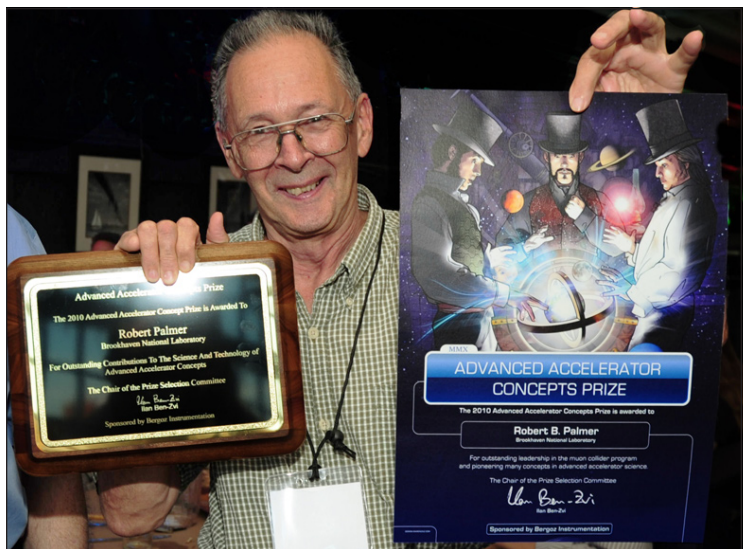




Tim Koehn, Univ. of Maryland

Bob Palmer Awarded Advanced Accelerator Concepts Prize for 2010

Robert Palmer, a senior physicist and head of the Advanced Accelerator Group at BNL, was awarded the Advanced Accelerator Concepts Prize (AAC) at the 2010 AAC Workshop held in Annapolis, Maryland, in June. The prize, which consists of \$6,000, a plaque, and a certificate, was made possible by a donation from Bergoz Instrumentation of Saint Genis Pouilly, France, manufacturers of electronic instruments for high-energy particle accelerators.

Palmer was awarded for “outstanding leadership in the muon collider program and pioneering many concepts in advanced accelerator science.”

“I am honored to receive this award,” Palmer said. “My career spans 50 years, and, since the 1970s, my focus has been in accelerator physics. Since the late 1980s, I’ve had an interest in muon colliders, and lately my colleagues and I are beginning to see results. A national Muon Collider Program is being es-

tablished, increased funding is expected, and a feasible design seems to be emerging. It is an exciting time.”

Palmer is an executive board member of the Muon Collider Collaboration, which has over 100 members from 27 institutions. Currently, the collaboration is studying the feasibility of building a high-energy muon collider that would enable physicists to make detailed studies of new particles that may be found at the Large Hadron Collider (LHC) at CERN, the European Organization for Nuclear Research. The hope is that a muon collider could reach higher energies at lower cost than linear electron colliders. Many physics challenges have to be met before a muon collider is built, so it probably would not be constructed until 2028.

Palmer has a distinguished history of contributions to accelerator physics. In 1972, he invented the inverse free...

See *Palmer's Award* on p. 2

Integrated Facility Management Update Moving Toward Operational Readiness

By Lanny Bates, Assistant Lab Director for Facilities & Operations
The Integrated Facility Management team continues to make significant strides toward implementing the new facility management model by September 30.

Right now, we are focused on what must be in place to safely declare “operational readiness,” so we can implement the integrated facility management model successfully. We will be executing critical activities that range from staffing and training to confirming that all Facility Use Agreements and permits are current — all to ensure safe, mission-ready operations.

Integrated facility management is a major piece of the Engineering, Construction, and Facility Management component of the Blueprint, and it also supports several of the Judgments of Need stemming from our analysis of the well-house explosion that will assure DOE that BNL can continue to operate safely.

As explained in the last integrated facility management up-



Lanny Bates

date published in the Blueprint issue of the Bulletin on April 30, all facilities on site are being organized into five complexes based on geographic location, with the exception of the “utilities” complex. New core teams will be responsible for the facilities, systems, and infrastructure for each complex. Using these teams will enable Facilities & Operations to improve the quality of its services, and be quicker and more efficient in the broad range of everything we do — from changing a light bulb to...

See *IFM Update* on p. 2

Congressman Baird Visits BNL

On July 9, Laboratory Director Sam Aronson welcomed Congressman Brian Baird to BNL. Congressman Baird, who represents the 3rd District in Washington State, serves on the House Science and Technology and the Transportation and Infrastructure Committees, the Research and Science Education subcommittee, and the Energy and Environment subcommittee, which he chairs.

Joining Aronson in his welcome were Michael Holland, Manager of the DOE Brookhaven Site Office, Doon Gibbs, Deputy Director, Science & Technology, Jim Misewich, Associate Director for Basic Energy Sciences, Pat Looney, Assistant Director for Policy and Strategic Planning and Marge Lynch, Assistant Director for Community Relations, Education, Government & Public Affairs.

After hearing an overview of the BNL energy program from Misewich, the Congressman and Adam Rosenberg, a staff member of the Energy and Environment committee, toured several BNL facilities and discussed research highlights with BNL directors and other scientists.

At the National Synchrotron Light Source (NSLS), after meeting Steve Dierker, Associate Director for Light Sources, and Chi-Chang Kao, NSLS Chair, the tour passed to the NSLS experimental floor. There, the visitors learned about a hot topic of interest in energy research, “designer” plastic solar cells, ongoing at



Joseph Rubino D1400710

At the National Synchrotron Light Source (NSLS), Congressman Brian Baird (center) hears from Dan Fischer (front, left) of the National Institute of Standards & Technology (NIST). Also present are: (from left) Cherno Jaye, NIST; Adam Rosenberg, House Energy and Environment subcommittee; Chi-Chang Kao, NSLS Chair and Director of BNL's Joint Photon Sciences Institute; Doon Gibbs, Deputy Lab Director for Science & Technology; and Sam Aronson, BNL Director.

the National Institute of Standards & Technology (NIST) U7A beamline. Dan Fischer of NIST explained that plastic solar cells are cheap, easy to make and can in principle cover very large areas, and that the designer technology is a special patterning process to maintain the appropriate length scales of the solar cell chemical components for efficient operation.

To do this work, Fischer said, NIST researchers are making chemically specific images of the solar cell architecture using the NSLS beams and a special new “chemistry” microscope. In addition, a new, high resolution version of the microscope will be delivered in the coming year, through a NIST American Recovery and Reinvestment Act-funded project

for small business. This new microscope is one of two for NIST's proposed suite of beamlines at BNL's NSLS-II, which is now under construction. The new microscopes, powered with the world-leading brightness and flux of NSLS-II beams, will allow solar cell “chemical” images to be visualized from micron to nanometer length scales in all three dimensions.

Baird and Rosenberg experienced other such talks and overviews at the Center for Functional Nanomaterials (CFN) with Misewich and CFN Director Emilio Mendez — at Biology with Creighton Wirick, Deputy Associate Laboratory Director for Environment and Life Sciences; and scientists Alistair Rogers and John Shanklin — at the...

See *Baird's Visit* on p. 2

How Low Can RHIC Go?

On June 9, BNL's Relativistic Heavy Ion Collider (RHIC) overcame major obstacles to complete its three-month low-energy program. Researchers can now begin studying the data to see if the colliding nuclear matter reached the “critical point,” a state it could only achieve in the aftermath of a low-energy collision.

RHIC is a world-class particle accelerator, capable of colliding beams of particles at higher energies than at any other laboratory except CERN and Fermilab. So why are researchers excited about its recent low-energy runs, which at their lowest had 30 times less than RHIC's maximum energy?

RHIC's low-energy collisions — gold-gold collisions at 7.7, 11.5, and 39 GeV — are still powerful enough to break apart nuclear matter. Ion collisions at these energies create a super-hot, super-dense environment, where the bonds that hold normal nuclear matter can briefly be overcome. For far less than billionths of a second, the quarks and gluons — respectively, the building blocks of nuclei and the cement that holds them together — melt out of their bound states into

a quark-gluon plasma, a new state of matter in the nuclear phase diagram.

A phase diagram is a map of the different states of matter (solid, liquid, gas, plasma) with the compass rose replaced by temperature along the vertical axis and pressure along the horizontal axis. Like maps, phase diagrams possess key landmarks, such as phase transition boundaries, where matter crosses from one state to another as it changes pressure and temperature.

RHIC's melted nuclei all “refreeze,” but depending on their collision energy, they pass through different phase transition boundaries. During RHIC's high-energy runs, experimenters observed that the phase transition was a smooth crossover, like gradually melting butter. But they predict that under conditions created during some low-energy collisions, this transition will

“RHIC performed exceptionally, delivering over double the data that we expected prior to the low-energy run...”

Edward O'Brien
of PHENIX

become more violent and “lumpy,” the way boiling water becomes a roiling mix of hot water and steam bubbles. In this violent transition, the lumpiness is fractal-like: no matter how closely you zoom in, it is lumpy at every scale.

This smooth-to-lumpy shift in transition quality occurs at the critical point. The critical point is an important landmark of nuclear matter's phase diagram, and its discovery is the objective of the RHIC low-energy program. Experiments search for this landmark by sweeping over the phase diagram map, colliding gold nuclei at various energies. Meanwhile, researchers study the collected data for signs that the critical point is nearby.

Detecting these signs requires the identification of particles created in RHIC collisions, the perfect task for the...

See *Low Energy* on p. 2

Baird's Visit from p. 1

...RHIC-ATLAS Computing Center with Center Head Michael Ernst and Facility Manager Eric Blum — at the Relativistic Heavy Ion Collider and the PHENIX Detector with Thomas Ludlam, Physics Department Chair, Howard Gordon, Deputy Physics Chair, Phil Pile, Collider Accelerator Department Deputy Chair, and Brant Johnson of the PHENIX Detector Group — the plant and biological radiotracer imaging program at the PET Facility, with facility head Joanna Fowler — and a meeting with Gerry Stokes, Associate Laboratory Director for Global and Regional Solutions.

In commenting on the visit, Lab Director Aronson said, "I believe our visitors left with a real understanding of the breadth of the science being done here now and our vision for the future. Visits like these to BNL and other labs result in connections that can have far-reaching benefits for the federally funded R&D effort."

— Liz Seubert and Jane Koropsak

IFM Update from p. 1

...installing a new chemical hood or repairing a roof.

Following a rigorous interview process, we have selected the facility complex managers who will lead the core team for each complex. Mark Davis will manage the Central Complex; Chris Johnson, the East Complex; Tom Roza, the South Complex; Leo Somma, the North Complex, and Bill Chaloupka, the Utilities Complex. Leading up to September 30, they will build their core teams and you may see them around as they introduce themselves and familiarize themselves with the facilities within their complex. These facility complex managers will report directly to me. Look for profiles of these individuals in upcoming communications.

Carlo Melbiess, the new Deputy Assistant Laboratory Director for Facilities and Operations, will manage the Integrated Facility Management Program.

The Lab's current building managers are playing an important role in helping the core teams make this transition. Although the title of "building manager" will not be used in the integrated facility management model, most of the building management functions will be carried out by members of the core teams, and some of our present building managers may join core teams in each complex as our facility complex managers hire staff for those positions. Other building managers will simply devote more time to other important responsibilities since the analysis conducted indicates that three-quarters of our current building managers spend, on average, less than 20 percent of their time fulfilling building manager functions. As we move through this transition period, I want to thank all of the current and past BNL building managers for their service in managing the Laboratory's facilities over the past 10-plus years.

We will provide more information about the facility complex teams and the overall transition into the integrated facility management program in the coming months.

Low Energy from p. 2

...STAR detector. STAR personnel completed installation of a new time-of-flight (TOF) detector just in time for this low-energy run. The TOF detector, in conjunction with STAR's time projection chamber, which measures particle trajectories, uncovers each particle's energy, mass, and charge, revealing the particle type. Identifying fluctuations in the ratios of different particle types is one indication of how close conditions are to the critical point.

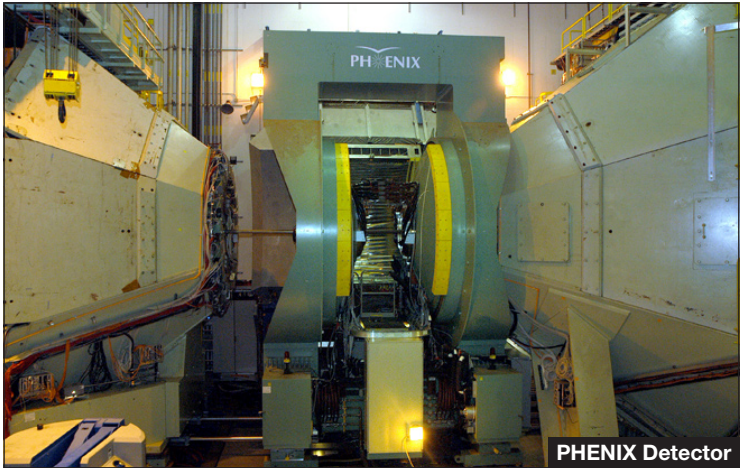
The PHENIX detector aids the critical point search by using its excellent ability to measure the photons, electrons, and positrons produced in RHIC collisions. These probes allow researchers to study the fluctuations in energy and momentum per particle, and yield information about the temperatures reached during the low-energy collisions, establishing the collisions in their proper place on the phase transition map. PHENIX also acquires data to measure particle ratios, allowing experiments at STAR and PHENIX to complement each other.

Collider-Accelerator Department (C-AD) scientists and engineers have already overcome significant hurdles to create low-energy collisions as part of Run 10. At the lowest energy tested this year, 7.7 GeV, RHIC power supplies and magnetic fields were less than one fourth of their typical values, which created unique challenges.

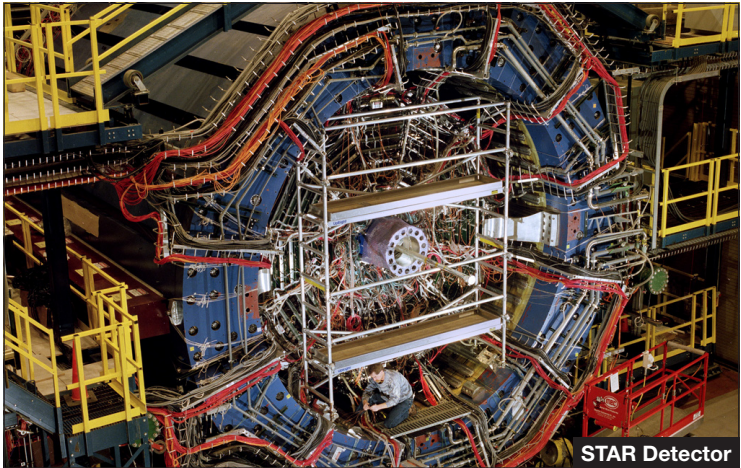
"We were never sure if the machine would be able to perform the way we needed it to," commented Paul Sorensen, an experimentalist at STAR. "Watching the progression of the run was at times nerve-racking and full of suspense."

"C-AD consistently improved the performance of the machine, and in the end we nailed the number of events we needed..."

Paul Sorensen of STAR



Joseph Rubino 02210703



Roger Shoultenburgh 013-13-01

The PHENIX team would agree. "We were concerned at the start of the low-energy run that the RHIC accelerator would be unable to meet our minimum requirements, since the machine was operating in a relatively untried configuration," said Edward O'Brien, director of operations at PHENIX.

Lower-energy beams are

inherently larger and less intense, decreasing the likelihood of collisions: RHIC produces more than 10,000 collisions per second at top energy, but only 3-5 per second at 7.7 GeV. These large, low-energy RHIC beams are also harder to weave through the same accelerator aperture used at high energies, like threading a needle with twine instead of silk thread.

In addition, more particles at the edge of the beam scrape against the accelerator vacuum chambers, creating beam losses and unwanted experimental backgrounds.

Another low-energy program challenge is that some energies only permit collisions at one of the two experiments, STAR or PHENIX. This was the case for the 11.5 GeV run, where STAR acquired low-energy data while PHENIX commissioned another detector without collisions.

Overcoming these difficulties, RHIC concluded its low-energy program with two days of collider tests at the lowest and most challenging energy.

"C-AD consistently improved the performance of the machine, and in the end we nailed the number of events we needed," said Sorensen. "From the start of the 7.7 GeV run to the end, C-AD improved the event rate by a factor of 10. Because of this, we will be able to measure fluctuations and correlations in these events that we believe will tell us whether we are to the left or the right of the critical point."

"RHIC performed exceptionally, delivering over double the data that we expected prior to the low-energy run," agreed O'Brien. "The data we've obtained are excellent and should provide a great foundation for the critical point search."

With the run's completion, all of this year's low-energy program goals were met or exceeded. Although more work lies ahead before the physicists can determine the existence and location of the landmark critical point, these successful runs already give the RHIC experimenters and accelerator team cause to celebrate.

— Sophie Bushwick

Grads: Apply to Participate In SBU Provost's Graduate Student Lecture Series

The Graduate School at Stony Brook University is accepting applications for participation in the Provost's Graduate Student Lecture Series. This series seeks to provide a mechanism for graduate students across campus and at associated institutions such as BNL to present their work in a public forum; to formally recognize excellence in graduate student research; and to expand communication among disciplines across campus and associated institutions. Each lecture is expected to last about 40 minutes with 20 minutes reserved for Q&A.

Graduate students are encouraged to nominate their paper for inclusion in the series, or faculty may nominate students. The deadline for this series is August 20 for presentations happening in the fall. The application form and information on requirements are available on the homepage of BNL's Association for Students & Postdocs (ASAP) website at <http://www.bnl.gov/asap>.

In Memoriam

Frank Federmann, who first came to the Lab as a senior auditor for Associated Universities, Inc., and, after being named Chief Internal Auditor in 1969, transferred to BNL as Director of the Internal Audit Office on February 1, 1998, died at 70 on April 24, 2010. A member of the New York State Society of Certified Public Accountants (NYSSCPA) and Chair and board member of the NYSSCPA Disaster Relief Task Force set up after the attacks on Manhattan's World Trade Towers on September 11, 2001, Federmann traveled weekly to Ground Zero to volunteer his expertise in helping small businesses and other victims of that disaster with financial matters. He retired on February 28, 2002.

Robert Marr, who joined the Physics Department as a research associate on May 11, 1959, and retired from the Department of Applied Science (DAS) as a senior physicist on September 30, 1995, died at 78 on April 26, 2010. His contributions ranged from physics bubble chamber analysis and computer tomography to digital visualization, his findings finding applications in CAT scan and MRI software. Marr moved to the Applied Mathematics Department as an associate physicist in May 1961, and rose to senior physicist with tenure by 1968. On February 3, 1975, he became Applied Mathematics' Acting Department Chair and Chair on December 1. After three years, he returned to research, moving to DAS in October 1988. Post-retirement, he worked on a guest senior physicist from February 1, 1996, until December 9, 2003.

Palmer's Award from p. 1

...electron laser, an instrument that gains energy from light and accelerates particles using a laser. In 1973, he proposed a method called momentum stochastic cooling, also known as the Palmer method, which corrects the momentum spread of particles as they circulate around an accelerator.

From 1980 to 1983, Palmer and his associates developed magnets for Brookhaven's Colliding Beam Accelerator Project, also known as ISABELLE, and in 1990 he started work on magnet development at the Superconducting Super Collider (SSC). Both of these projects were subsequently cancelled, but many of today's superconducting accelerator magnets can be traced back to Palmer's ideas. For example, he introduced the 2-in-1 magnet, in which two magnets are inserted into one block of iron, rather than two, which represents savings in cost and space, as well as better beam efficiency. The LHC contains 2-in-1 magnets because of their space-saving capacity.

After earning a Ph.D. in physics at Imperial College, London, in 1960, Palmer joined BNL as a research associate. He rose to become a senior physicist in 1974, and Associate Laboratory Director for High Energy Physics in 1983.

From 1987 to 1990, and from 1991 to 1996, Palmer held joint appointments at BNL and the Stanford Linear Accelerator Center. In 1990, he worked at the SSC, and returned to BNL in 1991 as head of the Lab's Center for Accelerator Physics (CAP). Currently, he is in charge of the Advanced Accelerator Group at CAP.

In addition to his notable achievements in accelerator physics, Palmer has made significant discoveries in particle physics. In 1993, he shared the American Physical Society's W.K.H. Panofsky Prize with BNL's Nicholas Samios and Ralph Shutt for the 1962 discovery of the Omega-minus particle. Palmer also played a role in the discovery of neutral currents in the early 1970s at CERN, the charmed baryon at BNL in 1975, and direct single photons at CERN in 1978.

In 1997, Palmer received BNL's Research & Development Award for his contributions to accelerator and detector concepts and technology. He also was honored with the American Physical Society's Robert R. Wilson Prize in 1999 for his outstanding achievement in the physics of particle accelerators. In 2008, he was elected as a member of the National Academy of Sciences.

— Diane Greenberg

Remember to donate to the BNL Food Drive

Collection bins are located in Bldg. 400 and elsewhere. Thanks.

Cleaning Out Brookhaven Lab

For some students elsewhere, memories of summer internships include fumbling to remember complex coffee orders or picking up other people's clothes at the dry cleaner. Not so for Steve Chidichimo and Erin Gallagher, two chemistry students interning at Brookhaven Lab this summer.

Each day this summer, Chidichimo and Gallagher don lab coats, safety glasses, and gloves to help clean out the Lab — safely purging chemicals that scientists no longer want, need, or use for their research.

“They’re really helping the Lab reduce its chemical footprint,” said Joe Pavlak of the Lab’s Waste Management Division. He and Peter Pohlot of the Lab’s Environmental Protection Division mentor the two interns, ensuring that they adhere to all Environmental Protection Agency (EPA) and Department of Transportation (DOT) regulations while safely discarding chemicals in buildings 463, 490, 555, 830, and 901.

“I’m learning how to work with different chemicals, how to find out about what I’m not familiar with, and also what I



From left: Steve Chidichimo, Joe Pavlak of the Waste Management Division, and Erin Gallagher place documented chemicals into a 90-day storage area.

can do to keep my future classrooms safe for students,” said Chidichimo. A graduate student at Dowling College, he is participating in the BNL Office of Educational Program’s Pre-Service Teacher program, which provides future science teachers with experience in cutting-edge research environments.

“My teaching assistants usually take care of this at school, so it’s a new experience for me,” added Gallagher, who is participating in the Lab’s Office of Education Programs’ Sci-

ence Undergraduate Laboratory Internship program. She will be a senior at James Madison University this fall and is interested in preemptive pollution prevention.

Once chemicals have been turned in for disposal, Chidichimo and Gallagher sort them according to the Lab’s Chemical Management System. This system states which chemicals are hazardous, flammable, toxic, corrosive, and so on, and notes any EPA and DOT regulations for proper disposal and

transport of specific chemicals. The chemicals are then carted off to a 90-day storage facility on site. Within 90 days, they are transported to the Lab’s Waste Management Division, where they are properly packaged and sent off site to be treated, incinerated, or recycled by an outside vendor.

This chemical “amnesty” program, which encourages those at the Lab to turn in any unneeded or leftover chemicals, is the second phase of the Lab’s Housekeeping Policy, an initiative that began earlier this year aiming to reduce hazards and provide safer work environments across the Lab site.

“This work is helping these students develop a number of skills and knowledge of chemistry,” explained Pohlot, who is mentoring both interns and manages the housekeeping initiative. “It’s also helping us clean out these legacy chemicals, relieving the Lab’s researchers of this responsibility, and saving them a lot of time.”

Also, Chidichimo and Gallagher won’t remember this as the summer they took coffee orders or picked up other people’s dry cleaning. — Joe Gettler



Members of Rat Race Choir are: (from left), Dave Chmela, bass and vocals; Adam Snyder, percussion and vocals; Craig Weinberg, guitar; and Larry McGowan, keyboards.

Rat Race Choir to Perform at BNL, 8/6

Legendary band Rat Race Choir (RRC) will perform at the U.S. Department of Energy’s Brookhaven National Laboratory on Friday, August 6, at 8 p.m. at Berkner Auditorium. Sponsored by the BNL Music Club, the concert is open to the public. All visitors to the Laboratory 16 and older must bring a photo I.D.

Formed in 1968, RRC hails from Westchester, New York. However, their presence on eastern Long Island at venues in Southampton and Mitty’s General Store in Water Mill has made them well known on the Long Island music scene. This progressive rock band has been performing their own musical compositions as well as classic rock songs from well-known rockers like Jethro Tull and Led Zeppelin. In the early 1970s the band was joined onstage by John Entwistle of The Who.

Dave Chmela, bassist and songwriter, is an original founding member of RRC. He is also a vocalist and his musical influences include Bob Marley to Alan Holdsworth. He also plays keyboards and is a great fan of classical composer George Frederic Handel.

Craig Weinberg picked up a guitar at the age of five and hasn’t put it down since. He realized his dream when he had the opportunity to become a member of RRC 14 years ago.

Larry McGowan first trained on piano and then became a church organist before joining the band in 1969. His entertaining on-stage antics make him a favorite to watch. His inspirations include Mike Pinder of the Moody Blues, Billie Holiday, Big Band sounds, as well as Chopin.

Adam Snyder also brings his share of talent to the band. He first started rehearsing with RRC in 2002. He has performed with many legendary musicians, including Billy Joel and Neil Sedaka. In addition to his percussion and vocal skills, Snyder can play bass and piano.

Also appearing on stage at this show will be rock bands Jebus and Memphis Crawl. See the Jebus website for more information. See the Memphis Crawl website for more information.

Tickets for the concert are \$20 and may be purchased at the BERA Store, through <http://www.ticketweb.com/> or at the door.— Jane Koropsak

Discount for North Fork Beer, BBQ, & Wine Festival

A BERA discount is available for the North Fork Craft Beer, BBQ, & Wine on Saturday, August 14, 2-6 p.m. at the Martha Clara Vineyards in Jamesport. Discount tickets are available at the BERA Store, \$45 per person, \$12 off the regular price. More information is available online: <http://www.northforkcraftbeerfestival.com>.

Annual Brookhaven Cup Golf Outing, 8/13

The annual Brookhaven Cup Golf Outing, which is open to all BNL employees and immediate family members, will be held on Friday, August 13, at Great Rock Golf Course. Tee times are in the afternoon. The cost of 18 holes of golf, including a cart, is \$50. A barbeque, with hamburgers, hot dogs, sausage and peppers, grilled chicken, and cold salads will follow on the patio at the 18th hole, for \$15/person. There will be a cash bar. The total for entire outing: \$65 If you would like to participate, make out a check for \$65/person (the total for the entire outing), made payable to the BERA Golf Association, and mail it or drop it off to Nick Franco, Bldg. 923, as soon as possible. Contact Mary Jane Bartholomew, bartholomew@bnl.gov, Ext. 2444; or Nick Franco, franco@bnl.gov, Ext. 5467, if you have any questions.

Arrivals & Departures

— Arrivals —	
Michael Devaney	Maint/Fab
Ronald Harjus	Maint/Fab
Yvette Hayes.....	C-AD
Alicia Johnson	Biology
Mohan Nair	Qual. Mgmt
Nancy Nair	Facils. & Ops.
Kevin Wish	Maint/Fab
— Departures —	
William Garber	CMP/MS

LEARN Weight Management Info Session, 8/17

An information meeting for the next session of the intensive LEARN Program for Weight Management will be held on August 17, noon-1 p.m. in Bldg. 490, Large Conference Room.

This intensive structured 12-week program includes sessions on lifestyle, exercise, attitudes, relationships, and nutrition. The program is open to eligible employees.

For more information, contact Michael Thorn, Health Promotion Program, Ext. 8612 or mthorn@bnl.gov. See also: <http://www.bnl.gov/hr/OCCMED/HPP/>.

Small Business ‘Green’ Showcase, 8/18

The Lab will host a Small Business “Green” Showcase, featuring 18 small businesses and small business organizations, on Wednesday, August 18, from 9 a.m. to 3:30 p.m. in Berkner Hall lobby. Stop by and learn a great deal more about green than you knew! Also, see a unique bicycle cover of recycled material and find out about a “solar traveler.” All are welcome.

Classified Ads from p. 4

For Rent (continued)

- SOUND BEACH – 4 bdrm hse, 1 bath, kit, l/r, furn, priv drway, beach rights, util not incl, rental 9/6 to 6/6. \$1,000/mo. 718-704-6877.
- WADING RIVER – new 1 bdrm apt, spacious, quiet neighborhd, cable/int, util incl, no smkg/pets. \$1,000/mo. 838-5879.
- WADING RIVER – 3 bdrm hse, 2 bath, cul de sac, SWRSD, priv wooded flat backyd, walk to town, no smkg/pets. \$2,000/mo. 929-8232.
- YAPHANK – Roomate/share Whispering Pines 3br condo, clean, furn rm priv bathrm, pool, tennis, 2mi to bnl. \$750/mo neg. Edward, Ext. 4427, 578-4057/ estein@bnl.gov.

- N. MYRTLE BEACH, SC – 2 bdrm, 4 beds, 2.5 bath, Townhse on golf course w/comm pool, daily/wkly/mo rates. \$590/wk. Chris, 516-660-0290.
- For Sale**
- MANOR PARK – 3 bdrm ranch, renov, hrdwd flrs, elk w/den area, lg l/r w/fp, bath w/jacuzzi, full bsmt w/flrg, 2 zn heat, 1 car attach gar 10 min to Lab. \$259,990 neg. 205-5300.
- ROCKY POINT – 10 rms, 4 bdrms, 3 bath, elk w/granite cntrtops, l/r w/fp & wet bar, d/r, fin bsmt, a/c, 2-car gar, 42x12' deck, igp, igs, 0.92 acres. \$455,000 neg. 744-7052.
- SHOREHAM – 3 bdrm hse, fen acre, SWRSD, all renv, hdwds thruout, open flpln, design kit & bath, ss, cabs, vaulted sunrm, secluded bckyrd, deck, hottub. \$346,999. 849-2493.

CALENDAR

Sunday, 8/1

***Summer Sundays, ‘Storm Trackers’**
10 a.m.-3 p.m. Lab open to the public for free visits, enter until 3 p.m. This Sunday features the National Weather Service. See notice, p. 4.

— WEEK OF 8/2 —

Friday, 8/6

***Rat Race Choir Rock Concert**
8 p.m. Berkner Hall. All are invited to attend this progressive rock band’s performance, sponsored by the BNL Music Club. Tickets are \$20 each, buy them at the BERA Store in Berkner Hall or through www.ticketweb.com/. See notice at left.

Sunday, 8/8

***Summer Sunday, ‘Atom Smasher’**
10 a.m.-3 p.m. This is the last Summer Sunday of 2010, when the Lab will be open to the public for a free visit, enter until 3 p.m. This Sunday will feature BNL’s “Atom Smasher Extraordinaire,” the Relativistic Heavy Ion Collider. See notice, p. 4.

— WEEK OF 8/9 —

Thursday, 8/12

Summer Student Poster Symposium, Closing Ceremony
Noon. Berkner Hall. At the end of the 2010 summer internship program, BNL’s Office of Educational Programs invites all to view the display of research posters students will be showing in the lobby and attend the closing ceremony that will follow in the auditorium.

—WEEK OF 8/16 —

Wednesday, 8/18

***Small Business ‘Green’ Show**
9 a.m.-3:30 p.m. Berkner Hall lobby. Small businesses and their organizations will present information on their services. All are welcome. See left.

Brookhaven Lecture
4 p.m. Berkner Hall. Ralph James, Nonproliferation & National Security Department, will give a Brookhaven Lecture on “Wide Band-Gap Semiconductor Radiation Detectors: Science Fiction, Horror Story, or Headlines.” All are welcome to this free public lecture. Visitors of 16 and older must carry a photo ID.

BERA Trips

For all trips, you must make reservations and purchase tickets in advance at the BERA Store in Berkner, Monday-Friday, 9 a.m. -3 p.m.

Skyline Cruise: Fri., 8/6. Dinner cruise — see the Statue of Liberty. Leave BNL at 4:30 p.m., leave boat about 11 p.m. \$105/ea.

NYC Battery Park “Do As You Please” Trip: Sun., 8/8. Leave BNL at 10 a.m., leave NYC 6 p.m. \$15/ea.

US Open: Tue., 8/7. \$65/ea. for admission, bus, parking, tip. Leave BNL 8:30 a.m., leave Open 7:30 p.m. Note: This is a regular BNL workday.

End of Summer Bash: Fri., 8/10. Bash at the Brookhaven Center, 6-11 p.m. \$5/ea.

Cabelas Shopping: Hamburg, PA. Sat., 7/11. Leave BNL 7 a.m., leave Cabelas, 4 p.m. \$20/ea., 55 tickets only.

NYC “Do As You Please” Trip: to area of San Gennaro Festival/ Chinatown. Sat., 8/18. \$15/ea. Leave BNL 10 a.m., leave festival 6 p.m. 55 passengers only.

Bronx Zoo: Sat. 8/25. Leave BNL 9 a.m., leave zoo 5 p.m. All seats are \$23/ea.: includes bus, Total Experience ticket, & “4-D Theatre.” Age 2 and under, on adult’s lap: free. 55 tickets only.

Strong Winds and Radio Waves

With hurricane season upon us, some members of BERA's Amateur Radio Club are more than prepared for strong winds, heavy rain, and electrical blackouts. These amateur radio operators are also on call to report severe conditions to the National Weather Service.

Gary Stevens works in Brookhaven Lab's Information Technology Division and is one of several Amateur Radio Club members who participate in the National Weather Service's SKYWARN program. Across the country, there are nearly 290,000 amateur radio operators — commonly referred to as “hams” — who volunteer their expertise and equipment to report severe storm conditions through the SKYWARN program. The reports from these spotters provide added insight to the National Weather Service, which helps the Service in issuing tornado, flood, and other severe weather warnings to local communities.

“Doppler radars can only see so much, so the National Weather Service also relies on us to report what we see from the ground,” said Stevens, who is on the lookout for waterspouts, wall clouds, strong wind gusts, and hail when severe weather is forecasted for Long Island.

Stevens realized the importance for amateur radio not during a weather emergency, but during the attacks on September 11, 2001.

“Amateur radio is extremely reliable during emergencies...it was the only way to communi-



Roger Stoutenburgh bnl150710

Pictured are: (back, from left) Nick Franco, Collider-Accelerator Department; Fred Perrier, Amateur Radio Club member; Henry Kahnhauser, Radiological Control Division; Rich Conte, Collider-Accelerator Department; Gary Conte of the National Weather Service; and Gary Stevens, Information Technology Division; (front, from left) Joe Terranova, Office of Emergency Management; and BNL retiree Hugh McNeill.

cate for some time on 9/11,” he explained.

Hams communicate with each other using radio frequencies that regular car radios and home stereos do not recognize. All hams are required to be licensed and they can communicate across town or even with astronauts in the International Space Station. While some hams are only involved in amateur radio as a hobby, many are involved as a way to prepare for emergencies, and many are trained and registered to help their communities during emergencies through programs like SKYWARN or the Amateur Radio Emergency Service.

“Birds of a feather flock together,” Stevens said, explaining

that most hams belong to at least one club.

At BNL, BERA's Amateur Radio Club welcomes both experienced and inexperienced newcomers. The club maintains a signal repeater and other equipment for its members, who meet regularly in person and over the airwaves. Club members also simulate emergency operations with hams around the world during the Amateur Radio Relay League's Field Day every June. And with Long Island's hurricane season running from June until November, what better time to practice?

To learn more about amateur radio, visit the BERA Amateur Radio Club website: <http://www.bnl.gov/bera/activities/arc/>.

— Joe Gettler



Joseph Rubino

Lab Open on Summer Sundays Until 8/8

This Sunday, 8/1, Track Storms With the National Weather Service

This Summer Sunday, August 1, visitors are invited to Brookhaven Lab site to see how scientists at the National Weather Service forecast the weather and track storms across the New York metropolitan area. You'll be able to see a weather balloon up close and watch it soar at 3:30 p.m., and enjoy the Weather show.

In addition, exciting science shows, tours of world-class science facilities, and entertaining activities for children and adults are all part of the free fun and learning opportunities offered to the public by BNL during Summer Sundays, which continue until August 8.

No reservations are needed to take part in Summer Sundays at the Lab, but visitors age 16 and over must bring a photo ID. Visitors may arrive any time between 10 a.m. and 3 p.m. A different tour and exciting new science show will be featured each week. Arrive early to avoid crowds and to take advantage of the full program.

The last facility visit takes place at 3 p.m. each week, and science shows will be held at noon, 1:30 p.m. and 3 p.m. each Sunday in Berkner Hall. A new hands-on exhibit, Creating Our Future, Sustainability by Design, will be available every Sunday in the Berkner Hall lobby. The cafeteria and gift shop, both in Berkner Hall, will be open from 10 a.m. to 3 p.m.

The next Summer Sunday, on August 8, will be the last of this year:

August 8 — Atom-Smasher Extraordinaire: RHIC

Visit the Relativistic Heavy Ion Collider, a world-class particle accelerator where physicists recreate conditions of the early universe to study the fundamental forces of matter. Stump a physicist and be amazed by the wonders of Phenomenal Physics. This tour is appropriate for adults and children age 10 and over.

For information, call 631 344-2651, or check <http://www.bnl.gov>, for Summer Sundays.

Classified Advertisements

Access many more current job openings on the World Wide Web at www.bnl.gov/HR/jobs/ and see also <http://www.bnl.gov/HR/careers/>

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.
LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.
DRIVER POSITIONS (LG-6) - Drives and services any and all Laboratory automotive vehicles under any conditions of usage. May be required to load and unload, perform necessary road maintenance, and perform related clerical duties. For Building and Grounds Utility Workers (BGUW)'s interested in the position, they must have worked at the going rate of BGUW for 24 months and possess a CDL B license. Candidates with a CDL A license and endorsements X (Hazmat) and N (Tank Vehicles) will receive \$1.00/Hr. over the going LG-6 pay rate. Submit Transfer Request form to Diana Hubert in HR, Bldg. 400B. Job ID #15445.

Motor Vehicles

08 JEEP WRANGLER X – 23.4K mi. 6/spd manual, 4X4, loaded, p/w, p/l, a/c, 18" tires, infin. spkrs, tow pkg, \$19,500 neg. 807-0457.
08 KIA SORENTO – 48,000 mi. navy blue, ex model, well maint'd, w/paper work, excel cond. \$13,500 neg. 278-5937.
06 CHEVY AVEO – a/t, a/c, am/fm, gd cond. \$5,600. Greta, 516-449-0305.
03 FORD EXCURSION - E. Bauer sport util, seats 7, keylss ent. 73.75K mi. 4wd, tow pkg, leather, more. \$17,000 neg. 399-1125.
02 HONDA ACCORD COUPE EX-L – 115 mi. V6, gar, all maint records, orig owner. \$7,500. Jim, Ext. 7859.
02 NISSAN ALTIMA – 139.4K mi. 2.5S, a/t, a/c, c/c, pwr s'roof, 16" alloy whls, cm/fm/cd, new eng, runs well, \$4,000. 255-0729.
01 FORD EXPEDITION – 145.75K mi. v/ dual a/c, 3rd seat, seats 8, tow pkg, new batt & front end. \$5,950 neg. 399-1125.
99 GMC PICK-UP – 130K mi. 4X4 Ext Cab, 2500 SLE, blk, loaded, mint. \$6,900 neg. Kenneth, Ext. 7268, 928-1254.
98 JEEP GRD CHEROKEE – 195K mi. p/s, p/b, p/w, a/c, a/t, 6cyl, am/fm/cd/cass, gd tires, brkes, must sell. \$1,975. Ext. 4230.
97 FORD EXPEDITION – E. Bauer Ed, leather int, 3rd row seat, CD, tow pkg, front hitch, well maint, receipts, \$4,500 neg. 775-0297.

96 NISSAN MAXIMA – 170K mi. 4DSD Red Maxima, gd cond, runs well, cold a/c, p/w, more. \$2,700 neg. 302-562-8410.
93 H. DAVIDSON DYNA WIDE GLIDE – 10K mi. mint, 90th anniv, newer tires & bags, \$7,500 neg. 356-4578/humbert@bnl.gov.
NEWMAR COUNTRY AIRE – Motorhome, diesel, 40' fully equiped, 1 slide-out, call for pricing. 289-1834.

Boats

25' TANZER SAILBOAT – Shoal drft 2'11", w/ aft cabin, encl head, roller furling, 4 winches, outbrd, GPS, more. \$4,950 neg. 905-8808.
KAYAK – Wilderness Systems "Sea Otter", 16' long w/rudder & compass, fiberglass, red & white, \$750. Nick, 286-1816.
SUNFISH & TRAILER – old but in gd cond, \$600/neg. Pat, 929-4942.

Furnishings & Appliances

APPLIANCES – GE refrig-top freezer, GE self-cln flat-top elec range; W'pool d/w & Broan range hd, excel, \$650/all. Ext. 5132.
BABY'S SET – maple dresser/changing table/crib, natural color, pd new/\$2,000, ask \$700/obo. Ext. 7939, donnellan@bnl.gov.
BED – Craftmatic full bed, firm ortho mattress, massagewave syst. & wireless rem, w/all orig papers, \$1,500/neg. 790-4790.
CHAIRS – Windsor style w/arm, solid oak, gd cond, ask/\$30/both. Lois, 375-7264.
CHILD/TEEN BUNK+DESK BED – all wood, desk pull out bed, ask/\$300, Ron, 379-0742 or RRJE4019@MSN.COM.
ENTERTAINMENT UNIT – oak, holds up to 27" TV, 58x58x21, drawers, storage. ask/\$90; 27" color TV/\$20. 375-7264.
FREEZER – Upright, not frost free, gd cond, ~16 CF cap, \$35 obo. 375-7264.
GLIDER ROCKER – maple chair, \$215; 516-740-8418.
MICROWAVE – Panasonic, 1300watt, 14"h24"w20"d, works well, \$30. Ext. 3780.
WHITE ELECTRIC STOVE – \$250 – computer desk/\$35; chrome clothes rack/\$20, filing unit \$20; Nina, Ext. 5894, 475-1297.
WOOD DINING TABLE – mirrored w/6 chrs, gd cond, \$200/neg. Ext. 3387, 245-5297.

Audio, Video & Computers

DELL DESKTOP COMPUTER – w/MS Office '03., needs cleaning & virus protec, \$450/neg. Ext. 7216, 445-4027.
TV – Panasonic 20" CRT w/VCR, works well, \$30. Harold, Ext. 3780.
WII CONSOLE W/5 GAMES – approx 6 mos old, 2 controllers, 1 Nunchuk, Super Mario, more. ask/\$250. 445-4027.

Sports, Hobbies & Pets

BOWFLEX POWER PRO HOME GYM: – grt cond, leg extension incl, \$330. 398-9060.
EXERCISE – NordicTrac/\$25; Cardio Force/\$20, both gd cond. 375-7264.
FERRET CAGE – like new, \$35. 399-1125.
FLY ROD – Sage Xi2 11 wt, 4pc, never used, great for striped bass, gd for travel, rod tube incl, \$350. sbronson@bnl.gov.
GI JOE'S & ARMY JEEP – w/trailer/light, misc equip; excel cond, bought in late 1960's; b/o. Sue, Ext. 4931.
KITTENS – 2 adorable, long-haired brothers, neutered, friendly and affectionate, 1 black, 1 gray. Susan, Ext. 5979.
KOI FOR SALE – all sizes. 929-6940.
MOTORCYCLE JACKET – Joe Rocket, Ballistic Series, Meteor 4 jckt & liner, szsm, used 1 wk, \$200/new, ask/\$50. Ext. 3750.
PAINTBALL GUN – Spyder Rodeo gun w/ Hopper, CO2 tank & carry case; paintballs, holster avail, exc, \$150/neg. 790-2205.
PORCELAIN VICTORIAN DOLL – 27" LTD handcrafted by doll artist W.Tung w/COA & stand in orig. box. Pics. \$69.95. 395-6784.
TUFFSTUFF HOME GYM – Odyssey 5, 240lb stack, whole body workout, \$2500 new, ask/\$1200. 516-315-6001.
XBOX 360 – Viva Piñata, Banjo-Kazooie, Nuts/ Bolts, 256MB int stor Xbox 360 wless ctrller, Xbox LIVE Mmbrshp \$150/obo. Ext. 7397.

Tools, House & Garden

ELECTRIC ROLLING TAPE MEASURE – 300' range, measures equal spacing for hanging pic\$5. Paul, Ext. 2899.
SINK – old-fashnd, drainbrd & backsplash, 4 holes, white iron/porcelain, 42.5"L,25.5" fr-to-b, sink 20"x17", 7"d, b/o. Ext. 7114.
SIDE BY SIDE REFRIGERATOR – Kenmore, white, ice & water dispenser, 68 3/4h x36w x30 1/2d, u-pic up, Ridge, \$75. Ext. 4905.

Free

'74 PEARSON SAILBOAT – 26", seaworthy, tow, it is yours. Mike, 476-5810.
PEA COAL – 2 boxes for coal stove. Ext. 2475, 751-4539.
QUEEN SIZE PLATFORM BED – w/night stands & drawers, oak, gd cond, no mattress, u pic up. Jae, Ext. 2337.

Miscellaneous

BABY BREAST PUMP – Medela in Style Adv w/shoulder bag, \$110; Graco passages travel syst w/car seat, \$110. Fan, Ext. 8140.
BABY'S changing table/\$20; infant to toddler rocker/\$30; 0-7 yrs girls' clothes, \$2/ea; large toy helicopter/\$5. 475-1297.

HP #45 BLACK INK CARTRIDGES – 5 for Canon 930, 932C printrs, \$10/ea, \$40/all;. Anthony, Ext. 4035 or acostantini@bnl.gov.
VW CERTIFIED TECH – Certified Volkswagon B-tech w/over 7 yrs dealer exp, all types of repairs. Will, 484-9888.
WEDDING GOWN – brand new white wedding gown, size 14, runs sm, pd/\$800, ask/\$400, must sell. Ext. 7216, 445-4027.

Car Pool

PLAINVIEW – established 3-person car pool meeting in Plainview, looking for 4th person, 8-4:30. Ron, Ext. 6068.

Happenings

BELLY DANCE SHOW & BUFFET – Sat, 8/7, show, 8-pm, Indian Cuisine, 7pm, \$39.95/ incl buffet & show. Call: Kiran, Palace in Commack. 462-0003, narvaez@bnl.gov.
CRUISE – 7-Day Caribbean Cruise, \$789.72pp dbl occup balcony. Dep req'd. Call for details. Kim, Ext. 7465, 399-3098.
DINNER/SHOW OUTING – Sat, Oct 16, to see "Joseph," PA, FINAL PYMTS DUE by July 30. Kim, Ext. 7465, 399-3098.
KISS ME, KATE AT NFCT – Cole Porter's musical plays at N. Fork Community Theatre, Mattituck on 7/30,31;8/5,6,7 at 8PM, 8/1,8 at 2:30. All tix \$20 at <http://www.nfct.com> or call 298-NFCT. Laura, Ext. 2520.

Wanted

3-4 BDRM HOUSE – looking to rent for sis-in-law relocating to L.I., pref Nassau Co, \$1500/ mth or less. Nina, Ext. 5894, 475-1297.
AIR MATTRESS – looking for an air mattress for camping, any size. Charlie, Ext. 4736.
BED – want a twin size bed, w/or w/o mattress. Pete, Ext. 4955/pwamnicke@bnl.gov.
DOG/CAT FOOD DONATIONS – For pets of struggling families/elderly. Collection bins are in Bldgs: 134, 400, 510 x5864, 725, 901 and 902. Kathleen, Ext. 3161.
FIREARMS – old or new, fair \$\$\$ paid. Joe, Ext. 3783, 487-1479.
FM RADIO/CD TECH – for Bose FM radio/CD repair; assess rain damage, weigh cost/benefit of fixing. Bob, Ext. 3186.
INFO ON JETTA TDI – Do you own a VW Jetta TDI sttion wgn? I want to talk re perfrence, etc, maybe test drive w/you?Nick, Ext. 2490.

NEW/GENTLY USED CLOTHES – all sizes, children's book and toys to be donated to 76 families in a shelter, Laura, Ext. 4027, lbuscemi@bnl.gov and Kathleen, Ext. 3161 or kratto@bnl.gov.
SURF BOARD – Looking for a used surf board, decent cond, not v. expensive, longbrd or Australian style ok. wflietiz@bnl.gov.
TUTOR – need help w/Intro to Electrochem. Engineering, will pay, mid-term in 1 week. 375-7628 or aharkins@bnl.gov.
WORD PROCESSOR – used. 849-4708.

For Rent

FLANDERS – W/frt, deepwater dock, bulk heading, deedd bch rights, newly-renov, cath ceilg, 3 bdrm, 2/baths, Jacuzzi, lg deck. rent/buy 499. \$2,000/mo neg. Ext. 3078.
MASTIC – 1 bdrm furn apt, priv ent/prkg, util/tv hook-up incl. \$800/mo. 772-8251.
MIDDLE ISLAND – new spacious 1 bdrm apt lg eik, new appli, l/r, full bath cac, priv ent, incl all, no smkg/pets, 1 mo sec. \$1,200/mo. 516-769-5370.
MILLER PLACE – 4 bdrm 2.5 bath furn home, while lab scientist owner is away, Oct 2010-Sept 2011, renter pays utils, shorter occup ok, terms neg. \$2,000/mo. 647-0649.
MILLER PLACE – share lg furn, Col. home in prof resid. area, cac, full kit, tv/int, fen backyd/deck/grill, own furn, bdrm, incl all, 2 bdrms avail, non-smkr. \$675/mo. 744-8386.
RIDGE – spacious 1 bdrm, bath, 7 min to Lab, pvt ent/drwy, all util incl, l/r, eik w/d, pet ok, tile/new carpet, fresh paint. \$1,125/mo. Mary, Ext. 8633, 236-9114.
RIDGE – lg nice rm, all util/int incl, hse 5 mins from lab, share kit, bath. \$625/mo. Mim Gao, 917-721-2277.
ROCKY POINT – 2 bdrm hse, 1 bath, new appl, lease, 1 mo sec, refs, util, extra. \$1,250/mo. 591-3290.
SHIRLEY – 2 bdrm apt, furn, nr BNL, incl heat/elect/water/cable/int, ideal for post-doc or student, no smkg/pets. \$1,100/mo neg. Tomasz, Ext. 7448 or tomw@bnl.gov.
SHOREHAM – spacious, clean 1 bdrm furn studio apt, sep ent & thermo, full bath, kit, patio, big yd, cable TV, no smkg/pets, 7 min to Lab. \$775/mo neg. 747-3495.

See Classified Ads on p.3