the Bulletin

BROOKHAVEN NATIONAL LABORATORY

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Report From the Annual RHIC & AGS Users' Meeting

At the Relativistic Heavy Ion Collider (RHIC) and Alternating Gradient Synchrotron (AGS) Users' Annual Meeting, held at BNL last Thursday and Friday, May 15-16, discussion on how to perform leading-edge research given flat budget projections was counterbalanced by a buzz of exciting physics results from over the past year.

Highlights from Thursday morning's session included a welcome from BNL Director Praveen Chaudhari and presentations by DOE's Dennis Kovar, Director of the Office of Science's Division of Nuclear Physics; Brad Keister, Director of the Nuclear Physics Division of the National Science Foundation (NSF); Alexander Firestone, Director of the NSF's High-Energy Physics Division; Frank Sulzman, Research Program Manager at the National Aeronautics & Space Administration (NASA); and Susan Ginsberg, Senior Science Policy Fellow at the American Physical Society (APS).

Brant Johnson, Organizing Committee Chair, opened the meeting by introducing Richard Seto, University of California at Riverside physicist and Chair of the AGS/RHIC Users' Group Executive Committee (UEC), who spoke optimistically on future projects at BNL. He also emphasized, "The way to increase our individual funding is to push [the government] for the increase of funding for science in general."

UEC chair-elect Victoria Greene, Vanderbilt University, then introduced BNL Director Praveen Chaudhari, whom, she said, she had met previously at a last-minute meeting to restore crucial funding for the RHIC spin-physics program. As she explained, "He listened to us, he understood the emergency, he took immediate action, and we saw results. We can ask for no more in a lab director."

In his address, Chaudhari emphasized his strong interest in the data to be presented later in the meeting and thanked the funding agencies for their support in the "risky" business of financing basic research.

Update From DOE

DOE's Dennis Kovar agreed, saying that the federal government — and therefore the taxpayers — takes calculated risks in funding science research. "With RHIC, we were confident that the machine would do well," he said. "Scientific results emerged almost immediately upon RHIC's start-up," he continued. "We're off to a great start."

Kovar presented an overview of DOE's nuclear physics program with a review of the past decade's facilities and results, showing that, through careful planning, many DOE facilities have positioned the U.S. for a leadership role in the future of science. He acknowledged, however, that budgets have been flat, and he expects that FY04 will be the same.

"Results from fundamental science research have profoundly influenced our lives," said Kovar, "and that is the case that must be sold [to change the funding picture]."

Next year's goals for the Division of Nuclear Physics include strengthening the research base, increasing research manpower, and increasing operations at user facilities by five percent, Kovar said.

Update From the NSF

NSF's Brad Keister then reported that the overall NSF FY03 budget was up 13 percent, including a 12-percent increase for physics programs. This increase however, comes at a time when the physics community is still "digging out from the previous year's budget cuts," Keister said. The FY04 budget is still unclear.

Keister also highlighted several NSF research initiatives: "physics at the informational frontier," including programs such as advanced computing, networks, quantum informational sciences, nuclear theory, fundamental neutron science, and education.

Alexander Firestone gave NSF's high-energy physics viewpoint. "If you want new projects to fly in Washington, then you have to connect them with big questions," he said.

Firestone discussed BNL's Rare Symmetry Violating Processes (RSVP) experiment, scheduled to begin construction in 2006. RSVP consists of two particle detectors: KOPIO, which will look for a very rare reaction with the potential to explain the observed lack of symmetry between matter and antimatter in the universe; and MECO, which will search for a rare form of muon decay, called

(continued on page 2)

More BNL Highlights From the APS April Meeting

Many talks at the American Physical Society (APS) meeting held in Philadelphia April 5-8 were of particular interest to BNL, and some were featured in the Bulletin of May 9. The Bulletin concludes this selection of highlights with talks given by William Kilgore and William Marciano, both of the Physics Department, during the Division of Particles & Fields (DPF) divisional meeting, which was held jointly with the APS meeting and chaired by Sally Dawson, Physics. — Liz Seubert

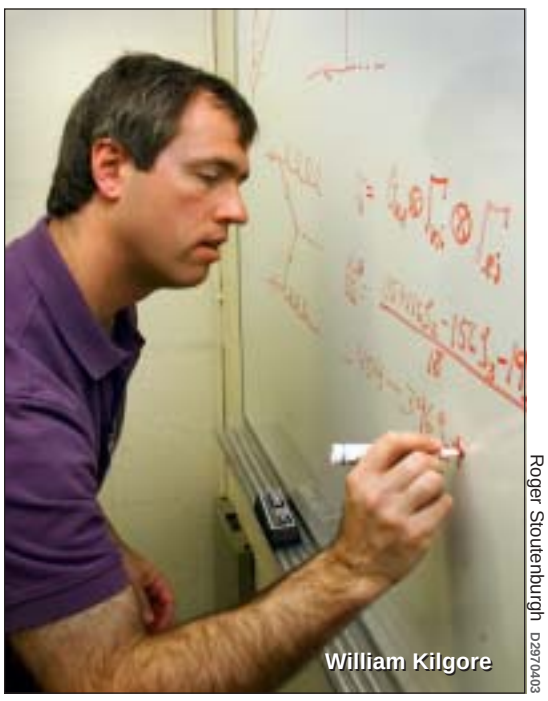
Kilgore on Tracking the Higgs

For many years, a central goal of high energy physics has been the discovery of the Higgs boson. The Higgs, a postulated subatomic particle, is believed to be a vital piece of evidence needed to verify the explanation given by the Standard Model, the basic theory of fundamental interactions and matter, of how particles acquire mass.

As reported by William Kilgore of BNL's Physics Department, the experiments at CERN's Large Electron-Positron (LEP) collider established a lower mass limit of 114 GeV/c^2 in their final run a few years ago.

The focus of the search has now shifted to the Fermilab Tevatron, Kilgore said, which has limited reach above the LEP limit, and the CERN Large Hadron Collider (LHC), scheduled to begin in 2007. While the production rate for Higgs bosons should be substantial at the LHC, it has been difficult to prove the reliability of the theoretical calculations that predict that rate.

"Over the last several years, I and my collaborator — Robert Harlander, a post-doctoral researcher at BNL at the time — have computed second-order quantum corrections to the Higgs boson production rate," Kilgore said.



"These calculations have established the reliability of older, lower-order calculations and provide the best estimates available of the Higgs boson production rate. Our most recent work has extended these calculations to cover not only the single Higgs boson predicted by the Standard Model but also the several Higgs bosons predicted by the minimal supersymmetric extension to the Standard Model."

Marciano on 'g minus 2'

At the APS-DPF meeting in Philadelphia, Bill Marciano, Physics Department, discussed the status of theoretical calculations of the muon anomalous magnetic moment, known as g-2.

The muon is an electrically charged particle that spins on its own axis and acts as a tiny magnet with its own magnetic moment, which is the name given to a magnet's strength. When a muon orbits in a magnetic field created by another magnet, its magnetic moment and its spin rotate about the external magnetic field at nearly the same rate as the muon's momentum. The rotation frequency of the spin is proportional to a factor scientists call "g." If g were exactly 2, the muon's spin axis would always move in step with the orbit and continue to point forwards.

However, because g is not exactly 2, the spin and magnetic moment of the muon precess slightly faster than the muon's momentum or orbital direction. The "g minus 2" experiment at BNL's Alternating Gradient Synchrotron is measuring this effect with unprecedented precision.

Deviations from g equals 2 result from quantum loop effects. These are due to contributions from excitations involving electrons, positrons, quarks, gluons, and all other known elementary particles. In addition, heavy, as-yet-undiscovered new particles — for example, those predicted by speculative ideas such as supersymmetry — probably also contribute. *(continued on page 3)*

BSA Distinguished Lecture

Oliver Sacks On 'Creativity And the Brain'

Wednesday, June 4

Oliver Sacks, world-renowned neurologist, humanist and bestselling author, will deliver a BSA Distinguished Lecture on "Creativity and the Brain" on Wednesday, June 4, at 4 p.m. in Berkner Hall. Refreshments will be served before the talk, beginning at 3:40 p.m., and Sacks will sign his books after his talk.

Sacks has written seven books, which include the bestseller, *The Man Who Mistook His Wife For a Hat* (1985), and, most recently, an autobiographical work, *Uncle Tungsten: Memories of a Chemical Boyhood* (2001).

Sacks's distinguished career as an author can be traced back to when, in 1966, he administered the drug L-dopa to patients who had remained in strange, frozen states for decades due to a sleeping sickness epidemic in the 1920s.

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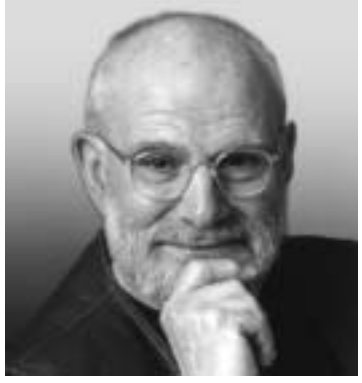


Calendar

of Laboratory Events

- *The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347; or Chris Carter, Ext. 2873.*
- *Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.*
- *The Recreation Building (Rec. Hall) is located in the apartment area.*
- *Contact names are provided for most events for more information.*
- *Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.*

— EACH WEEK —

Weekdays: Free English for Speakers of Other Languages Classes
Beginner, Intermediate, and Advanced classes. Various times. All are welcome. Learn English, make friends. See www.bnl.gov/esol/schedule.html for schedule. Jen Lynch, Ext. 4894.

Mondays: BNL Gospel Choir
5:15-7 p.m. Berkner Hall. All faiths are welcome. www.bnl.gov/bera/activities/choir/.

Mon., Tues., & Thurs.: Kickboxing
$5 per class. Mon. & Thurs. noon-1 p.m. in the gym; Tues., 5:15-6:15 p.m. in the gym; Thurs., 5:15-6:15 p.m. in Brookhaven Ctr. Registration is required. Christine Carter, Ext. 2873.

Mon., Thurs., & Fri.: Tai Chi
Noon- 12:45 p.m., Brookhaven Center North Room. Adam Rusek, Ext. 5830 or rusek@bnl.gov.

Mondays: BNL Dance Club Ballroom, Latin & Swing Practice
5:30-7 p.m. North Ballroom, Brookhaven Center, except Lab holidays. Jean Logan, jlogan@bnl.gov or Ext. 4391.

Tuesdays: Welcome Coffee
10-11:30 a.m. Rec. Hall. Hospitality event. Come and meet friends. The first Tuesday of every month is special for Lab newcomers and leaving guests. Hospitality Chair Monique de la Beij, 399-7656.

Tuesdays: BNL Music Club
Noon, North Room, Brookhaven Center. Come hear live music. Joe Vignola, Ext. 3846.

Tuesdays: Singles Club
5:15 p.m., Brookhaven Center. Contact: Jean, Ext. 4391.

Tuesdays: BNL Dance Club Individual & Couples instruction
5-11 p.m. North Ballroom, Brookhaven Center. Ron Ondrovic, ondrovic@bnl.gov or Ext. 4553.

Tuesdays: Toastmasters
1st and 3rd Tuesday of each month , 5:30 p.m., Bldg. 463, room 160. Guests, visitors always welcome. www.bnl.gov/bera/activities/toastmstrs/default.htm.

Tuesdays & Thursdays: Aerobics
5:15-6:30 p.m., $4 per class. Rec. Hall. Pat Flood, Ext 7886.

Tuesdays & Thursdays: Aqua Aerobics
5:15-6:15 p.m. Christine Carter, Ext 2873.

Wednesdays: On-Site Play Group
10 a.m.-noon. Rec. Hall. An infant/toddler drop-in event. Parents meet while children play. Svetlana Agafonova, 205-5065.

Wednesdays: Science Education Forum
Every other Wednesday, Noon-1 p.m., Bldg. 438. Join a discussion on interesting issues in science education. Refreshments will be provided. Bring your own lunch. Brian Murfin, Ext. 7171.

Wednesdays: Farmer's Market
11:30 a.m.-1:30 p.m., Berkner Hall parking lot

Wednesdays: Weight Watchers
Noon-1 p.m. Michael Thorn, Ext. 8612.

Wednesdays: Yoga Practice
Noon-1 p.m., Brookhaven Center. Free. Ila Campbell, Ext. 2206.

Wednesdays: Open Chess Night
5-8 p.m., Rec. Hall. Christine Carter, Ext. 5090.

Wednesdays: Exercise 101
5:15-6 p.m., Rec. Hall. $4 per class or $35 for 10 classes. Stretching, low-impact aerobics, and other exercises. Pat Flood, Ext 7886.

Wednesdays: Dance Club Group Lessons
6-9 p.m. North Ballroom, Brookhaven Center. Series 4 lessons start 4/9. Marsha Belford, belford@bnl.gov or Ext. 5053.

Fridays: Family Swim Night
5-8 p.m. at the BNL Pool. $5 per family.

Fridays: BNL Social & Cultural Club
6-9 p.m, North Ballroom, Brookhaven Ctr., dance lessons, 9-11:30 p.m. general dancing. Rudy Alforque, Ext. 4733, rudy@bnl.gov.

Fridays: Jiu Jitsu Club
6-7 p.m. in the gym. All levels, ages 6 and above. $10 per class. Tom, Ext. 4556.

— TODAY —

Friday, 5/23

Potluck Dinner, Karaoke, Dancing
To conclude the month-long celebration of Asian Pacific American Heritage Month, the BNL Social & Cultural Club, Swing Dance Long Island, and BNL's Asian Pacific American Association sponsors the 2nd annual event.

5 p.m.-8 p.m.: Pot Luck Dinner and Karaoke at the Rec. Hall.

8 p.m.-midnight: U.S.O. dance party at the Brookhaven Ctr. North Ballroom. Cash bar, coffee, tea, desserts and live music by the "Memories of Swing" Big Band. Tickets, at a cost of $10 for members and $15 for nonmembers, are available at the BERA Store.

BNL Celebrates Earth Day 2003

In honor of Earth Day 2003, the Environmental & Waste Management Services (EWMS) Division hosted several events, including the Annual 4-Mile Earth Day Run featured in the Bulletin of May 2, the Heckscher Spring Festival, the Office Supply Swap, and the Earth Day Awards Ceremony.

The Office Supply Swap provided an opportunity for Lab employees to clean up their areas by donating office items no longer in use to be swapped with items provided by other employees or donated to a local charity.

The Hecksher Spring Festival, hosted by the New York State Office of Parks, Recreation & Historic Preservation, was held April 26 & 27 in East Islip. As many as 20,000 to 40,000 visitors come each year to see environmentally related displays by local government bodies, environmental groups, and private companies.

EWMS staff set up a booth with a number of interactive displays that presented environmental information, with facts about Long Island's geography and groundwater, household hazardous waste management, energy conservation, wildfires, and BNL's Upton Ecological Reserve.

Said Debbie Bauer, EWMS, who helped organize and staff the booth, "The annual festival offers a unique opportunity for the Lab to send a positive message regarding the importance of environmental stewardship at BNL."

On April 29, EWMS held an Earth Day Awards Ceremony organized by Karen Ratel, EWMS, in Berkner Hall. Deputy Director for Science & Technology Peter Paul presented a framed certificate, a gift check, and a planting package to each of three BNL employees nominated by their peers as outstanding leaders in environmental stewardship. The winners were:


Joseph Rubino D0800503

Deputy Director for Science & Technology Peter Paul (left) with Linda Bowerman, Environmental Sciences Division


Joseph Rubino D0810503

Peter Paul with Dave Phillips, Collider-Accelerator Department


Joseph Rubino D0850503

Peter Paul with Richard Scheidet, Plant Engineering Division

Linda Bowerman, a chemistry associate with the Environmental Sciences Division, was recognized for her steady efforts in dealing with hazardous chemical management and personnel safety and protection. Bowerman also recently received a $6,000 award from the Pollution Prevention Project Funding for her recommendation to use no-oil pumps to help reduce wastes.

Dave Phillips, a Collider-Accelerator Department liaison engineer for the recently completed NASA Space Radiation Laboratory at BNL, won for developing a detailed design layout of the experimental facilities, arranging for environmental and safety reviews, and ensuring that chemical and radioactive emissions were kept as low as reasonably achievable throughout the operation.

Richard Scheidet, a Plant Engineering Division project coordinator, was named for his successful efforts to develop remediation procedures for dealing with contaminants associated with the Excess Facilities Project. The procedural methods developed can now be applied to other projects.

Three other winners at the event were 4th-graders Marianna Debbe of Laddie A. Decker Sound Beach School, Shelby Jacoy of Ridge Elementary School, and Ashley Powell of West Middle Island Elementary School. Their posters won BNL's "Your Environment" Art Contest.

"Earth Day is a great opportunity to focus our children's attention on the environment and the importance of protecting it, and this contest is a great way to stimulate their creativity and imagination and to help them to think of ways to help protect our environmental for the future," said George Goode, EWMS Division Manager, who presented the awards. Each student who participated received a certificate, and the winners, who were awarded a gift check and a planting package, will see their posters in the Lab's next Site Environmental Report Summary Booklet.


Joseph Rubino D0830503

(Left) With BNL's George Goode (back, left) and some teachers and administrators from participating schools are the winners and several of the other children who entered posters in BNL's "Your Environment" Earth Day Art Contest.

Update From the Annual RHIC & AGS Users' Meeting *(cont'd.)*

muon-to-electron conversion, whose existence would also have fundamental Implications for theories of matter.

The MECO magnet design and construction is an expensive component of the experiment, and Firestone reports that a search for engineering money is currently under way.

"The RSVP project is tied to intrinsically interesting scientific goals and this is ultimately why the project percolated to the top of the pile in Washington," Firestone concluded.

Update From NASA

Next, NASA's Frank Sulzman presented an overview of the BNL-based NASA Space Radiation Laboratory (NSRL) for research on long-term effects of low-dose radiation in space.

Sulzman described how researchers would use an AGS booster accelerator beam line and the NSRL target room to perform experiments on biological systems. "The AGS provides a great opportunity to piggyback on an already built instrument," Sulzman said. NSRL construction is nearly complete and the facility will be fully operational in October.

Update From the APS

With the current budget outlook, some may feel that restoring program funding is hopeless. "Not necessarily," said APS's Susan Ginsberg in her talk on the politics that contribute to science funding.

"We must make a case as researchers to keep science on the top of the pile," she said. "Five or ten letters on one topic can get attention in Washington."

Ginsberg pointed out that the APS public affairs website, www.aps.org/public_affairs/, allows researchers to send messages directly to Congress, and equally important, by sending electronic letters through the APS web site, the APS can track letters and make follow-up inquiries to help elicit response.

In addition to letter writing, Ginsberg encouraged researchers to make phone calls and congressional office visits asking for funding for broad areas of science rather than lobbying for pet projects. "It is not about getting a bigger piece of the pie, it is about getting a bigger pie," she said.

Results and the Future

Other talks on Thursday and Friday included results from AGS experiments, and data from the latest RHIC runs involving deuteron-gold and proton-proton collisions.

Thomas Kirk, BNL's Deputy Director for High-Energy and Nuclear Physics, discussed plans for RHIC's future, including RHIC II, which involves detector and luminosity upgrades, and eRHIC, which will accelerate and collide electrons with heavy ions in RHIC.

The meeting concluded with an upbeat presentation from Bill Marciano, Physics Department, who described a proposal to use an upgraded AGS to send a neutrino beam over 2,500 kilometers to a detector that could be used to resolve not only neutrino oscillations, but also many other physics questions.

Thesis Awards


Roger Stoutenburgh D4210503

Thesis award recipient Frederick Gray (left) and BNL Director Praveen Chaudhari


Roger Stoutenburgh D4230503

Thesis award recipient Hiroki Sato and Praveen Chaudhari

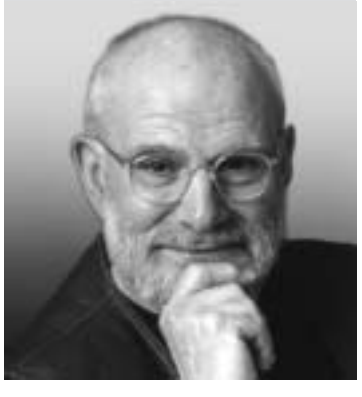
To acknowledge the vital role students play in RHIC and AGS research, the RHIC & AGS Brookhaven Science Associates (BSA) Thesis Awards — issued jointly by Battelle Memorial Institute and Stony Brook University — were presented to Frederick Gray, who prepared his doctoral thesis at the University of California at Berkeley under David Hertzog, University of Illinois, on measuring and interpreting the anomalous magnetic moment of the muon, and to Hiroki Sato, who prepared his doctoral thesis at Kyoto University (KU), Japan, under the direction of Kenichi Imai, KU, on J/Psi production in proton-proton collisions at 200 GeV. — John Galvin

Oliver Sacks *(cont'd.)*

The patients awoke from their statue-like states, and Sacks wrote about them in a book called *Awakenings* (1973), which later inspired Harold Pinter's play, *A Kind of Alaska*, and the 1990 movie, *Awakenings*, starring Robin Williams.

Born in London, Oliver Sacks received his medical degree in 1958 from Oxford University. In the early 1960s, he moved to the U.S., where he performed his internship at Mount Zion Hospital in San Francisco and completed his residency at the University of California at Los Angeles. Currently, Sacks is clinical professor of neurology at the Albert Einstein College of Medicine and consultant neurologist to the Little Sisters of the Poor and Beth Abraham Hospital.

— Diane Greenberg



Casper Sun Named Honorary Professor

As reported in *Health Physics News* of March 2003, Casper Sun, Radiological Control Division, was granted an honorary professorship at Suzhou University in the People's Republic of China. Sun received this honor at the 6th National Conference of Radiological Medicine & Protection, held November 25-30, 2002.

Originated in the early 1990s by Pan ZiQuang, Deputy Director of the Scientific & Technological Commission (CAEA), Beijing, China, the conference was attended by 250 participants from major radiological medicine and protection institutions in China and abroad.

Said Sun, "I have been fortunate to work with Professor ZiQuang and many others who attended this meeting. We also remember the Professor's visit to BNL in the mid-1990s, when topics discussed included an overview of radiological protection and nuclear energy programs in China."

An internal dosimetrist at the Lab, Sun is a founding member of the current Internal Relationship Program of the Health Physics Society.

"I am always interested in Sino-U.S. collaborations on radiological protection and nuclear waste management, and I hope to promote them further," Sun commented.

Sun first visited Suzhou in the fall of 1994, when, as a BNL research engineer, he accompanied Charles Meinhold, then Deputy Head of BNL's Radiological Sciences Division and Chair of the International Commission on Radiological Protection (ICRP). Meinhold was the first BNLer to be awarded a Suzhou University honorary professorship, for his contributions to the field of radiological protection.

In 1994, Sun, who was originally from China, had acted as Meinhold's translator, a service that he performed again at the November 2002 conference. Although he is a competent translator, Sun presented his own paper on "Blood Bioassay of Plutonium and Dose Estimate" in English.

"After so much time in the U.S., I no longer speak quickly enough to give it in Chinese!" he said. — Liz Seubert

DOE Funds Energy-Saving Cover for BNL's Pool

Roger Stoutenburgh D0980503

Seen with the new pool cover in the background are: (from left) the Plant Engineering Division's Tom Joos, Don Sievers, Michael Viscusi, Dan Ahearn, Barbara Pierce and Ozzie Lawrence.

Built in 1946, BNL's 150,000-gallon indoor swimming pool was first used for rehab by soldiers returning to the United States after World War II. Since 1947, when BNL was established, the pool has served employees, retirees, facility users, and their families.

Now, after all this time, this indoor pool has a cover!

Funded under the Federal Energy Management Program (FEMP) of DOE's Office of Energy Efficiency & Renewable Energy, the cover was the idea of the Plant Engineering (PE) Division's Energy Management Group (EMG). As PE maintenance staff know, a heated pool causes high humidity levels leading to roof damage and corrosion that requires structural repair and frequent interior painting. Recently, BSA funded the renovation of the pool building, which included replacing the roof and other significant structural work. EMG decided to find out whether a pool cover would be an advantage in reducing the humidity.

Said EMG's Barbara Pierce, "After a thorough analysis, we found that a pool cover would not only reduce humidity, but also serve several other functions." The group calculated that the cover would help to reduce evaporation of pool water to the surrounding air, thus reducing water-heating, poolroom ventilation, and dehumidification requirements. The need for makeup water and water treatment would also decrease. By reducing evaporation, interior condensation and corrosion would be minimized, all helping to decrease maintenance costs.

Pierce also explained that the pool building currently consumes about 3,000,000 pounds of steam per year, of which approximately 2,000,000 pounds per year heats the pool. The remainder provides heat and hot water for the locker rooms and showers. "We found that by installing a pool cover combined with a solar water heating system, we could save approximately 100,000 gallons of water and more than half of the steam currently used," she said.

Knowing that DOE's FEMP strongly supports energy-saving efforts, the group submitted their report to FEMP and received funding for the cover and a solar water-heating system, which is currently being designed.

PE's Construction Support Supervisor/Construction Inspector Michael Viscusi coordinated the construction portion of the project, which entailed the installation of the pool cover by its fabricator, Alta Enterprises, Inc. of Wyoming.

Said Viscusi, "My task was to coordinate materials and field construction, and ensure that the contractor received appropriate safety training. Things went smoothly, and the project was completed on time and the pool reopened as scheduled."

— Jane Koropsak

'Music at Noon' BNL Choral Group Sings Monday, 6/9

At noon on Monday, June 9, a BNL choral group led by Sam Carr, Physics Department, will give a concert in Berkner Hall. The program will include piano solos and works by Samuel Barber, Gabriel Faure, Wolfgang Mozart, John Rutter, and others. All are welcome.

Upton Nursery School Recruits Now

Roger Stoutenburgh D2420403

Parents, now is the time to register your child for the Upton Nursery School, a small cooperative school that is run on BNL site by parents who have hired experienced, professional teachers, one with New York State certification and both with Master's Degrees.

The nursery school meets in the Recreation Hall in the apartment area on two mornings a week, from 9 a.m. to noon, September to June. Children must be 3 years old by December 1.

The curriculum includes kindergarten topics with a focus on language and social skills in a warm, fun, pressure-free environment. Children who do not speak English are welcome; the school has always had children from many different countries which makes the program an exciting cultural experience.

For more information, contact Cathy Lavelle, 344-2774 or lavellec@bnl.gov; and Laura Williams, 473-6937 or gorgysgirl@yahoo.com; and visit the school's webpage at www.bnl.gov/nurseryschool/.

Marciano on g-2 *(cont'd.)*

"By comparing the precise experimental value of the muon's anomalous magnetic moment as measured here at BNL to better than 1 part per million, with the theoretical prediction, one can look for a sign of supersymmetry or some other 'new physics,'" Marciano said in his talk. "Currently, a difference between theory and experiment exists; however, the theory part is somewhat controversial, with different approaches yielding inconsistent predictions."

Ongoing studies hope to clarify the theory prediction in time for the next experimental improvement, expected to be announced in late spring or early summer of 2003, Marciano concluded.

Arrivals & Departures

Arrivals

Zhiqiang Chen ..... Biology
Jennifer Graham ..... Medical

Departures

Paul Barba ..... C-A
Lesliam Quiros ..... ESHQ

In Memoriam

Irving Singer, who had come to BNL on October 1, 1951, as an associate meteorologist for the Brookhaven Graphite Research Reactor, died on March 17, 2002, at age 78. After moving to the Instrumentation & Health Physics Division in 1960, he had retired as Meteorologist on July 31, 1973.

Calendar *(continued)*

— WEEK OF 5/26 —

Monday, 5/26

BNL Closed to Observe Memorial Day

— WEEK OF 6/2 —

Wednesday, 6/4

***BSA Distinguished Lecture**

4 p.m., Berkner Hall, Neurologist and bestselling author Oliver Sacks will talk on "Creativity and the Brain." All are welcome. See story, page 1.

Thursday, 6/5

BERA Bridge Club

7 p.m., Brookhaven Center, South Room. Morris Strongson, Ext. 4192, mms@bnl.gov.

Saturday, 6/7

Atlantic City Bus Trip

Join BERA for a trip to the Hilton Hotel and Casino in Atlantic City. Bus leaves Brookhaven Ctr. at 8 a.m. and departs Atlantic City at 7 p.m. Trip costs $25 per person and includes a $9 coin return. Purchase tickets at the BERA Store, 9 a.m.-3 p.m. Participants must be at least 18 years of age.

— WEEK OF 6/9

Monday, 6/9

***Music at Noon**

Noon-1 p.m., Berkner Hall. A BNL choral group led by Sam Carr, Physics Department, will sing works by Samuel Barber, Gabriel Faure, Wolfgang A. Mozart, John Rutter; solo piano and other performances will be given.

Wednesday, 6/11

Noon Lecture

Noon-1 p.m., Berkner Hall. Gary Okihiro, Columbia University, will give a talk, title to be announced.

Thursday, 6/12

Community Advisory Council Meeting

6:30 p.m., Berkner Hall, Room B. Open to the public. For more information, see http://www.bnl.gov/community/CAC.htm.

Thurs. & Fri., 6/12-13

***BNL Blood Drive**

9:30 a.m.-3 p.m., Brookhaven Center. BNLers from 17 to 75 years of age, in good health, and weighing over 110 lbs. are welcome. All donors should have photo identification and know their social security number. Susan Foster, Ext 2888, donateblood@bnl.gov. See notice on page 4.

— WEEK OF 6/16 —

Thursday, 6/19

BERA Bridge Club

7 p.m., Brookhaven Center, South Room. Morris Strongson, Ext. 4192, mms@bnl.gov.

— WEEK OF 6/23 —

Tues., 6/24, & Wed. 6/25

Vacuum Gauging and Cryogenic Pump Seminars

9 a.m.-1:30 p.m., Berkner Hall, Room B. Representatives from Helix Technology will present this two-day course in vacuum measurement. Lunch, coffee, and refreshments will be provided by Helix. For more information and to register, contact Mel Johns, (508) 337-5150, or mjohns@helixtechnology.com.

— WEEK OF 7/7

Thursday, 7/10

Community Advisory Council Meeting

6:30 p.m., Bldg. 490, Large Conference Room. Open to the public. For more information, see http://www.bnl.gov/community/CAC.htm.

Note: This calendar is updated continuously and will appear in the Bulletin whenever space permits. Submissions must be received by the preceding Friday at noon to appear in the following week's Bulletin. Enter information for each event in the order listed above (date, event name, description, and cost) and send it to bulletin@bnl.gov. Write "Bulletin Calendar" in the subject line.

Pedestrian Safety in Crosswalks

It's the time of year when more people enjoy walking around site. The BNL Traffic Safety Committee reminds all drivers to take extra care, and, especially, to remember the new State law, No. 1151, governing pedestrians in crosswalks.

Drivers' Responsibilities at Crosswalks

Effective January 19, 2003, the new law states that drivers must stop for a pedestrian who enters a crosswalk, no matter on which side of the street the pedestrian enters. Previously, the driver had to stop only if the pedestrian was in the portion of the crosswalk on the driver's side of the road.

Also, the law states, drivers to the rear of a vehicle that has stopped to yield to a pedestrian in a marked crosswalk or unmarked intersection must not overtake and pass the stopped vehicle.

Pedestrians' Responsibilities at Crosswalks

Pedestrians also have responsibilities: This law forbids pedestrians to step suddenly into a crosswalk if the approaching vehicle is too close to be able to stop.

Also, when walking off site, if a pedestrian tunnel or overpass is provided, the pedestrian who chooses to cross the road without using the tunnel or overpass must yield to all vehicles.

The BNL Traffic Safety Committee reminds all drivers and pedestrians that it is their responsibility to remain alert and comply with all New York State traffic laws. For more information about traffic safety at BNL, go to the following websites www.bnl.gov/esh/shsd/traffic and https://sbms.bnl.gov/ld/ld08/ld08d211.htm.

Defensive Driving, 6/7

A Defensive Driving course will be held on Saturday, June 7, from 9 a.m. to 3:30 p.m. This course, usually given at the Lab, will be at the Mount Sinai High School, on the north side of Route 25A, in Mount Sinai, about 1 mile west of Route 83.

To register, send your telephone number on a check made out to Empire Safety Council for $35 per person, in care of Scott Zambelli, P.O. Box 670, Mount Sinai, NY 11766. Reach Zambelli at 331-6599, Ext. 13.

Next Week's Bulletin

BNL will be closed in observance of Memorial Day next Monday, May 26.

On Friday, May 30, the Bulletin will issue the BNL Water Quality Consumer Confidence Report instead of the usual publication.

Potluck Dinner, Karaoke, U.S.O. Dance: Tonight!

Tonight, Friday, May 23, the BNL Social & Cultural Club and the BERA Asian Pacific American Association invite all to their 2nd Annual Potluck Dinner and Karaoke, 5-8 p.m. at the Recreation Hall. Bring a favorite ethnic dish, enough to share with six people.

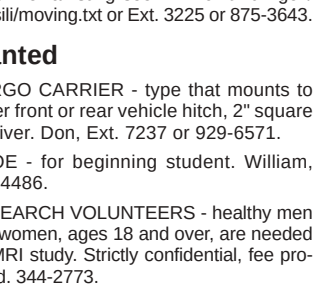
At 8 p.m., as one of the May Asian Pacific American Heritage events, the United States Officers' (U.S.O.) Dance Party! will start at the North Ballroom at the Brookhaven Center, with music by "Memories of Swing." Buy tickets at $10/members, $15/nonmembers, at the BERA store, Berkner Hall. For more information, contact Rudy Alforque, Ext. 4733 or rudy@ bnl.gov, or visit www2.bnl.gov/rudy/social.

Roll Up Your Sleeve: Blood Drive on 6/12-13

The three-day Memorial Day weekend is here, which means a welcome to summer — and a short supply of blood.

Long weekends often mean more traffic, more accidents, and more accident victims needing blood. That translates into a depletion of the stock of the local blood banks.

To replenish Long Island's blood supply, BNL is holding a blood drive on Thursday and Friday, June 12 and 13, from 9:30 a.m. to 3 p.m. in the Brookhaven Center.



Those eligible to donate are people in good health between the ages of 17 and 75 and weighing over 110 lbs. All donors should have photo identification and know their social security number.

To make an appointment, contact Susan Foster at Ext. 2888 or e-mail donateblood@bnl.gov.

Pool, Gym, Weight Room, Closed 5/23-27

The swimming pool, gym, and weight room will all be closed for maintenance today, Friday, May 23, through the Memorial Day holiday of Monday, May 26, reopening on Tuesday, May 27.

Classified Advertisements

Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status. Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people. Except when operational needs require otherwise, positions will be open for one week after publication. For more information, contact the Employment Manager, Ext. 2882; call the JOBLINE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/default.htm.

LABORATORY RECRUITMENT - Opportunities for Laboratory Employees

TB2476. ADMINISTRATIVE SERVICES ASSISTANT (A-2/Reposting) - Requires specialized training or equivalent experience plus six years' relevant experience of which at least two years should be as a Sr. Office Services Assistant. Must possess extensive knowledge of one or more specific areas of the Laboratory operations, policies, and procedures and demonstrate skills in one or more specialized administrative functions. Will keep a database of training for all regular employees and guests, publish and post training authorization list, interact with other departments, RHIC/AGS User's Office as needed and set up training classes in the Physics Department when needed. In addition, will assist supervisors in assessment of training requirements, go through experiment safety reviews, assign/modify training JTAs attend training coordinator meetings, notify people of new and expired training and give safety briefings and sign new employees' forms. Must have excellent interpersonal and communication skills both oral and written, and proficiency in MSOffice 2000 (i.e., Outlook and Excel). Works independently within established procedures and may be required to handle non-routine office matters. May have frequent contacts within and outside the Laboratory to exchange information essential to assigned office functions. Duties will include scheduling meetings, filing and maintaining files, setting up and maintaining Internet pages, ordering supplies, and providing assistance to Chair's Office for administrative functions. Will also schedule seminars and colloquia, assist with speakers, and enter Corrective Action into Physics ATS system. Physics Department.

NS2477. SECRETARY (part-time, term appointment – CW2) – Requires an AAS or equivalent experience, knowledge of MS word, Outlook, and other Lab-wide programs, and excellent organization and communication skills. Will maintain confidential records and files, process and maintain publications, generate, edit, and distribute documents and correspondence. Will provide varied secretarial support including extensive foreign and domestic travel, manuscript preparation and file maintenance. Physics Department/Director's Office.

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

MK2851. ASSISTANT PHYSICIST (S-1) - A world-class program to study the spin structure of the proton has begun at Brookhaven National Laboratory in the RHIC Spin Program. This program is based on the STAR and PHENIX experiments, observing the collisions of polarized protons with energies () from 200 to 500 GeV. The experiments will measure the gluon polarization in the proton, the flavor decomposition of quark contributions to the proton's spin, and will probe for new physics using parity violation. An Assistant Scientist position in the BNL Medium Energy Group (RHIC Spin Group), under the leadership of Gerry Bunce, is available starting October 2003. We seek candidates with prior experience in high energy spin physics experiments. Scientists with appropriate backgrounds who are interested in applying should send a CV and three letters of reference to Dr. Gerry Bunce, Building 510A, Brookhaven National Laboratory, P.O. Box 5000, Upton, NY 11973-5000, before June 9, 2003. Physics Department.

TB3459. MEDICAL ASSOCIATE IV (P-1 / term appointment) - Requires BS or BA degree, preferably in biological science, medical or allied health areas. Good interpersonal skills and writing ability needed. Computer training in MS Office and prior experience with clinical research highly desirable. Responsibilities include clinical research studies using advanced MRI techniques, recruitment and outreach for studies, liaison between MR group and Institutional Review Board; assist scientists and research associates with project coordination. Medical Department.

TB2798. REGISTERED NURSE (A-4/term appointment) - The PET Imaging Program requires a Registered Nurse to participate in imaging studies with radioactive tracers. Must be highly organized to work rapidly and accurately within a restricted time frame and have experience in phlebotomy, monitoring EKG, blood pressure and pulse, ordering supplies, lab work, and record keeping. Responsible for rendering all phases of nursing care to patients, including observation and reporting of condition, administration of medication, maintenance of record and general assistance to the patient and staff. Will assist in human subject recruitment, behavior evaluation and primate research studies. Flexibility in work hours is required. Experience in critical care and a BS or BA degree in a health-related field is desired. Medical Department.

NS2525. SR. SECRETARY (CW-3/part-time/term appointment) – Requires a minimum of three years of work experience, proficiency in MS Office Suite, excellent written and oral communication skills, and the ability to perform administrative tasks under minimum supervision. A thorough knowledge of Laboratory policies and procedures and BNL systems such as IPAP and Peoplesoft are desirable. Must have the ability to work under pressure, balance priorities and perform multiple tasks. Responsibilities will include filing, distributing mail, ordering supplies, coordinating workshops, foreign and domestic travel arrangements, and other routine and non-routine administrative tasks. Ability to obtain and maintain a security clearance is desirable. Nonproliferation and Counter terrorism Division/Nonproliferation & National Security Department.

Motor Vehicles & Supplies

00 SUZUKI ESTEEM - 4-cyl., 1.8, 54K mi., a/t, a/c, new tires, new stereo, $5,000. Samantha, Ext. 3471.

96 TOYOTA RAV-4 - 5-spd., 2wd, 90K mi., full power, airbags, excel. cond. $5,5000. Dave, 288-3011 or digital pager 7224.

95 CHEVY BLAZER - S10, teal green, leather, all power, 103K mi., new tires, exhaust, brakes, front end, excel. cond., eng. perfect, well maint, $7,200. Ralph, 325-0145.

95 FORD ESCORT - a/t, a/c, p/s, 92K mi., excel. cond., new tires & timing belt, $2,500. Rachel, Ext. 8331 or 399-2417.

94 VOLKSWAGON JETTA - silver, 5-spd., 70,200, a/c, p/s, 4-wheel disc, power sunroof, $3,950. Michele, Ext. 3281 or 732-1028.

92 MERCURY GRAND MARQUIS - maroon, full power accessories, good fuel economy, very clean, quiet, luxurious, 140K mi., $3,200. Robert, Ext. 3401 or 744-6229.

92 MERCURY SABLE -blue, 3.8L, all power, 160K mi., dual airbags, ABS, third seat, clean, $2,100. Roy, Ext. 7531 or 929-3550.

87 MAZDA 323 - 1.6L, white, 2-dr., v.g. cond., 99K mi., runs v. well, recently serviced, bucket seats, moonroof, clean, am/fm/cass., $800. Alex, Ext. 3114 or 645-1883.

CAMPER - Winnebago, 25' Chiefton, approx. 50K mi., 454 Chevy, sleeps 6, $14,500. Marilyn, Ext. 5075 or 585-1863.

LADDER RACK - Kargomaster, fits Chevy ext. cab w/cap, new cond., orig. $550, ask. $250. John, Ext. 7268 or 732-7568.

TIRES - trailer, 205/75/15 load range C, 2 new, $45 ea.; 2 low-mi, $30 ea.; all, $45. Ext. 7160.

Boat & Marine Supplies

22' WESTERLY SAILBOAT - twin keel, fiberglass, clean, newly painted, many extras, needs some work, $2,500. 744-3569.

21' BAYLINER - '86, swim platform, Bimini top, excel. cond., sleeps 4, $4,500. Bill, Ext. 2036 or 286-8413.

18.5' WELCRAFT - '72, 100 hp Evinrude eng., w/trailer. Paul, 751-2149.

OUTBOARD - Seagull, long shaft, 5 hp, model #WSPOL, at least 20 yrs. old, but works well, well maint., $500. 286-5897.

Furnishings & Appliances

AIR PURIFIER - Blue Air, large room size, very quiet, efficient, on coasters, almost new, orig. $500, ask. $250. Ext. 5080 or 751-1884.

BEDS - antique maple double bed, dresser, nightstand, $400; black wrought iron daybed w/mattress, $100; queen-size mattress, boxspring w/frame, $200. Mary, Ext. 6344.

BEDROOM SET - queen-size bedwall w/mirror, overhead lights, side cabinets & armoire; Thomasville, light oak, excel. cond., $950 neg. Bob, 928-1806.

DINING ROOM - '40s mahogany oval table, 6 chairs, server & china cabinet closet, $2,000; pasta maker, $20; Nordic Track, $75. Joann, Ext. 7459.

END TABLES - 2 hexagonal cabinets w/glass tops, 22"w x 22"h, dark wood, v.g. cond., $50. John, Ext. 7268 or 732-7568.

HOME FURNITURE - many kinds of furniture in excel. cond., wooden king-size bed, tables, 3-part sofa bed, wooden clothing cabinets, more. Alex, Ext. 3114 or 645-1883.

ROCKING CHAIR - large, old, classic style, wooden w/wicker seat & back, painted white, seat needs repair, good as is for front porch vignette, $22. Karen, Ext. 4262.

SOFA/LOVESEAT - & coffee table, good cond., $125. 751-4539.

SOFABED - floral print, $165 neg. Steve, Ext. 2897.

Tools, House & Garden

POOL - 13'x19'x4', upgraded filter, new hvy-duty liner, ladder, sports net, extras, great cond., used only 14 mos., disassembled & ready to go, instrucs. incl., $875. Ext. 7542.

POOL FILTER - Hayward model EC4575, 1½ hp, 3 yrs. old, owner guide incl., $200. 744-7007.

PROPANE TANK - 17 lbs., size for bar-b-q grills etc., w/overflow protection device, never filled, brand new, $20. Peter, Ext. 2913.

Sports, Hobbies & Pets

BINOCULARS - Celestron, 8 x 25 magnification, new in box w/manual, $15. Peter, Ext. 2913.

BODY SCULPTING SYSTEM - incl. 3 videos, platform & guide, orig. $100, ask. $50. Ext. 2457.

CAGE - dog training, med. size, $25. Ext. 4262.

POOL TABLE - Kasson 1" slate table, subways, v.g. cond., 1,000 lbs., you pick up, $850. Ken, Ext. 5110 or 281-0843.

ROLLERBLADES - In-line skates: Razor Soul 2K, sz. 7, 56mm/90a wheels, hard shell, $75; Mission Proto SV, 6D, front 72mm/back 80mm, $50. Don, Ext. 7237 or 929-6571.

Audio, Video & Computers

CAR CD/FM RECEIVER - Kenwood model #KDC-2158 detachable face plate, 45wx4 peak, great cond., hardly used, $75. Justin, Ext. 7325 or 878-2689.

COMPUTER - Pentium 200mhz, 3.2gb H.D., 64mb RAM, CDROM, speakers, modem, NIC, mon., keybd., mouse, Windows98, $75. John, Ext. 2654 or 475-6981.

COMPUTER - Mdl. 2100, 1.1ghz cpu, 40gb H.D., 256mb mem., 40x/10x/40x CDRW, 2-usb, Ethernet 10/100, keyboard/mouse, XP home OS, $450. Don, Ext. 7237 or 929-6571.

WIRELESS LAPTOP PC CARD - D-Link DWL-650 wireless PCMCIA card, new, $30; 2 Linksys LNE100TX etherfast 10/100 NICs, new, $5/ea. obo. Ext. 5268 or 395-5474.

Miscellaneous

BARBIE JEEP - power wheels, like new, hardly used, battery charger incl., $100 obo. Donna, Ext. 6044 or 224-1447 eves.

CANDLES - Beeswax & hand dipped, assorted sizes & shapes. Esther, 345-0498.

CHILD CARSEATS - 2, Centry 5-point, $10/ea. or $15/both. Marc, Ext. 8281.

ELECTRICAL APPLIANCES - and much more. For a listing see www.cmth.bnl.gov/~vasili/moving.txt or Ext. 3225 or 875-3643.

Wanted

CARGO CARRIER - type that mounts to either front or rear vehicle hitch, 2" square receiver. Don, Ext. 7237 or 929-6571.

OBOE - for beginning student. William, 924-4486.

RESEARCH VOLUNTEERS - healthy men and women, ages 18 and over, are needed for MRI study. Strictly confidential, fee provided. 344-2773.

VIOLIN - full size needed for son to take to college. Esther, 399-4509.

Free

FIREWOOD - oak, you pick up. Joe, Ext. 2384.

GAS OIL TANK - 275 gal. w/gauge, excel. cond., no rust, you pick up in Middle Island. Karen, 473-1317 or 345-9489.

SWING SET- all wood frame, 2 swings, 1 ring swing, slide w/deck & canopy, you disassemble. Kathleen, Ext. 2113 or 298-5345.

Yard & Garage Sale

SHOREHAM - multi-family yard sale, Saturday, 5/24, 9 a.m. to 2 p.m., 5 & 7 Cheryl Drive, take Randall to Cooper to Cobblestone, 2nd left onto Cheryl. Ext. 2457.

In Appreciation

Thank you to all who attended my farewell luncheon. It meant so much to me to share it with people who will always be in my heart. You will all be missed but never forgotten. — Doreen Hallinan

To my friends at BNL - Thank you for all your good wishes and for all the assistance I received designing and implementing the programs for BNL's Health Promotion Program. I really enjoyed my 12 years at BNL, and I couldn't have done it without all of you. — Mary Wood, jmwood18@aol.com

Services

A list of services offered by BNLers is on the web at www.bnl.gov/bnlweb/pubaf/bulletin/services.htm, or from Ext. 2345.

the Bulletin

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