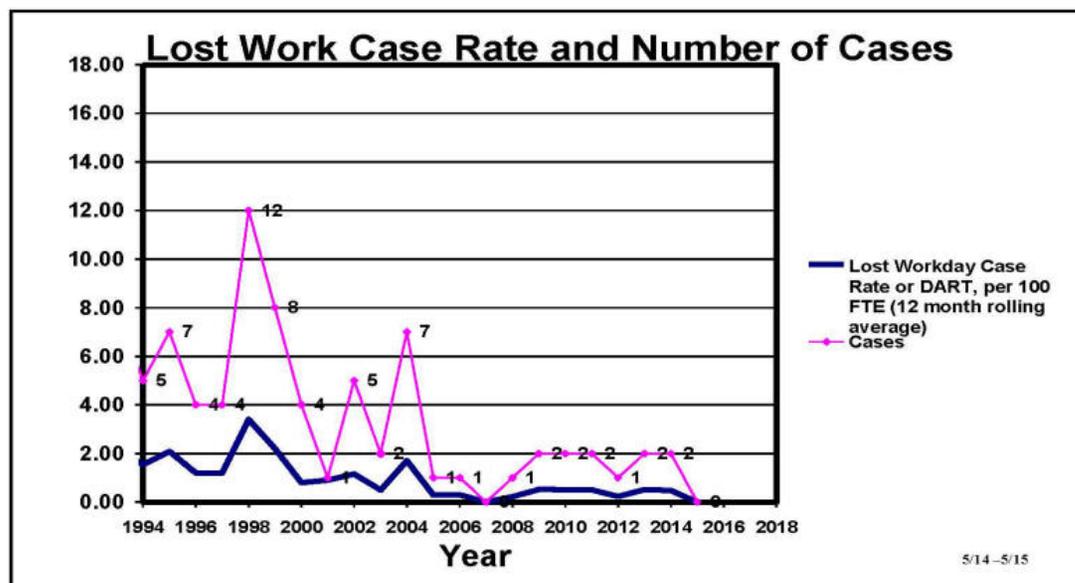
DEPARTURES: Farewell, you will surely be missed..

Benjaman Johnson - (Instrumentation Group) Last Day was May 22
Paul Callegari - (Water Systems Group) Retired May 29th
Philip DeCaro - (Maintenance Group) Transferring to Photon Sciences Department - Last Day June 1

Guest Notices:

June 1- Bayam Sobhani (Guest Research Assistant) - Working with V. Ranjbar

SAFETY STATS: Peter Cirnigliaro



C-AD Occupational Injury Statistics

	For Year 2014	For Year* 2015
First Aid Cases	8	3
Recordable Cases	3	1
Lost Work Cases	1	0

* Calendar Year through 5/15

CONGRATULATIONS: **Frank Scheifele**

Please join me in congratulating Frank Scheifele in welcoming his newest grand child Anthony Thomas Scheifele! He was born May 6th, 2015 at 1:04pm (8lbs 13oz.).

Frank has worked at the lab for 27 years, starting first with target desk and CAS for 24 years and now working in the Access Controls Group.

See below pictures of his son holding his new baby, his 2 grand children Kaylie and Gabriella and there rest of the family :-)

