

SEP '15
ISSUE

PARTICLE POST

COLLIDER-ACCELERATOR DEPARTMENT

Contact: [A. Lamberti](#)

A WORD FROM
THE:

PREVIOUS ISSUES

August 2015

Administration

[\[HOME PAGE\]](#)

[BNL WEBSITE](#) | [C-AD WEBSITE](#) | [ES&F WEBSITE](#) | [BERA](#) | [BNL CLASSIFIED ADS](#) | [INSIDE](#)

Accelerator Div.

Quote of the Month: "The science of today is the technology of tomorrow." - Edward Teller

ES&F Div.

Acc. R&D Div.

Operations

NOTE FROM OUR CHAIR: Thomas Roser

▶ Arrivals/Departures

 Safety Stats



The most likely federal budget situation is a three-month Continuing Resolution (CR) before an actual budget would be passed by Congress at the beginning of 2016. In this case we continue to plan for a start of the He cool down of RHIC in January, which will allow us to complete the scheduled 22 weeks of RHIC cryo operation before the summer months. In the meantime, under a CR, we have to maintain the restrained spending that we have been living with for the last couple of months.

The 2 o' clock area at RHIC is a very busy place this summer. Good progress is being made with the installation of the electron accelerator for the Coherent electron Cooling Proof-of- Principle experiment and also all RHIC beam instrumentation equipment is being removed from the 1 o' clock region of the IR in preparation of the installation of the cooling section of the Low Energy RHIC electron Cooling (LEReC) project. Activities at the 2 o' clock area will continue up until the RHIC run starts next year.

We were hosting the 16th International Conference on Ion Sources at the New York Marriott Marquis. The conference was very well attended with a large international participation. A big "thank you" goes to the conference organizing team at C-AD that worked hard to make the conference such a big success.

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!

EVENTS/SEMINARS



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

September 17 - (Bldg. 510 - Large Seminar Room |

Physicist Mei Bai Receives DOE's E.O. Lawrence Award!

"Bai was one of nine mid-career scientists and engineers honored this year with the Lawrence Award, which is one of the most prestigious given by the Department of Energy. Bai, who is currently working in Germany at the Nuclear Physics Institute in Jülich, was honored for her outstanding contributions in advancing the understanding of the spin of the proton and for her work on making RHIC the world's first and only high energy polarized proton collider." Read more about this accomplishment [here](#).



Energy Secretary Ernest Moniz (center) and Acting Director for the Office of Science and Deputy Director for Science Programs Patricia Dehmer (left) present Mei Bai with the E.O. Lawrence Award.

Congratulations, Mei!

1:30 pm) 2016 Benefits Information Meeting

September 17 - (Bldg. 510 - Small Seminar Room | 3 pm) Particle Physics Seminar: "CMB Constraints DM Annihilation/Sum of the neutrino masses from CMB observations"

September 18 - (Bldg. 535 - Large Conference Room | 2 pm) Instrumentation Division Seminar: "Hybrid pixel detector developments for Synchrotrons and Free Electron Lasers at the Paul Scherrer Institute"

September 19 - (Port Jefferson Harborfront Park | 9 am) BERA APAA / BNL Team Races at the Port Jeff Dragon Boat Race Festival

September 25 - (Bldg. 510 - Room 2-160 | 12 pm) ATLAS/HET Joint Lunch Seminar: "Constraints on New Physics via Higgs Boson Couplings and Invisible Decays with the ATLAS Detector"

September 30 - (Berkner Hall Auditorium | 4 pm) BSA Distinguished Lecture: "A hundred years of visualizing molecular structure"

October 1 & 2 - (Berkner Hall Patio | 11 am) Adopt-a-Platoon Fall Plant Sale Fundraiser

Do you have to give a talk?

Public Speaking Techniques: Verbal & Non-verbal

Presented by: Theodore Sampieri

12:00 – 1:00 Fridays

CAD Bldg. 911

Large Conference Room: 2nd Floor

IN OTHER NEWS...

Ion collider produces droplets of primordial goo
The Relativistic Heavy Ion Collider just spit out tiny droplets of a liquid researchers say resembles the seeds of the cosmos, primordial goo created by the Big Bang, which existed on briefly before cooling the matter that helped birth stars, galaxies and planets. [Read more.](#)

Brookhaven National Laboratory projects are up for awards

Four projects developed at BNL have been nominated as finalists for awards to be presented this year by a national magazine. [Read more.](#)

Scientists Create Primordial 'Perfect Liquid' in Lab



Steve Bellavia captured this photo of emission nebula NGC 7000 in the constellation of Cygnus.

The BNL's Relativistic Heavy Ion Collider smashed together large nuclei at nearly the speed of light to recreate the fundamental particles in the primordial soup present during the earliest days of the universe. [Read more.](#)

World's most powerful digital camera being built by US Department of Energy

The US Department of Energy is building a digital camera that puts your camera to shame. [Read more.](#)

The last place left in America that's piecing together the origins of the universe

In the instant after the Big Bang, the only thing in the universe that existed was a hot plasma soup full of subatomic particles. But to study that plasma, you don't have to travel back in time billions of years to the Big Bang itself - just go to Long Island, NY. [Read more.](#)

Liquid-like magnetic state leads to superconductivity

Despite a quarter-century of research since the discovery of the first high-temperature superconductors, scientists still don't have a clear picture of how these materials are able to conduct electricity with no energy loss. [Read more.](#)

Magnet hyperthermia, an auxiliary tool in cancer treatments

Hyperthermia has been used for centuries to combat tumors and reduce their effects. New research aims to use a different system (magnet nanoparticles) to increase body temperature. [Read more.](#)



One of the 38,000 lb. STAR MMPS rectifier transformers being sent to New Jersey for inspection. One lead showed a 100 degree F temperature higher difference than the other five leads, which was discovered during a random infrared camera photo inspection. Gas analysis of the silicone fluid came back normal and the windings should be OK.



STAR MMPS transformer West 245 F

Measurements		°F
Bx1	Max	245.0
	Min	39.7
	Average	106.3
Sp1		239.7
Parameters		
Emissivity		0.95
Refl. temp.		68 °F

6/18/2015 9:43:47 AM



FLIR0148.jpg

FLIR E4

63957917

Photo of the infrared camera.

WHAT'S GOING ON IN OUR NEIGHBORHOOD?

Interested in Cycling?

<http://www.bicyclelongisland.org/majoride.htm>

<http://www.cyclotour.com/events.htm>

Interested in Running or Walking?

Eastern Long Island Take Steps for Crohn's and Colitis – Oct 25 (11a – 4p) at Stony Brook University, Student Activity Plaza

Oktoberfest 5K Run/Walk – October 10 (2p – 8p) at The Bench Bar & Grill

22nd Annual Walk for Beauty! – Oct 25 (8:30a – 4p) at the Stony Brook Village Center

Hercules on the Harbor 10K Run – Oct 25 (8:30a) at the Stony Brook Village Center

...Check out the [LI Running Calendar](#) for more!

For the Kids:

Family Art Day – Sep 26 (10a – 5p) at the Stony Brook Village Center

Long Island Ducks – Sep 11, 12 & 13 (Sat at 6:35p; Sun at 1:35p) – Tix available at the BERA store

Stony Brook Events:

LI Art Show – Sep 12 (12p – 6p) at Harmony Vineyard

Port Jefferson Events:

Dragon Boat Race Festival – Sep 19 (8:30a – 5:30p) at Port Jeff Harbor

PJ Farmer's Market – Sep 13 & 20 (9a – 1p)

American Music Fest – Sep 26 (12p) – Sep 27 (8p) throughout PJ Village

Paint Port Pink Week – Sep 26 (9a) – Oct 3 (5p) throughout PJ Village

Check out Erik Forsyth's Travels:



[HTTP://WWW.YACHTFIONA.COM](http://www.yachtfiona.com)

DAY AT THE VINEYARDS...

Duckwalk North - SOUTHOLD - Music on Saturdays (4-6pm)

Castello di Borghese Vineyard & Winery - CUTCHOGUE - Vineyard Tours & Wine Tastings Every Thursday & Sunday at 1pm & FREE Jazz Every Saturday (2-4p) with Marguerite Volonts

Jamesport Vineyards - JAMESPORT -Live Music from 1-4pm every Fri, Sat & Sun

Martha Clara Vineyards - RIVERHEAD - Live Music every weekend

Palmer Vineyards - RIVERHEAD - Live Music every Sat (12-4).

Pindar Vineyards - PECONIC - Live Music Every Saturday (1-5pm)

Baiting Hollow Farm Vineyard - BAITING HOLLOW - Music every Sat & Sun from (2-6)

—
Paumanok Vineyards - RIVERHEAD - Fresh, Local Oysters (2-5pm) every Sat & Sun starting Memorial Day through September

SEP '15
ISSUE

PARTICLE POST

COLLIDER-ACCELERATOR DEPARTMENT

Contact: [A. Lamberti](#)

A WORD FROM
THE:

PREVIOUS ISSUES

August 2015

Administration

{[HOME PAGE](#)}

BNL WEBSITE | [C-AD WEBSITE](#) | [ES&F WEBSITE](#) | BERA | BNL CLASSIFIED ADS | [INSIDE](#)

Accelerator Div.

Quote of the Month: "The science of today is the technology of tomorrow." - Edward Teller

ES&F Div.

Acc. R&D Div.

Operations

NOTE FROM OUR ADMINISTRATION: S. LaMontagne

▶ Arrivals/Departures

 Safety Stats



Fiscal year end closing will take place this year on Tuesday, September 29th. On the date, the annual cost we report to DoE for FY 2015 should reflect the full value of all effort performed, as well as the value of all goods and services received.

While much of the activity associated with the closing process should be transparent to you, your assistance is important.

How can you help?

- **Complete your September time card by Friday, September 4th.** You need not submit your time card at that time and should continue to update both productive and non-productive time if necessary. Your best estimate of productive time for September will enable us to more accurately project total annual labor cost.
- If you are a credit card holder, **enter project numbers for credit card purchases that should not be charged to your default project promptly.** Note that no account number changes may be entered via Payment Net after 4:45 PM on Thursday, September 24th.
- If you are the requestor on a high-value procurement and anticipate a material delivery in September, **please keep your administrative group in the loop on any changes in the delivery schedule.**
- If you are a technical representative on a construction, service or maintenance contract, **assist your administrative group in obtaining and/or evaluating the vendor's estimated level of effort through September 30th if requested to do so.**

In summary, in every interface with the financial system (i.e., time cards, WEB Reqs, stores withdrawal, RFQ's, work orders, credit card purchases, etc.), please prepare your input carefully to ensure that the appropriate project numbers are referenced. Once the year is closed, we cannot process corrections to prior year entries.

Lastly, if you are a supervisor, group leader, or division head, please be attentive to the financial documentation prepared by your employees and follow-up to ensure that they respond to administrative requests on a timely basis.

SEP '15
ISSUE

PARTICLE POST

COLLIDER-ACCELERATOR DEPARTMENT

Contact: [A. Lamberti](#)

A WORD FROM
THE:

PREVIOUS ISSUES

August 2015

[Administration](#)

[{HOME PAGE}](#)

[BNL WEBSITE](#) | [C-AD WEBSITE](#) | [ES&F WEBSITE](#) | [BERA](#) | [BNL CLASSIFIED ADS](#) | [INSIDE](#)

[Accelerator Div.](#)

Quote of the Month: "The science of today is the technology of tomorrow." - Edward Teller

[ES&F Div.](#)

[Acc. R&D Div.](#)

[Operations](#)

NOTE FROM OUR ACCELERATOR DIVISION: Wolfram Fischer

[▶ Arrivals/Departures](#)

[Safety Stats](#)



The RHIC Run-16 will have Au+Au at 100 GeV, followed - time and budget permitting - by d+Au at a number of energies. With this decision the installation of the Coherent electron Cooling Proof of Principle (CeC PoP) undulator is possible, and the experiment can proceed.

Meanwhile the ERL commissioning continues led by Wencan Xu. We have now moved the operation into the MCR taking full advantage of the expertise of the operations staff, and will be training more shift leaders. The ERL commissioning also serves as a test for the commissioning of the Low Energy RHIC electron Cooler, beginning in 2018. The Low Energy RHIC electron Cooling project is our largest upgrade, and will enable a 4-fold luminosity increase at the lowest collision energies, thereby enabling a 2-year physics program.

SEP '15
ISSUE

PARTICLE POST

COLLIDER-ACCELERATOR DEPARTMENT

Contact: [A. Lamberti](#)

A WORD FROM
THE:

PREVIOUS ISSUES

August 2015

Administration

[{HOME PAGE}](#)

[BNL WEBSITE](#) | [C-AD WEBSITE](#) | [ES&F WEBSITE](#) | [BERA](#) | [BNL CLASSIFIED ADS](#) | [INSIDE](#)

Accelerator Div.

Quote of the Month: "The science of today is the technology of tomorrow." - Edward Teller

ES&F Div.

Acc. R&D Div.

Operations

NOTE FROM OUR EXPERIMENTAL SUPPORT & FACILITIES DIVISION: Phil Pile

▶ Arrivals/Departures

 Safety Stats



We continue to work through our list of jobs in preparation for the next run. The present plan is to run for 22 weeks with cool-down to 4 degrees K to begin on 4 January with first beam to RHIC about 8 January. With this start-up schedule that puts RHIC warm-up complete on 6 June. After much deliberation with the experiments and machine experts, Berndt has reached a decision on the asymmetric beams for next year. The plan for next year is to begin with full energy gold on gold for 10 weeks of physics followed by an energy scan with deuterons on gold rather than protons on gold. With this the DX magnets do not need to be moved, thus reducing the risk (already considered low for next year) to PHENIX in the event of an anort kicker misfire and allowing for installation of the CeC undulators so that CeC experiment can begin tests with beam. The CeC experiment will continue in 2017.

The sPHENIX project is progressing with a successful EMCal workshop at UCLA and a successful silicon tracker workshop at the University of New Mexico last month. Another tracker workshop is scheduled for 27 October in Santa Fe. The big review to come is scheduled for 9-10 November and is an internal review of the cost and schedule. The review will include DOE observers. Preparations for connecting the BaBar solenoid to the ERL cryogenic plant and to its power supply are proceeding well and will allow critical testing of the superconducting coils.

BLIP and TPL are now in a shutdown mode with the last Sr-82 delivery to a customer on 28 August and rubidium to a customer on 2 September, ending a long 37 week BLIP/TPL operations cycle. This year was another (3 years in a row) record year for Sr-82 production and a good year for research. Research highlights included two long thorium irradiations (Ac-225 project) with shipments to ORNL for processing and a successful test of a scandium target (for titanium-44 production which can be used as a generator for the PET isotope scandium-44), in the "low energy" slot in the BLIP RbC1 target array. In addition, short runs in support of other R&D projects were completed. The BLIP Raster project is on track for commissioning in December this year. With the Raster operational the BLIP targets should be able to survive with full beam intensity from the Linac. The first BLIP beam in 2016 for production and R&D is planned for 8 January.

The NSRL facility is still in a shutdown mode at this time but is beginning to come to life for the fall run. A project to raise the maximum beam energy to 1.5 GeV/n is in the home stretch, but not without problems. A leak in the new D6 septum magnet vacuum chamber turned out to not be repairable. Fortunately there was a spare vacuum chamber and the chamber, at least so far, is vacuum tight. This problem, however, did result in a schedule shift for the fall NSRL run, a slip of one week to 12 October. Adam and company have rescheduled the four affected experiment teams with no change to the presently scheduled end date of 20 November. One of the R-line quadrupoles developed a short in one of its current windings and has been repaired. NSRL will come on this year ready to commission the new Booster D6 septum (which includes a new improved foil changer) and upgraded 20 degree bend in the R-line. This will bring closure to the 1.5 GeV NSRL upgrade project that will improve our ability to simulate radiation effects induced by galactic cosmic rays in deep space.

SEP '15
ISSUE

PARTICLE POST

COLLIDER-ACCELERATOR DEPARTMENT

Contact: [A. Lamberti](#)

A WORD FROM
THE:

PREVIOUS ISSUES

August 2015

Administration

{ [HOME PAGE](#) }

[BNL WEBSITE](#) | [C-AD WEBSITE](#) | [ES&F WEBSITE](#) | [BERA](#) | [BNL CLASSIFIED ADS](#) | [INSIDE](#)

Accelerator Div.

Quote of the Month: "The science of today is the technology of tomorrow." - Edward Teller

ES&F Div.

Acc. R&D Div.

Link to: [ATE Newsletter](#)

Operations

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

▶ Arrivals/Departures

 Safety Stats



Not available for comment at the time of this publication.

SEP '15
ISSUE

PARTICLE POST

COLLIDER-ACCELERATOR DEPARTMENT

Contact: [A. Lamberti](#)

A WORD FROM
THE:

PREVIOUS ISSUES

August 2015

Administration

{[HOME PAGE](#)}

[BNL WEBSITE](#) | [C-AD WEBSITE](#) | [ES&F WEBSITE](#) | [BERA](#) | [BNL CLASSIFIED ADS](#) | [INSIDE](#)

Accelerator Div.

Quote of the Month: "The science of today is the technology of tomorrow." - Edward Teller

ES&F Div.

Acc. R&D Div.

Operations

NOTE FROM OPERATIONS: Paul Sampson



Shutdown 2015 continues throughout the complex.

The major work at RHIC continues to be in the 1 and 2 o'clock regions on the CeC PoP and LEReC projects. In the 4 o'clock RF sector, testing is ongoing and access is being locally controlled.

Work in the pre-injectors will continue throughout the month, with preparation for the NSRL run early in October. Installation of the Raster magnet and components in the BLIP tunnel will commence in October and be completed for LINAC startup in mid-December.

Work in the Booster is progressing well. The 1.5 GeV upgrade for NSRL is underway and the installation of the new D6 septum and tunnel bending-magnet will be completed this month. Testing and commissioning will precede the setup for the NSRL run.

AGS maintenance and other shutdown work is also progressing well. Vacuum chamber and component replacement is ongoing and installation of new low field corrections will begin as materials arrive. Restoration of the AGS will begin in December.

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 Shutdown or to review past results, go to 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/Departures

 Safety Stats

SEP '15
ISSUE

PARTICLE POST

COLLIDER-ACCELERATOR DEPARTMENT

Contact: [A. Lamberti](#)

A WORD FROM
THE:

PREVIOUS ISSUES

August 2015

Administration

{ [HOME PAGE](#) }

[BNL WEBSITE](#) | [C-AD WEBSITE](#) | [ES&F WEBSITE](#) | [BERA](#) | [BNL CLASSIFIED ADS](#) | [INSIDE](#)

Accelerator Div.

Quote of the Month: "The science of today is the technology of tomorrow." - Edward Teller

ES&F Div.

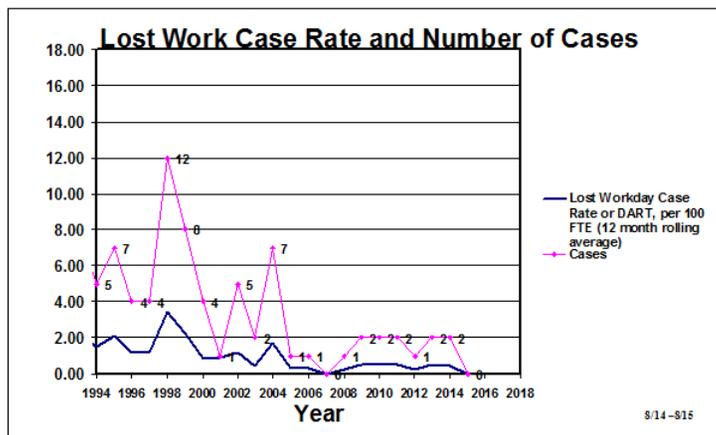
Acc. R&D Div.

Operations

SAFETY STATS: Peter Cirnigliaro

▶ Arrivals/Departures

 Safety Stats



C-AD Occupational Injury Statistics

	For Year 2014	For Year* 2015
First Aid Cases	8	4
Recordable Cases	3	1
Lost Work Cases	1	0

* Calendar Year through 8/15

SEP '15
ISSUE

PARTICLE POST

COLLIDER-ACCELERATOR DEPARTMENT

Contact: [A. Lamberti](#)

A WORD FROM
THE:

PREVIOUS ISSUES

August 2015

[Administration](#)

[{HOME PAGE}](#)

[BNL WEBSITE](#) | [C-AD WEBSITE](#) | [ES&F WEBSITE](#) | [BERA](#) | [BNL CLASSIFIED ADS](#) | [INSIDE](#)

[Accelerator Div.](#)

Quote of the Month: "The science of today is the technology of tomorrow." - Edward Teller

[ES&F Div.](#)

[Acc. R&D Div.](#)

[Operations](#)

ARRIVALS: Welcome!

Zachary Sorrell

Yuan Gao

[▶ Arrivals/Departures](#)

DEPARTURES: Farewell, you will surely be missed..

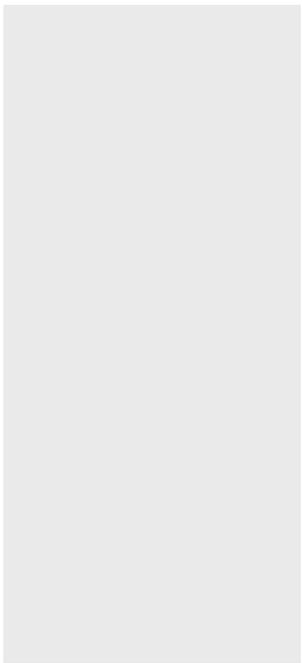
Ammar Morgan

David Paulraj

Wally Shaffer

Wally came to the Lab as a Technician working in the Magnet Division. His first jobs were building and testing the prototype superconducting ISABELLE magnets, the ones that worked! When the project was cancelled in 1983 he came to the Linac group. Since then Wally has worked on, repaired, redesigned, and improved every Linac system in operation today. In addition he is an expert machinist, welder, magnet builder and has created magic with the simple winding equipment he used at Linac. He has also worked on the Booster construction project, building quadrupole magnets and ring assembly. He has built many of the EBIS warm solenoids and all the Linac LEBT and MEBT solenoid magnets. Wally retired as the Linac Technical Supervisor and his 37 years at the Lab is celebrated. I will miss him beyond words can describe. We all, at C-AD, wish him good health and many victories on the Drag Strip. **-Vinnie LoDestro**

 **Safety Stats**



Guest Notices: