

Particle Post April 2007

We have only this moment, sparkling like a star in our hand... and melting like a snowflake. Let us use it before it is too late.

~Marie Beyon Ray

To review previous issues

A Note From Our Chairman



With the start of spring, C-AD has been the recipient of good news. We finally received our FY2007 budget. It allows for a twenty week run, increased AIP support, continued ERL R&D and the construction start of the EBIS project. In addition, after several years of negotiation etc, we have received the first funding of a \$5M CRADA between BNL and Nano Life Sciences Inc., to design a rapidly cycling 250 MeV proton synchrotron for oncology treatments. Congratulations to Steve Peggs for his perseverance. For the details, see the slides from the All Hands presentation, that is posted on our website.

Congratulations to Fulvia Pilat for being honored for her accomplishments in science at the Brookhaven Town-sponsored Women's Recognition Night at Brookhaven Town Hall on March 15. It was my pleasure, in addition to several of our colleagues, to attend the festivity.

I would like to remind everyone that the misuse of computers and computer equipment will lead to disciplinary action. It is unfortunate that recently two incidents of computer misuse involved C-AD personnel. The incidents were thoroughly investigated by the IT Division and C-AD suspended one individual for two weeks without pay, for creating, downloading, viewing, storing, copying, and transmitting sexually oriented material, while the second individual's employment was terminated for unauthorized access to and tampering with a computer. Misuse of computers will not be tolerated at C-AD.

Administration



AT LAST – REAL NEWS! Our FY 2007 funding levels have been confirmed. Although operating funds of \$109.3M reflect a reduction from our Presidential Budget, the shortened RHIC Run 7, along with lower than anticipated power cost, insures that funds for salaries, materials and services are provided at the levels initially planned.

Perhaps, the best of the real news is that EBIS construction funds of \$5.0M have been provided. EBIS Project personnel have been poised to spend for the past six months. At issue was the official interpretation of “no new starts”. With both Project Engineering and Design (PED) funding and Critical Decision 3 in FY 2006, it was not clear if EBIS was a “new” start. It is. At the half-way point in FY 2007, nearly 70% of the planned funding has been allocated and the Nuclear Physics Program Office has confirmed that the \$2.4M we did not receive will be fully restored in the FY 2008 budget.

March financial data reflects the first up-tick in spending in FY 2007. Retroactive implementation of current year salary actions and increases in overtime and shift expense brought direct labor expense to the highest level this year. WEB requisitions, which have been on hold awaiting definitive news on our FY 2007 budget, began to flow through the system and credit card limits were restored to previously held levels. RHIC operating expenses for the month totaled \$7.8M and year-to-date expense is \$45.2M.

If you haven't yet had a chance to check out our [Administrative Web Site](#), you may want to take the time this month to familiarize yourself with what is available. The site should provide the quickest answers to frequently asked questions regarding funding and expenditures. BNL standard and overhead rates, DOE escalation rates and signature authorization tables are also available. Please, let us know what you think.

Machine Update



The RHIC run finally started in March, after our earlier struggles with the federal budget and system problems. After the bypass of the HX20 heat exchanger and the ensuing fast and successful cool-down, beam operations RHIC started on March 9 in the Blue Ring, and on March 12 in Yellow. Then the set-up phase of RHIC operations started and first collisions overnight were delivered for experiments set-up on March 20, with 37 bunches colliding. On March 26, after a few days of ramping up of the luminosity, the physics running started with a store of 51 bunches colliding. In the meanwhile we progressively increasing bunch intensity and number of bunches to a maximum so far of 79 colliding bunches. The maximum possible – and ultimate goal – is 111. The record peak luminosity so far is 2.2×10^{27} , already exceeding the record of 1.7×10^{27} in Run-4, the last time we ran with gold. The integrated luminosity so far exceeds the maximum projections. We are now confronting repeated system failures and the focus at the moment is on addressing these to avoid compromising the long-term availability of the machine. The NSRL program is running concurrently to RHIC: some species can be run in ppm (pulse to pulse modulation) so switching species is seamless, other species as the presently run (Fe) require mode switching.

The later mode implies that NSRL can only run under RHIC stores, and this adds some challenge to the scheduling. The flexibility of the NSRL team in optimizing overall operations is much appreciated. The injectors have started set-up for polarized proton studies in AGS, also planned to be run soon, concurrently with the other programs. BLIP continues to run steadily. We had the first scheduled maintenance day on March 28, it went well in general and some lesson were learned to improve the return to operations next time.



COLLIDER-ACCELERATOR DEPARTMENT and SUPERCONDUCTING MAGNET DIVISION EQUAL OPPORTUNITY COMMITTEE

The Collider-Accelerator Department and the Superconducting Magnet Division have a policy of equal opportunity and fair treatment in an environment free from harassment for all employees.

The joint Collider-Accelerator and Superconducting Magnet Division committee has been appointed to assist us in operating within the Equal Opportunity and Affirmative Action Policy guidelines of Brookhaven National Laboratory. You are encouraged to contact any one of the committee representatives if you have any equal opportunity or fair treatment concerns. They are here to help you.

A copy of the Laboratory's Equal Opportunity and Affirmative Action Policy Statement is available from the Diversity Office in Bldg. 185, from any of our Equal Opportunity Representatives, or on the web at <http://www.bnl.gov/diversity/policies.asp>.

Derek I. Lowenstein, Chairman
Collider-Accelerator Department

Thomas B. Kirk, Interim Head
Superconducting Magnet Division





Committee Members
(from left to right)

Diana Votruba, Ext. 5123

Mei Bai, Ext. 3397

Ahovi Kponou, Ext. 4919

Joseph Tuozzolo, Ext. 3966

Omar Gould, Chair, Ext. 2656

Charles Gardner, Ext. 5214

Marion Heimerle, Ext. 4619

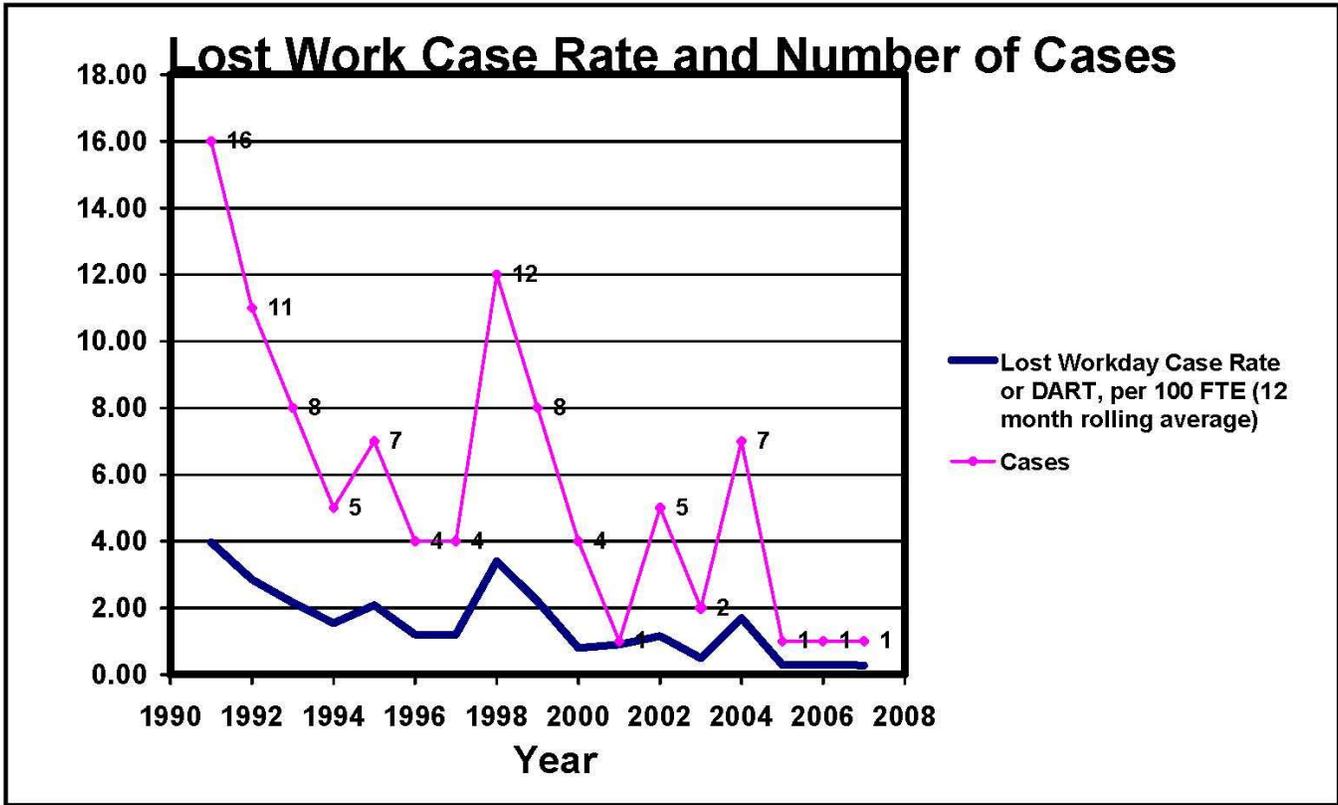
Vincent Castillo, Ext. 3772

Loralie Smart, Ext. 2425

Ann Lamberti, Ext. 7611



Safety Stats



C-AD Occupational Injury Statistics

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

* Calendar Year

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

NEXT EXCHANGE: Friday, APRIL 6, 2007

Pete Cirnigliaro



Arrival

Laura Taddonio joined the C-A Department on April 2 working with Tony Arno in the Design and Documentation Group.

WELCOME!!

Departures

Jorge Jimenez, Electrical Systems Group terminated on Wednesday, March 28.

Molly Scannell, Machine Operations Group terminated on Friday, March 23.

Transfer

Mary Ostensen, Administrative Group will be transferring to the EENS Directorate effective April 9.

A Lunch with Bill Weng

Bill Weng started his two-year assignment with the Office of High Energy Physics of the DOE Office of Science on April 1, 2007. Before his departure to Washington, D.C., colleagues at C-AD had lunch with him to wish him well on his new journey.

Bill joined BNL in 1977 after receiving his PhD from the Department of Physics at Stony Brook University in 1974 and spending his post doctoral period at the University of Arizona. His first assignment at C-AD was to improve the fast extraction line to the neutrino target, and accomplished with flying color. The task ended with the run of 1.5 GeV run to the target for the hydro-phonic detector test. After demise of ISABELLE project Bill moved to SLAC to work on the SLC, he came back to Brookhaven at the beginning of the Booster project. During the period from 1987 to 1990, Bill served as the head of the Booster Project at BNL. From 1990 to 1994, he was the head of the Accelerator Division at AGS. Starting 2002 he became the head of the Center of Accelerator Physics.

Bill was the Senior Team Leader for Ring System of the Spallation Neutron Source (SNS) Project from 1996 to 2002 leading the BNL team in the design and early construction of the SNS Ring and Transport lines. The SNS project started with five DOE laboratories: Lawrence-Berkeley for the Front End, Los Alamos for the Linac, Brookhaven for the Ring and Transport, ORNL for the Target, and Argonne for the neutron instruments. Later when the superconducting RF technology was chosen for the SNS Linac, Jefferson joined as the sixth laboratory. Bill was one of the earliest members of the SNS collaboration. When the construction started in 1999, Bill formed the SNS team with scientists and engineers from the Collider-Accelerator Department, Superconducting Magnet Division, and Energy Science and Technology Department. Through the years, Bill worked with three teams of SNS management at ORNL and developed close collaborations with other partner laboratories as well as institutes around the world. With Bill's hard and effective work, a firm foundation was laid at BNL for the success of the project. In April 2006, the SNS project was successfully completed at ORNL. Throughout the project Bill has shown a leadership as well as the political savvy to deal with all those multi-laboratory interests. The Ring was successfully commissioned in 3 days storing 50% of the design beam intensity. In less than a year, the SNS Ring reached the full design intensity of 10^{14} protons per pulse setting a world record of high intensity rings.

GOOD LUCK!!



Get To Know Your CoWorker



Wenge Fu, Controls Division, has been working at the Lab for about 9 years now. He is the Database Administrator of the Controls database servers. He also works as a software application engineer to develop applications and web applications for the accelerator control system. Wenge enjoys walking and fishing in his spare time. His wife, Ping, is a

housewife who enjoys cooking and gardening. They have one daughter, Julia, who is a freshman at Stony Brook University, majoring in pharmacology. She is doing well in college.



Do You Know of Any Recent or Upcoming Graduates? If so, please let me know and I will include in our next newsletter.



Did You Know?

That RHIC now has an online bi-monthly newsletter. [RHIC Newsletter](#). Please click on link to the left to view the latest web publication of RHIC News.

Brookhaven Town Honors Two Brookhaven Lab Women

March 15, 2007

UPTON, NY — Jean Logan and Fulvia Pilat, scientists at the U.S. Department of Energy's Brookhaven National Laboratory, were honored for their accomplishments in science at the Brookhaven Town-sponsored Women's Recognition Night at Brookhaven Town Hall on March 15. They were among fourteen women honored for contributions to various fields in a ceremony to celebrate National Women's History Month.



Jean Logan (click on image to download a high-resolution version)

Chemist Jean Logan developed a graphical analysis method to interpret data for Brookhaven Lab's Positron Emission Tomography (PET) program. PET is a medical imaging method that measures the concentration and movement of radiotracers — radioactive isotopes — in living tissue. Over the last twenty years, the Laboratory's PET program has gained international recognition for studies in human addiction, brain aging and degeneration, obesity, and drug research and development.

Logan's kinetic model describes the uptake and loss of a radiotracer in living tissue over the course of an experiment. Her method transforms a general set of model equations into a linear plot, the slope of which is related to the number of tissue-binding sites. It is an important tool for researchers at PET facilities

around the world, since it allows them to interpret data without solving complex mathematical equations. She also devises methods to analyze kinetic data for new radiotracers.

After she earned a Ph.D. in chemistry from Louisiana State University, Logan joined Brookhaven Lab as a research associate. In 1980, she joined the Laboratory's PET program as an assistant chemist. She was promoted to associate chemist in 1989, and to chemist in 1994.

"It's nice that Brookhaven Town gives this honor to women," said Logan. "Not so long ago — within my lifetime — women were not well-represented in science. In fact, they were sometimes discouraged from attending graduate school. We've made significant progress since then."



Fulvia Pilat (click on image to download a high-resolution version)

Brookhaven physicist Fulvia Pilat helped to design, commission and run Brookhaven's largest accelerator, the Relativistic Heavy Ion Collider (RHIC). Currently, she is head of operations for RHIC and its injector accelerators. Physicists from around the world conduct experiments at RHIC to explore a state of matter that existed one millionth of a second after the Big Bang. Overseeing a staff of about 30, Pilat is responsible for the smooth operations and system maintenance of the 2.4 mile-round collider and three smaller accelerators that prepare ions for acceleration to nearly the speed of light in RHIC.

The NASA Space Radiation Laboratory at Brookhaven, where scientists study the effects of radiation in space on humans, and the Brookhaven Linac Isotope Producer, which creates nuclear medicine agents, also depend on the smooth functioning of these accelerators.

In addition, Pilat is the coordinator of the Accelerator Physics Experimental Program at RHIC, in which she leads about 40 physicists and engineers who develop new techniques and instrumentation for the better operation of RHIC and future accelerators.

"My job is very demanding but also very exciting," Pilat said. "It's a pleasure to work at Brookhaven Lab, which has state-of-the-art facilities and very enthusiastic staff, and it's an honor to be recognized by Brookhaven Town for my work. I hope honors like these will make young women more aware of the opportunities that are now increasingly available to them in science."

Born in Trieste, Italy, Pilat received her Ph.D. in physics from the University of Trieste in 1986. She began her physics career at CERN, the European laboratory for particle physics in Geneva, Switzerland. After six years at CERN, Pilat came to the U.S. to work on the Superconducting Supercollider in Texas. She also worked at Los Alamos National Laboratory before joining Brookhaven in 1994. She was promoted to her current position in 2005.

NOTE TO LOCAL EDITORS: Jean Logan and Fulvia Pilat are both residents of Setauket, NY.

Number: 07-28 | [BNL Media & Communications Office](#)



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



C-AD Service Awards March

20 years	Nikolaos Laloudakis Christopher Degen
10 years	Travis Shrey Louis Tenreiro

Congratulations to ALL!

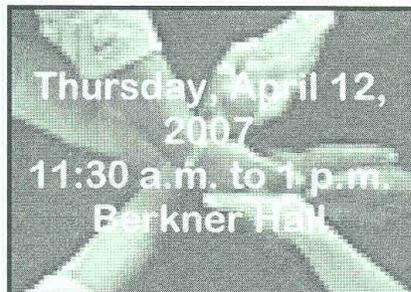


Have you exhausted all avenues to get your concerns heard?

Did you know that Brookhaven National Laboratory has a group of diverse employees that are ready to listen? Why not seek the assistance of the **Brookhaven Advocacy Council (BAC)?**

Or, join our team! If you are a good listener who can maintain confidentiality, remain impartial, and are interested in establishing an atmosphere of trust between BNL management and its employees, consider becoming a BAC member!

For more information, come speak with a BAC Council member:



The Brookhaven Advocacy Council, a key component of the Laboratory's commitment to fairness, shall endeavor to create an atmosphere of trust between itself and BNL employees, guests, and users that is expected to contribute to a quality work environment at the Laboratory.

The Brookhaven Advocacy Council advises and makes recommendations to the Laboratory Director on the resolution of employee, guest, and user concerns or issues that are brought to the attention of the BAC.

**<http://www.bnl.gov/bac>
Hotline: 631-344-4200
E-mail: bacchair@bnl.gov**



Fun Time

This is a new version of the classic Tic Tac Toe game. Playable either against a friend or against the computer. [Please click here for game.](#)



Spring wasn't here when this picture was taken, but the Killdeer can certainly feel that it is coming. Picture taken at Ring Road at 6:00.

Submitted by James Osterlund



Coltsfoot in bloom (left) and Mourning Cloak (right) out and about; it is Spring! Early Spring, maybe, but Spring nonetheless.





Easter Egg Hunt

**Saturday, April 7
11:00am at the Rec Hall (317)**

BNL Hospitality Committee invites you
to our Annual Easter Egg Hunt in the Recreation Building 317.
You can participate in many games, crafts and a raffle.
Please bring one dozen hard boiled decorated eggs and a dish to share.
We will provide bagels, fruit and drinks.

We'll start the egg hunt at 11:30am and the games at 12, so please
be on time (11:00am) so we can have enough time to hide the eggs.
Looking forward to seeing all of you!

For information contact: Petra Adams: 821 9238
petra@adamsovi.com



**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**



April 2007



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
Palm Sunday		Physics Colloquium "History of the Development of the Bubble Chamber" David Rahm, PO, 3:30pm, Bldg. 510 Passover		Health Promotion Program Lecture "Exercise & Diabetes", Jen Gatz & Amy Shapiro, 12:00pm, Berkner Rm. B	Good Friday	Point & Insurance Reduction Program (Defensive Driving) E. Sierra, 9am, Berkner Rm. B

<p>8</p> 	<p>9</p>	<p>10</p> <p>Physics Colloquium "Magnetic Monopoles: The Unicorns of Physics" A. Scharf Goldhaber, SBU, 3:30pm, Bldg. 510</p>	<p>11</p> <p>Opera Scenes, noon, Berkner Hall</p> <p>Instrumentation Division Seminar "How Can We Improve the Performance of GEM Detectors", Craig Woody, PO, 2:30pm, Bldg. 535</p>	<p>12</p> <p>Medical Dept. Seminar "Is Psychiatric Classification Approaching a Paradigm Shift?", Roman Kotov, SUNY Stony Brook, 1:30pm, Bldg. 490</p>	<p>13</p>	<p>14</p>
<p>15</p>	<p>16</p> <p>Research Library Seminar "Tips on Using Inspec", Karen Barrymore & Erica Moblely, Inspec, 1pm, Bldg. 510</p>	<p>17</p> <p>Seminar "The Greenhouse Effect and Your Family's Contribution to It", Stephen Schwartz, EE, Noon, Berkner</p> <p>Physics Colloquium "Bringing CO2 Laser to the Forefront of Advanced Accelerator Research", Igor Pogorelsky, PO, 3pm, Bldg. 510</p>	<p>18</p> <p>424th Brookhaven Lecture "Radiological Threat Reduction: Dealing with Dirty Bombs", Stephen Musolino, N&NS, 4pm, Berkner</p>	<p>19</p> <p>Anxiety Awareness and Screening Day, Call the EAP office/ OMC x4567 to make an appointment</p>	<p>20</p>	<p>21</p>

22 Earth Day	23	24 Physics Colloquium "An Energy Revolution for the 21st Century", Marty Hoffert, NYU, 3:30pm, Bldg. 510	25 Health Promotion Program Lecture "Dentistry in the 21st Century", Mitchell Shapiro, Noon, Berkner Hall Administrative Assistant's Day	26 Take Our Children to Work Day	27 'Pickin' at the Berkner:' Blues/Rock Concert, 8pm	28
29	30					



May 2007

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Physics Colloquium, Evalyn Gates, U. of Chicago, 3:30pm, Bldg. 510	2	3	4	5
6	7	8	9	10	11	12

<p>13</p> <p>Mother's Day</p>	<p>14</p>	<p>15</p> <p>Physics Colloquium, "Colliding 5nm Electron Positron Beams at the International Linear Collider", William Morse, PO, 3:30pm, Bldg. 510</p>	<p>16</p> <p>425th Brookhaven Lecture, Pavel Oblozinsky, ES&T, 4pm, Berkner</p>	<p>17</p>	<p>18</p>	<p>19</p> <p>Armed Forces Day</p> 
<p>20</p>	<p>21</p>	<p>22</p> <p>Physics Colloquium, "High-Energy Neutrino Astronomy: Towards a Kilometer-Scale Neutrino Observatory", Francis Haltzen, U. of WI-Madison, 3:30pm, Bldg. 510</p>	<p>23</p>	<p>24</p> <p>Memorial Lecture, "2nd Vernon W. Hughes Memorial Lecture", William Marciano, BNL, 3pm, Bldg. 510</p>	<p>25</p>	<p>26</p>
<p>27</p>	<p>28</p> <p>Memorial Day</p>  <p>Holiday</p>	<p>29</p> <p>Physics Colloquium, "Approaches to Cosmic Acceleration" Mark Trodden, Syracuse U., 3:30pm, Bldg. 510</p>	<p>30</p> <p>BSA Distinguished Lecture, "Einstein's Biggest Blunder? A Cosmic Mystery Story", Lawrence Krauss, Case-Western U., 7pm, Berkner</p>	<p>31</p>		



**We Remember
Sept. 11, 2001**

Editor: Pamela Manning x4072