

Particle Post July 2009

"Liberty is the right to choose. Freedom is the result of the right choice." - Unknown

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A Note From Our Chairman



Summer is here! Maybe? I am sure that the sun is somewhere behind all those rain clouds.

The RHIC run is over for the fiscal year, but we still have some AGS fixed target work to complete. The summer maintenance period will be a very busy one. I urge everyone to be sensitive to safety and environmental considerations. On that note, BNL has passed its yearly OHSAS 18001 and ISO 14001 registration. Congratulations to everyone at C-AD and SMD for their continuing efforts.

BNL has received notice that the electrical power contract has been extended with NYPA for 18 months, while a 15-year agreement is being worked on. This is excellent news for the RHIC program.

Despite the rain, we had a great turnout for our annual barbeque. The company and the food were great. I was especially happy to see and speak with many of our retired former colleagues. I hope to see all of you again at next year's festivities.

On July 22-24 we will be undergoing our yearly DOE RHIC Science and Technology Review. We have a good year, especially providing 250 x 250 GeV polarized proton collisions for the first time. Well done.

On a personal note I would like to extend a big Happy 80th Birthday to Satoshi.

A good summer to everyone.

Administration



From a funding perspective, fiscal year 2009 continues to be an interesting year--interesting in a GOOD way! The department's allotment ARRA funding of \$7.2 million arrived in June (that's 90% of the \$8 million funding expected from the stimulus package.) It's important that we remember that ARRA funding carries some significant restrictions, including:

- Credit card purchases are prohibited.
- Spending must comply with the domestic preference clauses of the ARRA and the Buy American Act.
- Weekly project status reports are required.

The accounts for the two ARRA projects were officially opened in June

As a follow up to last month's discussion on the Special Process Spares (SPS) inventory, I'd like to offer up my thanks to everyone in the department who helped out with this year's inventory--it was the easiest inventory in memory! As a result of this process, we wrote off \$300,000 of spares that were put into use. Please be vigilant in notifying Paul Sparrow when SPS inventory items are put into service. We especially want to ensure that any new items put into service during fiscal year 2009 get written off on a timely basis.

Now a note to all managers and signatories who are planning vacations...please consider whether a Delegation of Authority may be needed for purchase approvals or for time card approvals. For purchasing, in the event of your absence, a substitute signatory (someone within the same organization with the same or higher tier authority) can approve purchases on your behalf. To do so, however, you must DOCUMENT your delegation of authority. The easiest way to accomplish this is to send an email to Steve Bubka and indicate the specific dates for which your delegate holds the signature authority responsibility. For time card approvals, you can designate another manager with approval capability--just follow this path within PeopleSoft HR-->Manager Self Service-->>Time Management-->>While I'm Away-->>then enter your designee and the effective dates, change the status to "Active", and "Save". Please contact any member of the administrative group with any questions on the above.

Operations Update

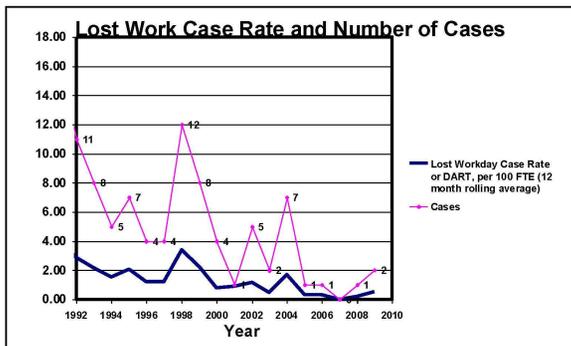


RHIC operations just ended on Monday July 6th at 10am in the morning and the warm-up has started. We ran polarized protons at 100 GeV til June 29th. In the last week of operations we first ran a dedicated machine configuration for the pp2pp experiment (now part of STAR) with a detuned β^* of 20m in IP6 (Star) and of 0.7m in IP8 (Phenix). The ramp development went very fast and pp2pp ran steadily for 3 days and met their data-taking objective. The last 2 says of the run were dedicated to beam experiments (APEX) critical for the planning of the future RHIC runs. Taking advantage of the good weather and the consequent high machine availability, almost all studies were completed. The highest priority items were the continuation of the development of a machine configuration with the vertical tune near the integer – an avenue for the maximization of polarization transmission to 250GeV – and the understanding of the limit in beam intensity transmission in the yellow ring.

While RHIC warm-up and shutdown activities are in progress, the injectors will be running for about another week for the proton interrogation experiment that needs extracted beam from AGS.

With all beam activities soon off, the focus now is on shutdown and operations analysis and planning. We will hold the RHIC Retreat next week July 15-17 in Mystic, CT with a summary closeout planned at BNL on July 20 in Snyder.

Safety Stats



Statistics		
	For Year* 2008	For Year* 2009
First Aid Cases	6	3
Recordable Cases	3	2
Lost Work Cases	1	1

* Calendar Year

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

EXCHANGE DATE: FRIDAY, AUGUST 7, 2009

Pete Cirrioglio



Arrivals

Donald Gosline joined the department on June 22 working with Ron Zapasek in the Collider Electrical Power Supplies Group.

Erik Rydout joined the department on June 29 working with Ron Zapasek in the Collider Electrical Power Supplies Group.

Kirk Sinclair joined the department on July 6 working with Steve Gill in the Vacuum Group.

Student Collaborators

Jennifer Perez started on July 6 working with Mike Sivertz in the NSRL Group.

Steven Vayl started on July 6 working with Vadim Pitsyn in the Accelerator Physics Group.

WELCOME!

Departures

Willem De Jong, Cryogenics Systems Group, will be leaving the laboratory on July 17.

Paul Menga, Machine Operations Group, will be leaving the laboratory on June 26.

Transfer

Charles Gardner, Collider Accelerator Support Group, will be transferring to the Light Source effective July 20.

GOOD LUCK!



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



C-AD Service Awards June

30 years	Vincent Castillo
	James Alessi
	David Derryberry
10 years	Alexei Fedotov
	Brian Van Kuik

Congratulations!



Get To Know Your Co-Worker

William Eisele, Controls Division has worked at the lab for just over 7 months and he works on the Linux system administration for the Controls Group. Before he joined our department he worked as an outside vendor (TFCU) in Bldg. 400. He moved the TFCU branch several times, built IT infrastructure for new branch. William enjoys BSD Unix, Cybersecurity, restoring vintage electronics, mountain biker and he is a licensed sky diver. He and his wife have a 5 year old named Nayati who is getting ready for kindergarten, loved preschool, hiking in the forest and reading.



Fun Time

Test your brain... [Click here](#)



Did You Know

Robert Todd, Vacuum Engineering, will be participating in a fundraising event to help raise money for the Alzheimer's Association of Long Island. Rob heard about the swim in Newsday and it is right where he lives so it is certainly convenient for him to participate. The swim is July 22, anyone who would want to sponsor Rob can get in touch with him at rtodd@bnl.gov or calling him at 631-344-2131. <http://www.memoryswim.org/> Your support is appreciated.

As many of you already know, Don Barton retired at the end of June. Here are a few photos on his retirement celebration held on June 25 in the Lobby of Bldg. 911.



Power Transformers Upgraded at Alternating Gradient Synchrotron

By Sanya Shanmughain, May 8, 2009



The [Alternating Gradient Synchrotron](#) (AGS), the Lab's oldest accelerator, received an upgrade recently when its main power supply transformers were replaced during the past year, while the [Relativistic Heavy Ion Collider](#) (RHIC) was offline. The original 40-year-old power transformers were reaching the end of their useful life, and neither the AGS nor RHIC could run without them.

Another reason for their replacement was to reduce the disruption of the electric current, or 'ripple,' that RHIC experiences. The four new transformers were built to reduce the large ripple effect, which in turn mitigates the loss of polarized protons that are studied at RHIC.

Lab physicist Haixin Huang explained that the amount of proton polarization is higher this year, increasing consistency of the proton sample studied at RHIC. Since the ripple affects the magnetic field in the AGS, it also affects the polarization of protons in RHIC. Huang's group is continuing to look for ways to increase the polarization.

You can understand ripple by using your hands. Place your palms together, and spread your fingers, making sure that each finger is aligned with its partner. Your fingertips represent the peaks, or surges, of the electric current. The valleys in the current are represented by the area where the bases of your fingers meet. Notice that the distance between the peaks and valleys is high, at roughly the length of your finger.

To understand the reduced ripple attained by the upgraded transformers, shift your hands so that your fingers are no longer in line with each other. You can see that there are twice as many peaks and valleys, but the distance between them is shorter, about half the length of your finger. Conceptually, this is how the new transformers change the ripple voltage at the AGS.

"If we plugged the AGS main ring power supply directly into the LIPA [Long Island Power Association] grid, lights would flicker on eastern Long Island," said Jon Sandberg, chief electrical engineer and the project manager.

"Instead, we have a motor generator set which buffers our pulsating load from the grid line," he said. "The instantaneous power needed to pulse the ring is taken from the energy stored in the rotating mass of the generator, and LIPA only has to supply the average power dissipated in the system."

The project, which was successfully completed under budget, cost approximately \$3.6 million.

Sandberg said, "The nicest thing for me was how well everyone chipped in and got things working, how all the trades worked together, and how smoothly we completed this project."

Collider Accelerator Department (CAD) Senior Project Engineer Viorel Badea worked closely with Project Engineer Richard Porqueddu to design and manage the mechanical aspects of the new transformers' installation. Mike Bannon acted as a work control coordinator for the project, while Frederick Kobasiuk coordinated the efforts of the various departments involved.

Ioannis Marnaris, the Booster and AGS power supply group leader, managed the commissioning, testing and controls of the transformers with much help from electrical engineers Roger Bonati and Edward Bajon, Technical Assistant Steven Savaterra, Technical Supervisor Mike Bannon, and Assistant Technical Supervisor Gary Danowski.

The installation process was more than a swapping of identical transformer units; the electrical bus work was very different between the old and new transformers. The new bushings, which insulate high-voltage conductors, are on the top of the units, while the ones of the older transformers were on the sides.

Additionally, the 13-inch deep concrete foundations that supported the old transformers had to be removed by crane (see photo) and replaced with blocks nearly double in depth to support the increased weight of the new transformers. This was all completed with the help of the Plant Engineering Division shops and the Tower Line Crew.

The rigging, lifting, and placement of the massive transformers was directed by CAD's Alexander Pendick and supervised by Alex Korol of Plant Engineering.

Thanks to all who contributed to this project from CAD, the Plant Engineering Division, and Central Fabrication Services, the transformers have been up and running since January, and RHIC scientists were able to begin RHIC run 2009 in February.

2009-1089 | [Media & Communications Office](#)

From: Sparrow, Paul J
Sent: Friday, June 19, 2009 10:32 AM
To: CAD Personnel List
Subject: Thanks for coming!

I would like to **thank** everybody who helped , and **ALL** of the people that braved the dampness, for our Bar-B-Q. We had a great turnout, and lots of Rain.

Paul J. Sparrow

Here are some photos that Ed Gill took (stay tuned for Rippie's photos):





The Food Pantry needs our help.....

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.

From: Carter, Christine B
Sent: Tuesday, July 07, 2009 12:23 PM
Subject: BERA NEWS Please pass on & post! THANKS 7-7-09

1) Billy Elliott on Broadway- DO NOT MISS this Tony Award winner live on Broadway on Sunday July 19.

Front mezzanine tickets for the 3pm show at the Imperial Theatre. Tickets are \$125 per person. The coach bus will leave Brookhaven Center at 10:30am and leave after the show, approximately 6pm

2) Yonkers Raceway & Empire City ~ A DAY AT THE RACES! Saturday August 8, 2009. Enjoy a full afternoon & evening at the beautiful Yonkers Raceway & Empire City, home to more than 5,000 slot machines! Live horse racing begins at 7pm, and there are more than 4 dining rooms to enjoy! The coach bus will depart Brookhaven Center at 2pm & leave Yonkers at 10pm. 18 & over only. \$20PP (about an hour & 30 min. from BNL) <http://www.yonkersraceway.com/default.asp>

3) CENTRAL PARK BIKE TOUR Saturday Aug 22, 2009

Join us for a leisurely 2 hour escorted bicycle tour and experience the magic of Central Park with a spirited and informed tour guide. Travel John Lennon's Strawberry Fields, the medieval Belvedere Castle and Jacqueline Kennedy Onassis Reservoir. \$40.00 includes round trip bus transportation, bike and helmet rental and 2 hour tour. Bus departs at 8:00am from the Brookhaven Center for a 10:00am bike tour. The rest of the day, from 12 noon till 4pm, is on your own, with departure in the same locale at 4:00pm.

4) BACK TO SCHOOL SUPPLY DRIVE!

PLEASE help support all the kids in need! Drop off all donations to Building 400 Recreation Office until Aug. 14.

5) Trip to NY City to do as you please for Sat. 8/1. Bus leaves Brookhaven Center at 9am, and will leave NY at 5:30pm. 2 coach busses.

Drop off & pick up is in the Bryant Park area. \$10pp adult or child 2 years old & over. Under 2 free on lap.

THANKS!



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.



July 2009						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 BSA Noon Recital, Berkner Auditorium	2 Holiday	3 Holiday	4 

5	6	7	8	9	10	11
12	13	14	15	16 Particle Physics Seminar "Final Phase SNO Results" Gersende Prior, CERN, 11am, Bldg. 510 Small Seminar	17 NP & RIKEN Theory Seminar, 11am, Bldg. 510 Small Seminar	18
19	20	21 Sambamurti Memorial Lecture "Spotlight on the Gluon", Michael Begeel, BNL, 3pm, Bldg. 510 Large Seminar Physics Colloquium "TBD", Takao Sakaguchi, BNL, 3:30pm, Bldg. 510 Large Seminar	22	23	24	25
26 Parent's Day	27	28 NP Seminar "Correlated $d\bar{n}+$ pair production in quasi-free pp-collisions in nuclei", V. Balashov, INP, Moscow, 11am, Bldg. 510 Small Seminar Physics Colloquium Sasha Glazov, DESY, 3:30pm, Bldg. 510 Large Seminar	29	30	31	



August 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 Physics Colloquium "Profiling RHIC collisions with electromagnetic probes" Takao Sakaguchi, BNL, 3:30pm, Bldg. 510 Large Seminar	5	6 Brookhaven Women in Science Chasman Award Reception, Connie Yee, 5:15pm, Bldg. 510 Large Seminar	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29 First day of Ramadan
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