

# Particle Post January 2008

*"One resolution I have made, and try always to keep, is this: To rise above the little things." ~John Burroughs*

Previous issues

## A Note From Our Chairman



I would like to wish everyone a happy, healthy and prosperous New Year. 2007 has been a very productive year for C-AD. Everyone's dedication and hard work continues to make RHIC the world leading nuclear physics accelerator facility.

For those of you who were here prior to the mid-1980s, I have some sad news to report. Paul Reardon, who was the Associate Director for High Energy Facilities, has passed away. The following is his obituary.

Paul J. Reardon, 76 of Lawrenceville, New Jersey, beloved husband of the late Pauline, passed away Wednesday, Dec. 12, 2007. He was born on December 13, 1930, in Haverhill, MA. He graduated Cum Laude from Boston College and obtained a Masters Degree from Rutgers University. He served as a 2nd Lieutenant in the army in Japan and Korea where he was awarded the Bronze Star for Meritorious Service. During his career as a nuclear physicist, he became an international authority in the design and construction of subatomic particle accelerators and superconducting magnet systems. He holds two patents in the production of superconducting wire and cable. His two most cherished accomplishments were his contributions in the development of the magnet technology universally used in MRI's today, and the development and construction of proton therapy clinical accelerators for cancer treatment.

He was a loving father and grandfather to 7 children: Christine Jones (David), Barbara Tabor (Larry), Paul Reardon (Patricia), Jocelyn Zoog (Harry), Thomas Reardon (Beth), Kevin Reardon (Susan), and Sean Reardon (Karen); 21 grandchildren: Janine, Lisa, Cheryl, Regina, Brendan, Alicia, Phillip, Monica, Eric, Deanna, Austin, Laura, Kelly, Thomas, Corinne, Claire, Elise, Andrew, Renee, Jack & Patrick; and 2 great grandchildren: Sophia, and Henry. We will all miss his love and affection. Gifts in lieu of flowers can be made to the Children's Hospital of Philadelphia ([www.chop.edu](http://www.chop.edu)) or to the American Heart Association ([www.americanheart.org](http://www.americanheart.org)).

On the financial front, the president has signed the Omnibus Spending Bill. We have just received our FY07 RHIC budget. The FY2008 budget is just below last years budget. This means we will have to be very frugal as we attempt to complete a 17 week run. We expect to complete deuteron-gold operations no later than January 31 and proceed with polarized proton operations until approximately February 29. At that point we will bring RHIC into a shutdown for maintenance and start the NSRL program until late June. Purchases and overtime will have to be kept to only the absolute necessities. Travel will also be limited. We are however proceeding at all deliberate speed with the first transverse stochastic cooling system. The goal is to start commissioning in FY2009, next year.

The machine performance continues to be outstanding. The luminosity and availability statistics are impressive. We expect to meet the STAR and PHENIX delivered luminosity goals by the end of January.

## Administration



Over the past several weeks, Laboratory personnel in the Nuclear and Particle Physics Directorate have been engaged in a struggle with DOE's Nuclear Physics Program Office to claim BNL's share of a much diminished Nuclear Physics funding pie. A year that began with a realistic hope that RHIC could complete the planned 30 week run, now offers a more familiar challenge – how to maximize the scientific impact of a limited run, minimize the schedule impact on ongoing construction and R&D efforts and retain critical staff.

And so, once again, C-AD staff are asked to minimize expense whenever possible. Overtime should be limited to only that which is essential and purchases and services that can be delayed until next fiscal year should be delayed.

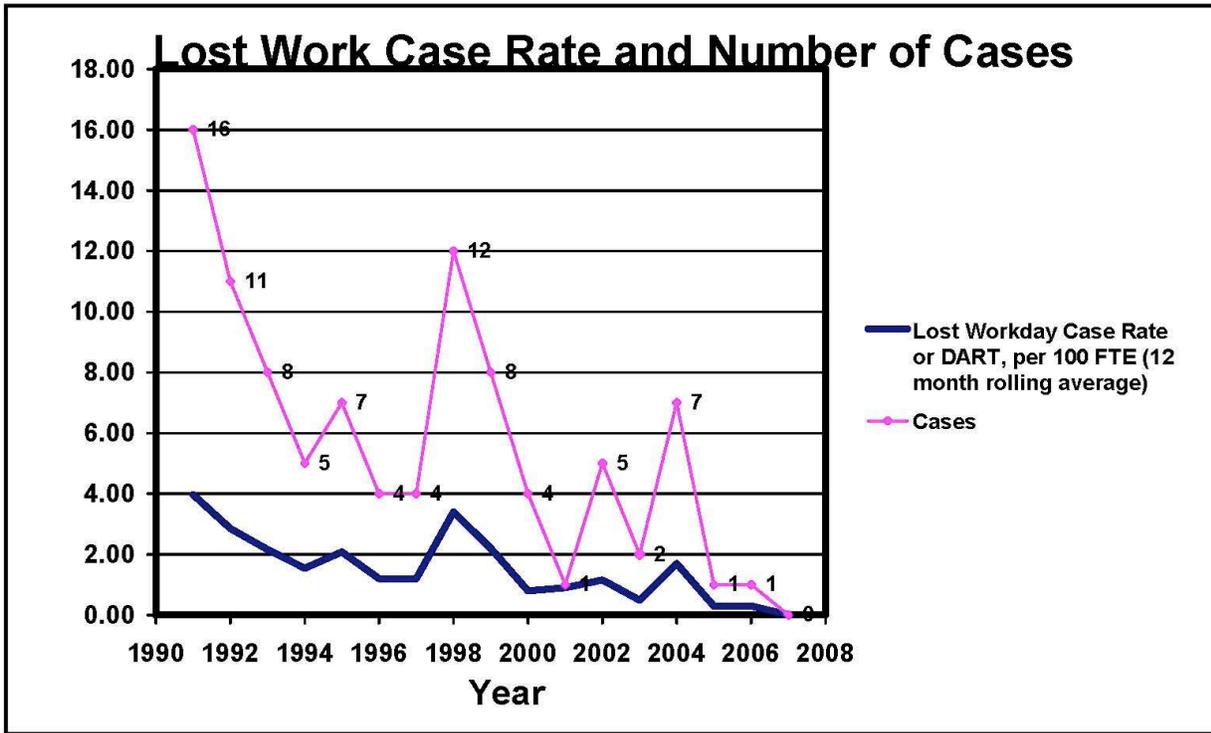
Once the budget is known, Drs. Vigdor, Lowenstein and Ludlam will set BNL's programmatic priorities for the year. Their guidance should be considered in making your decisions about how to spend our limited resources in FY 2008.

## Machine Update



The RHIC deuteron-gold Run-8 is going very well indeed. The integrated delivered luminosity to the experiments is on the high end of our pre-run projections and if things continue to progress well STAR and Phenix can reach their physics goal for the run by the end of January. A key contribution to the increase in machine performance has been the reduction of the beam size at the collision point (in jargon, beta\* squeeze), first in the yellow ring and then in the blue ring. Proposed and carried out as an APEX study, the beta\* squeeze paid an immediate dividend of a ~30% luminosity increase. In addition, average machine availability, defined as the fraction of time in collision vs. calendar time has so far been ~53%, better than last run. In particular as seen in the plot below (green bars), last week we exceeded our ultimate goal of 100 h in collision/week. Continuing good and steady operations is particularly important now as we strive to achieve the d-Au run goals as soon as possible to maximize the running time for polarized protons. With the current budget projections, we should be able to run with polarized protons for 4 weeks in February. In Operations and Maintenance we are very busy at the time of writing with the preparation and optimization of the set-up for the upcoming polarized proton operations. The BLIP program has been in the meanwhile steadily running in parallel with RHIC operations.

## Safety Stats



### C-AD Occupational Injury Statistics

	For Year* 2006	For Year* 2007
First Aid Cases	1	4
Recordable Cases	5	1
Lost Work Cases	1	0

\* Calendar Year

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

**EXCHANGE DATE:** FRIDAY, FEBRUARY 1, 2008

*Pete Cirnigliario*

happy new year

**Arrival**

**Richard Porqueddu, Mechanical Systems Group, joined us on January 2, working with Joe Tuozzolo.**

## Departure

Joseph Skelly, Controls Division, will be retiring January 31, 2008.

## Transfer

Charles Spataro, Machine Operations Group has transferred to the Light Source II, effective January 1.

**GOOD LUCK!!**

happy new year

**RHIC Newsletter**. Please click on link to the left to view the latest web publication of RHIC News.

happy new year

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



happy new year

## C-AD Service Awards December

**40 years**

**Ronald Weider**

**35 years**

**I-Hung Chiang**

<b>30 years</b>	<b>James Osterlund</b> <b>Robert Ritter</b>
<b>25 years</b>	<b>Roger Lee</b>
<b>20 years</b>	<b>Robert Todd</b> <b>Wu (Arlene) Zhang</b>

## Congratulations!

# happy new year

### Get to Know Your CoWorker

**Robert Todd**, is the Vacuum Group engineer and currently works on supporting C-AD machine operations as well as ERL and RHIC II vacuum system design. Rob started working in the Magnet Division right after graduating from Binghamton University in 1987. He worked on superconducting magnet development for both RHIC and SSC. While there, he took an interest in vacuum and leak detection and joined the newly formed RHIC Vacuum Group. As RHIC construction was nearing completion, we merged with the AGS Vacuum Group and the rest is history. While at C-AD he helped with the commissioning of the RHIC vacuum systems and also worked on SNS and other unique projects along the way. Working at BNL has been a tremendous experience. I can't believe it has been 20 years and I am looking forward to 20 more. Rob has been married to his beautiful wife Katie for 15 years where they live in their hometown of Northport. Rob and Katie have been blessed with two beautiful children. Emma is in the 4th grade and plays the piano and viola and loves science, soccer, basketball and lacrosse. Ian is in kindergarten and loves soccer to burn off that extra energy. Both love school. Before the kids came along Katie was a Programmer Analyst at Grumman. Not too long ago Rob was running with the Second Wind Track Club with coworkers Charlie De la Parra and Dan Weiss. Second Wind competes at regional and national track and field meets like the Penn Relays and the Millrose Games. The training was getting harder to do so two years ago Rob switched to swimming for fun and exercise. He joined the BERA swim team, the BNL Accelerators and found out swimming can be just as demanding. They compete at USMS (US Masters Swimming) sanctioned meets and have a great time. Rob also enjoys sailing his Sailfish in Northport bay when the wind kicks up and bike riding when the weather is nice.

(Emma's 1st Communion)	(Annual trip to NYC 2007)	(Ian ready to climb)
(Emma loves Chess Masters)	(your move Dad)	(The 99th Millrose Games with coworker Charlie De La Parra and Olympian Gail Devers)

(2005 Penn Relays)	(2007 Tobay Triathlon with coworker Victor Usack, Teddy Roosevelt and Don Archer of 2nd Wind TC)	

happy new year

## Fun Time

THIS IS FUN.....TRY IT

Try to photograph Superman

Warning this can be addictive!

[Click here: Superman Returns](#)

happy new year

## Did You Know

Seven BNL Scientists Named American Physical Society Fellows, a professional organization with more than 45,000 members. Elections to APS Fellowship is limited to no more than one half of one percent of its members in a given year, and election for this honor indicates recognition by scientific peers for outstanding contributions to physics.

Three of the Seven were from C-AD:

### \* Wolfram Fischer

"For the successful commissioning of high luminosity, high energy collisions at the Relativistic Heavy Ion Collider [RHIC] and outstanding contributions to the understanding of high-energy accelerator and collider properties."

An expert in beam dynamics problems of high energy colliders, Fischer worked on the commissioning and continuous performance improvements of RHIC, Brookhaven's world-class accelerator at which physicists detected a "perfect" liquid thought to have existed at the beginning of the universe.

After earning a Ph.D. from the University of Hamburg, Germany, in 1995, Fischer became a research collaborator at Brookhaven Lab in the same year, and he joined the Brookhaven staff in 1998. He is currently Deputy Head of the Accelerator Division in Brookhaven's Collider-Accelerator Department.

### \* Ady Hershcovitch

"For inventing and developing original plasma devices, as well as improving existing devices for applications in research and industry that led to new technologies and new physics."

Hershcovitch developed a plasma window, a novel device that has several industrial and scientific applications, including electron-beam welding and transmitting beams of particles and radiation from vacuum to atmosphere for experiments in the U.S., Israel and South Africa. Accelaron Inc., of East Grandy, Connecticut, holds an exclusive license for the technology. Earlier in his career, Hershcovitch developed an ion probe, a diagnostic device that measures the temperature and density of ions in plasma physics experiments and in tokamak fusion reactors, which hold the promise of producing fusion energy, like the energy that powers the sun. In 1996 and 1987, respectively, Hershcovitch won R&D 100 Awards for these inventions from R&D Magazine, which annually honors inventors for the top 100 technological achievements of the year.

Hershcovitch earned a Sc.D. from the Massachusetts Institute of Technology in 1977, and he joined Brookhaven in 1980. He is also a research professor at Southern Methodist University in Dallas, Texas, and is directing plasma-related projects at the University of California at Irvine, the Institute for Theoretical and Experimental Physics in Moscow, Russia, and the High Current Electronics Institute in Tomsk, Russia.

### \* DeJan Trbojevic

"For his original contributions in the design, commissioning and operations of Tevatron and RHIC colliders and for the development of new concepts for future accelerators."

Trbojevic designed part of the main ring around the large particle detector at DOE's Fermi National Laboratory (Fermilab) in Batavia, Illinois. He also developed a new method of particle acceleration for high-energy accelerators that eliminates problems associated with transition energy - the energy at which particle motion is unstable - and a new type of accelerator with small magnets that is relatively easy to operate. The accelerator could be used for muon, proton or electron acceleration as well as cancer therapy. In addition, he was a key figure in the building and commissioning of RHIC.

Trbojevic earned his Ph.D. from Georgetown University in 1984. After working at Fermilab, he came to Brookhaven in 1992.

## CONGRATULATIONS TO ALL

### Safety during the Winter

New York State Department of Transportation Commissioner Astrid C. Glynn reminds New Yorkers to be prepared when traveling in winter weather conditions and to visit [www.nysdot.gov](http://www.nysdot.gov) for driving tips and links to the latest road, weather and traffic conditions.

### UNITED WAY UPDATE:

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**From:** Beckman, Maria C  
**Sent:** Tuesday, December 18, 2007 12:31 PM  
**To:** United Way Captains; White, Kenneth W; Gurski, Kathleen  
**Subject:** Victory for the Volunteers!

Please send this message around to people within your organization, for many contributed to this success.

Since an appeal was made a few weeks ago to send in completed volunteer forms, they have just poured in. The total to date is 2,439 hours! The combined BSA and Battelle corporate contributions of \$20,000 for the United Way can be claimed! Thank you to every volunteer for your enthusiasm and heart.

Part of this total represents hours spent on the creative UW fundraising activities such as the different bake sales, breakfast, ice cream social, chili luncheon, sandwich fundraisers, car wash, bread sale, pizza lunch, international food tasting, holiday auction, book sale, yard sales, and others.

An amazing 1,900 hours represents time spent volunteering in our communities -- participating in charity fundraisers, as coaches, teachers, fire department volunteers, EMTs, soup kitchen workers, Red Cross Kitchen workers, Adopt-a-Platoon fundraisers, blood donors, distributing food and toy baskets, sorting food for distribution, volunteering expertise to organizations in need of need, visiting nursing homes and the infirmed, participating in various church and music ministries, staffing hotlines, and more! The positive impact you make on people in our surrounding communities cannot be measured. Compassion grows when you reach out to help others.

Last but not least, thank you to everyone who donated food, new toys, toiletries, and clean, warm clothing and coats which are much appreciated by local agencies that count on our continued generosity.

Happy Holidays!

Maria Beckman and Mary Campbell  
BNL United Way Campaign Volunteer Program Coordinators

happy new year

WHERE

Physics, Bldg. 510

Large Seminar Room

# RHIC & AGS

## Open Forum Meeting

All BNL Employees and Guests are welcome.

TIME

12:00 pm to 2:00 pm

Lunch will be provided  
first-come, first-serve basis

DATE

Friday, January 11, 2008

AGENDA

### Special Guest Speaker

Mike Lubell

(Director of Public Affairs, American Physical Society)

**FY08 Science Funding for RHIC and Other Facilities at BNL**

- ❖ **FY08 Funding & its Impact on RHIC Operations: Steve Vigdor**
- ❖ **Housing Survey Results and Future Plans: Rene Bellwied**

**WEBCASTING:** The meeting will be available from on-site or off-site by clicking on <http://www.bnl.gov/video>. RealPlayer 8 is required on your computer, which can be downloaded from the web page above.

Bridge Connection: (866) 606-4717. You will be asked for an access code, dial 8293223.

Questions: Guest, User, Visitor Center @ (631) 344-3333



From: Carter, Christine B  
Sent: Friday, December 28, 2007 8:54 AM  
Subject: BERA final Update for 2007

**HAPPY NEW YEAR TO ALL!**

2007 was a good year for QOL/BERA/Recreation! The perks & benefits offered by BNL are outstanding!

- BNL employees enjoyed over 30 trips & events arranged by the BERA Board
- A new ASAP Lounge opened in Bldg. 462 for all Students & Postdocs to enjoy <http://www.bnl.gov/asap/>
- ESOL classes at CAD have been added, plus new workshops- check out the schedule! <http://www.bnl.gov/esol/>
- Attendance at BERA Summer Camp and Swimming Lessons broke records
- The gym floor was replaced after 7 months and a new heating system was installed! What a great facility we have!
- Fitness classes are available during lunch & after work to fit into most schedules
- Swimming Pool programs (Virtual Swim to the Bahamas in January!)- come enjoy the warm water & exercise
- \$25 per year membership to the BERA Exercise & Bodybuilding Club weight room
- FREE weight room orientation offered twice a month for members
- The BERA Discounts page continues to grow- take advantage!
- Elections for 4 positions on the BERA Board will take place in March, 2008. If you'd like to be a part of the Board and continue to make BERA a great organization, please call or email me.

**HOLIDAY SCHEDULE:** <http://www.bnl.gov/bera/recreation/facilities.asp>

**BERA BOARD Information:** [http://www.bnl.gov/bera/linkable\\_files/AdminManual\\_1-25-07.pdf](http://www.bnl.gov/bera/linkable_files/AdminManual_1-25-07.pdf)

Best to you & yours for 2008,

Chris, Joanne, Jen, & all the BERA staff

happy new year

**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](mailto:pmanning@bnl.gov)

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



Check out Eric Forsyth's video he show on December 19th.

[Fiona Returns to Antarctica](#) (~2GB) Right click and "Save Target As" onto your desktop.

# happy new year



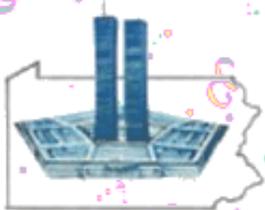
## January 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 New Year's Day	2	3	4	5
6	7	8	9 Concert featuring Synergy Quintet, 12 noon, Berkner	10	11	12
13	14	15 Physics Colloquium "Unusual peaks around the open charm threshold" M. Voloshin, U. MI, 3:30pm, Bldg. 510	16	17	18	19
20	21 	22	23	24 432nd Brookhaven Lecture, James Murphy, NSLS, 4pm, Berkner Auditorium	25	26 Sixth Annual 'Gathering of the Slides' Concert, 7:30pm Berkner
27	28	29 Physics Colloquium Paul Sommers, Penn State, 3:30pm, Bldg. 510	30 BSA Noon Recital: "Concert featuring Cellist Raman Ramakrishnan", 12noon, Berkner	31		

# February 2008



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2 Groundhog's Day
3	4	5	6	7	8	9
10	11	12 BSA Noon Recital: "Stony Brook Opera", 12noon, Berkner	13	14 	15	16
17	18  Holiday	19 Physics Colloquium "Developments in charm quark mesons: chaos, confusion and craziness", T. Barnes, 3:30pm, Bldg. 510	20 433rd Brookhaven Lecture, Jason Graetz, ES&T, 4pm, Berkner Auditorium	21	22	23
24	25	26	27	28	29	



**We Remember**  
*Sept. 11, 2001*

Editor: Pamela Manning x4072

