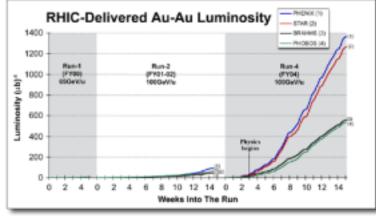


Vol. 58 - No. 16

New Machine Record for Heavy Ion Luminosity at RHIC

BNL's Relativistic Heavy Ion Collider (RHIC) has established a new machine record for heavy ion luminosity, well above its previous performance. Luminosity is an extremely important measure of a collidingbeam accelerator's performance.

Exceeding all expectations of December 2003 until April 2004. the 1,000-plus international physicists working at RHIC, the record-breaking luminosity, or rate of particle interactions, was set during the most recent experimental run using gold ions, which lasted four months, from



This graph shows the very sharp rise in the luminosity of the goldion beam collisions delivered to the four experiments, PHENIX, STAR, BRAHMS, and PHOBOS, at the Relativistic Heavy Ion Collider, during the run of fiscal year (FY) 2004, and in contrast to the runs of FY 2001-02 and FY 2000. In FY 2000 beams collided at 65 GeV/u (100 billion electron-volt per nucleon), in the later two runs at 100 GeV/u.

"The record luminosity performance is a direct reflection of the expertise of the designers, builders and operators of RHIC. This tremendous achievement supports the fact that the Collider-Accelerator Department ranks with the best accelerator organizations in the world," said Derek Lowenstein, Chair of the Collider-Accelerator Department (C-A), which operates a suite of facilities for accelerator-based experiments hosted by the Lab.

Funded by DOE's Office of Science and commissioned in 2000 as the world's highest energy heavy-ion collider, RHIC has so far run four times, with each period of operation lasting several months. During three of the four runs, including the one just completed, two beams of gold ions traveling in opposite directions at near the speed of light have been smashed into each other. The goal is to recre-

divided incoming from circu-

lating beam in the Booster,

thereby increasing the inten-

sity of the beam within the

chain of accelerators feeding

• minimizing the "electron



In the photo are some of the RHIC accelerator physicists and operators in the Main Control Room. They are: (from left) Rama Calaga, Haixin Huang, Lee Hammons, Travis Shrey, Andrew Meyer, Kin Yip, Brian Van Kuik, Thomas Roser, Todd Satogata, Christoph Montag, Wolfram Fischer, Rogelio Tomas, Ubaldo Iriso, and Mei Bai.

ate "quark-gluon plasma," an extremely dense state of matter thought to have last existed microseconds after the Big Bang.

Analyses of data from the earlier runs indicate that RHIC is, indeed, producing an extremely dense form of matter that has never been seen before. Whether or not it is the longsought plasma of quarks and gluons freed from their confinement within the atomic nucleus remains to be determined. To make such a determination, experimenters need as much data on the events coming out of RHIC's gold-beam collisions as possible. So, the higher the rate of RHIC's particle interactions, the more data coming out of those collisions to support the quark-gluon plasma search.

Given the record-setting luminosity and its contribution to the run's success, "RHIC's

experi-

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may nail

t i m e , "

says ac-

celerator

physicist

Thomas

Roser,

who is re-

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"It was a successful team effort to bring about an assortment of small *improvements* — 5 *percent* here, 10 percent there — that all added up very nicely." - Wolfram Fischer

> be found to be there within the expected energy range, or that high density matter that has something even more interesting and unexpected will appear."

Extended Run

Roser explains that one of the goals of RHIC is to uncover the energy at which quarkgluon plasma first begins to emerge. To find this energy, RHIC was operated at two energies during the recent gold-ongold run.

The first collisions of the run were with beams of 100-billion electron volts (GeV) per nucleon, or 200 GeV at the collision center. Energy that high is thought to be more than sufficient to generate quark-gluon plasma. Following the phenomenal luminosity achievements, the RHIC experimentalists requested that the run be extended by one week for lower energy collisions for comparison. DOE's Office of Science provided additional funding, so that data from the collision of gold ions with energy of only 31.2 GeV per nucleon, or 62.4 GeV at the collision center, could be obtained.

"The RHIC accelerator physicists agreed to tune the machine to a new beam energy with only a two day setup time," says Mark Baker, Deputy Spokesperson for the PHOBOS experiment, speaking for all RHIC experiments (BRAHMS, PHENIX, PHOBOS, and STAR). "They pulled it off brilliantly. This combination of high luminosity and flexibility to scientific needs is essential in order to really characterize the been created at RHIC."

Attention to Detail Pays Off Wolfram Fischer. • replacing the foil that



ver the run of a collider such as the Relativistic Heavy Ion Collider (RHIC), sustained luminosity can be increased in two ways: first, by making more intense particle beams to increase the instantaneous collision rate; and, second, by decreasing the accelerator's downtime, thereby increasing the time spent colliding those intense beams.

"The luminosity record came about by taking care of a multitude of things, by paying attention to detail," explains accelerator physicist and Accelerator Division Head Thomas Roser. He credits accelerator physicist Wolfram Fischer, Collider-Accelerator Department (C-A), for leading the effort. As a result, Fischer has been promoted to the newly created position within C-A of Associate Accelerator Division Head for Upgrades.

Since accelerating heavy ions to nearly the speed of light and then colliding them is not done in one step, improvements were made almost every step of the way in the hardware and software systems that make up RHIC. Upgrades included:

seen in the **Relativistic Heavy** Ion Collider (RHIC) ring at one of the injection kickers that "kick" the beam coming from the Alternating Gradient Synchrotron accel-

- cloud" that affected RHIC's vacuum, thereby increasing within RHIC erator onto the **RHIC ring orbit.**
 - lems that limited reliability improving computer-control systems to make

beam to RHIC

operating various systems and the entire accelerator more effi-

cient and effective.

Also, expecting that a greater number of particle collisions per second in a given beam area would be delivered over a longer time, the experiments had to make certain upgrades so that they could handle all the collisions.

Confident that their

fixes would work, Roser and Fischer projected that sponsible for RHIC operations RHIC's luminosity would reach 200-500 inverse within C-A. "I believe that micro-barns over the course of the run, while the either quark-gluon plasma will experimenters expected 300 inverse micro-barns. Inverse micro-barns is a measurement of luminosity. The higher the number, the more data for *(continued on page 3)*

the lifetime of the beam eliminating power-supply and other equipment prob-

Marsha Belford

CFN Users' Meeting May 19-20

At the annual Center for Functional Nanomaterials (CFN) Users' Meeting, users will be able to make contacts, share results, and help to shape the operation and capabilities of the CFN. Talks by world-class nanoscientists, information on the CFN and how to apply for user time, and meetings with vendors will be included on the agenda.

Wednesday, 5/19 - registration at Berkner Hall, 4 p.m.; vendor/poster session, 5-9 p.m.

Thursday, 5/20 - registration from 7 a.m.; main meeting, 8:30 a.m.: talks, afternoon breakout sessions, open forum. 6 p.m.: vendor/poster session, followed by a banquet

www.cfn.bnl.gov/user/meeting/

2004 NSLS Users' Meeting - May 17-20 -

The National Synchrotron Light Source (NSLS) Annual Users' Meeting is a forum for reporting new research results and advances in experimental capabilities that utilize synchrotron radiation. The meeting includes workshops, invited talks, a poster session, and vendor exhibits.

Monday, 5/17 -	Berkner Hall - workshops, poster session, vendor and equipment exhibit, evening reception
Tuesday, 5/18 -	Berkner Hall - main meeting: talks, poster session, vendor and equipment exhibit, poster awards, banquet
Nednesday, 5/19 -	workshops
Thursday, 5/20 -	workshop.

The meeting and workshops are sponsored by the NSLS Users' Executive Committee (UEC), the NSLS, BNL, and vendor exhibitors and sponsors.

For details on registration, including check-in and voting for 2004/5 UEC members on Sunday, May 16, 4-7 p.m., list of workshops, talks, speakers, and full agenda, visit www.nsls.bnl.gov/users/meeting/.

2004 RHIC & AGS Annual Users' Meeting May 10-14

The Relativistic Heavy Ion Collider (RHIC) & Alternating Gradient Synchrotron (AGS) Annual Users' Meeting will include four days of topical workshops around a one-day plenary session, which is on Wednesday, 5/12. The plenary program will include: latest results from RHIC, AGS, and NASA Space Radiation Laboratory; reports from Washington, elections, awards, open forum meeting; thesis awards; poster session with prize for best student post-doc poster; and banquet. Workshops will be held on Monday and Tuesday, 5/10 & 11, and Thursday and Friday, 5/13 & 14.

https://www.bnl.gov/rhic_ags/users_meeting/

The Bulletin

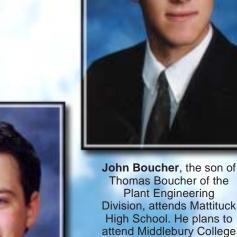
May 7, 2004

2004 BYA JEIORI

BSA has announced the 15 winners of the annual BSA Directors' Scholarships, which go to children of BNL employees in continuation of a tradition instituted at BNL 36 years ago. Each BSA Scholar is a high-school senior who will receive \$2,500 per year for up to four years of study at the college or university of his or her choice.



Deborah Alessi, the daughter of James Alessi of the Collider-Accelerator Department, attends Longwood High School. She will major in math or science at the State University of New York at Buffalo or Geneseo.



Tamara Campbell, daughter of Mary Campbell, Collider-Accelerator Department, attends William Floyd High School. She plans a double major in art restoration and teaching at the State University of New York at New Paltz or Potsdam.



Accelerator Department, attends Kings Park High School. She has decided to study medicine at George Washington University.



Lena Trbojevic, the daughter of Dejan



Andrew Davenport, the son of James Davenport, Center for Data Intensive Computing, attends Ward Melville High School. He will study history or biology at Amherst University, Brown University, or Duke University.

Ludmila Rehak, the daughter of Margareta Rehak, Collider-Accelerator Department, and Pavel Rehak, Instrumentation Division, attends Ward Melville High School. She will study biological sciences at Cornell University.







Maria Michta, the daughter of Richard Michta, National Synchrotron Light Source Department, attends Sachem North High School. She will major in molecular biology and genetics at Long Island University.





Roger Davis of the Collider-Accelerator Department, attends Center Moriches High School. He plans to major in music and science at Bard College or the State University of New York at Stony Brook.



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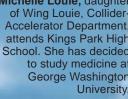
or Colgate University to

study biology.

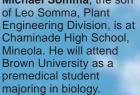
Antonia Fthenakis, the daughter of Vasilis Fthenakis of the Environmental Sciences Department, attends Half Hollow Hills High School East. She will study chemistry and medicine at George Washington University.



Michelle Louie, daughter of Wing Louie, Collider-



Colin Wilke, son of Richard Wilke of the **Environmental Sciences** Department, attends St. Anthony's High School, Bayport. He will major in engineering at the Cornell School of Engineering.







Anya Swiss, daughter of Marcia Swiss, Information Technology Division, attends William Floyd High School. She will participate in the Physicians Assistant Program at the State University of New York at Stony Brook.

Trbojevic, Collider-Accelerator Department, attends Knox School, St. James. Undecided as yet on her major, she will study at Sarah Lawrence College, Emerson College, or the University of New Hampshire.



Brandon Wright, the son of James Wright of the **Plant Engineering** Division, attends Patchogue Medford High School. He plans to attend Niagara University to major in education.

Congratulations, 2003 Spotlight Winners

For extending extraordinary efforts in response to the needs of their departments or divisions, the following BNL employees were honored during fiscal year 2003 by Spotlight Awards. These winners are listed in addition to those in the Bulletin of April 9, 2004. Each winner is awarded a certificate and a check ranging from \$100 to \$900 before taxes. Winners have been listed under the names of departments or divisions in which they served at the time of their award.

Collider Accelerator Department: Ila Campbell, Terence Higgins, Ann Lamberti, Patricia O'Grady, and Patrick Talty; Energy Sciences & Technology Department: Nereida Santiago; Environmental Services Division: Melvin Van Essendelft; High Energy & Nuclear Physics Directorate: Susan White De Pace; Human Resources & Occupational Medicine Division: Lorraine Barry; Internal Audit Office: Elinor Adams; Physics Department: Pierrot Bichoneau and Cynthia McQuilken; and Superconducting Magnet Division: Edwin Casanas.

Science Fair at the Child Development Center



practicing to be Sherlock Holmes? No: These children (above) at the Lab's Child Development Center (CDC) are learning about magnification during this year's annual science fair.

Says CDC Director Deborah O'Neill, "At the CDC, we include science as part of our daily curriculum. Young children are always eager to explore, discover and learn."

Adds O'Neill, "We wish to thank Cindy Biancarosa of the BNL Science Museum in the Office of Educational Programs for providing us with materials that helped us put together the events of our annual CDC science fair."

Other activities of the day included teaching the children about "sink and float" and planets.

Located in Bldg. 373 in the apartment area, the CDC opened its doors in September 1991. Today, CDC and Little Red School House staff care for 81 children between the ages of 6 weeks and 5 years. For information about the CDC, or to register your child or grandchild, call O'Neill at Ext. 7416. — Jane Koropsak



Retirement Counseling: TIAA-CREF, 5/14, 5/24

A TIAA-CREF representative will visit BNL on Friday, May 14, and Monday, May 24, to answer employees' questions regarding the TIAA-CREF retirement plan, such as TIAA and CREF differences, allocating funds between TIAA and CREF, options, flexibilities with TIAA-CREF, and retirement options. For a 45-minute appointment, call Valerie James, (800) 842-2733, Ext. 7980.

Attention to Detail Pays Off

the experiments to analyze.) By reaching 1,370 inverse microbarns, "We surprised ourselves," admits Roser. "We thought that we could attain this rate of luminosity improvement within a couple of years, but we didn't know that we would get there so quickly."

sending them to RHIC.

During the preparation for this year's NSRL runs, it was discovered that, where the beam comes from the Tandem into the Booster, there was a badly bent foil, which separates incoming beam from circulating beam. Replacing this septum foil resulted in a 25 percent improvement in the intensity of

forming an "electron cloud." But the electrons that hit the beam pipe do not only release more electrons, they also liberate gas into the beam pipe. Interactions between the beam and the gas limit the time the beam can be stored before its quality is deteriorated so much that it has to be refilled.

The solution: "more time

Inviting Visitors to BNL

When visitors come to the Lab, whether one or many, the person sponsoring them must complete a Visitor Notification Form and send it to the Safeguards & Security Division at least 24 hours ahead of time, if possible. In the case of a foreign national, notification should be started 30 days before the visit.

Access to BNL is controlled by permitting entrance only to those persons who have official business at the Lab and only to those visitors who are properly sponsored by a BNL employee or guest. So, anyone who is organizing a meeting, conference, or public event such as a concert, or who is expecting guests on site, must fill out the form.

The easiest way is to go to the BNL Home Page. In the left-hand side column, click on "Visitor/ Event Notification." Requests for individual visits and requests for properly approved events with multiple visitors are handled on separate forms but read the explanations on the webpage. If you need help in accessing or submitting these forms, call Safeguards & Security at Ext. 4271.

Arrivals & Departures Arrivals

/		
Bernd Foerster	Medical	
Levente Hajdu	Physics	
Michael Jensen Env. S	Sciences	
Gina Paveglio	NSLS	
Departures		

Keith Boone ITD
Katarina Leckova Medical
Daqi Li ES/WM
Salvatore Scarpitta Rad. Ctrl.

Can You Spare a Can?

Remember please bring in a can or two of food to put in the BNL Food Drive bin in your building. Your donations are needed so much.

Fidelity Investment Counseling, 5/11

A Fidelity Investment representative will be at the Lab on Tuesday, May 11, to hold sessions with individual employees interested in learning more about their retirement-savings and investment options.

Schedule one of the 45minute appointments by calling

Calendar

— TODAY, 5/7 —

Friday, 5/7

*BNL Career Network Group Meeting Noon, Berkner Hall, Room A. All are welcome. Cathy Wehrmann, Ext. 7823.

— WEEK OF 5/10 —

Mon.-Fri. 5/10-14

*RHIC & AGS Annual Users' Meeting See notice on page 1 and www.bnl.gov/ rhic_ags/users_meeting/.

Wednesday, 5/12

Rifle & Pistol Club Meeting

Noon, Conference Room, Bldg. 535. A guest speaker will talk about a wild boar hunt. Jim Durnan, Ext. 8236, durnan @bnl.gov; Rich Conte, Ext. 5741; or www.bnl.gov/bera/activities/rpc/

Universal Voltronics, CMCAMC Demo

10 a.m.-3 p.m., Berkner Hall. Represen-tatives from Universal Voltronics and CMCAMC will display new HV and CAMAC instrumentation and various new products. Bert Yost, (518) 569-3543.

— WEEK OF 5/17 —

Mon. 5/17 — Thurs. 5/20

*National Synchrotron Light Source Annual Users' Meeting

See notice on page 1 or go to http:// www.nsls.bnl.gov/users/meeting/

Wednesday, 5/19

Brookhaven Lecture

4 p.m., Berkner Hall. Paul Moskowitz, Nonproliferation & National Security Department, on "Protecting Our National Security: BNL's Contribu-tions." All are welcome.

Wed. 5/19 & Thurs. 5/20

*CFN Users' Meeting

See notice on page 1 or go to http:// www.cfn.bnl.gov/user/meeting/.

Thursday, 5/20

BERA Bridge Club

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

Saturday, 5/22

*'Blues Legends' Concert

8 p.m., Berkner Hall. Two blues leg-ends, David "Honeyboy" Edwards and Hubert Sumlin, and more. Buy tickets in advance at the BERA Sales Óffice for \$20; \$25 at the door. For more information, see story on page 4.

– WEEK OF 5/24 —

Monday, 5/24

IBEW Meeting (note new location)

6 p.m. Centereach Knights of Columbus Hall, 41, Horseblock Road, Centereach. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes regular business, committee reports, and the president's report.

— WEEK OF 5/31 —

Monday, 5/31

Memorial Day Holiday

The Lab will be closed in honor of Me-morial Day. No Bulletin will be published on Friday, June 4.

Wednesday, 6/2 National Bond and Trust Demo



(cont'd.)

The most important improvement that resulted in more and denser beam, interestingly enough, came about as a result of another ongoing program within the RHIC complex: the NASA Space Radiation Laboratory (NSRL) run.

Tandem to Booster Fix

Since 1995, NASA radiobiologists have been employing lowenergy beams of iron and silicon at BNL to simulate the cosmic rays encountered in space, with the goal of understanding and mitigating their risk to space travelers. That program now uses the Booster, which is the accelerator that accepts heavy ions from the Tandem Van de Graaff, in which they originate and are initially accelerated. After speeding them up further, the Booster injects the beam into the Alternating Gradient Synchrotron, which accelerates them even more before

beam delivered to RHIC.

Vacuum Improvements

With more intense beam available, the second most important improvement was an upgrade in RHIC's vacuum, which allowed the intense beams to be stored and collided. In theory, a vacuum is space in which there is no matter. In practice within RHIC, each of the two beams circulates within its own vacuum pipe, in which the pressure is far below atmospheric pressure so that the residual gas within the pipe interferes as little as possible with the beams.

The problem was that the intense beams could accelerate electrons, which are always present in the beam pipe. The accelerated electrons hit the beam pipe again and release more electrons, ultimately

baking and pumping," explains Fischer. This means that, before the run began, a "bake-out" was conducted whereby the sections of the vacuum pipe that operate at room temperature were heated up to 250° Celsius. That causes the pipe to "out-gas," or release gases, which are then pumped out so that they cannot later interfere with the beam.

Improving the Booster intensity and RHIC's vacuum aside, "There were no silver bullets," explains Fischer. "It was a successful team effort to bring about an assortment of small improvements — 5 percent here, 10 percent there that all added up very nicely. Thanks to just about everyone within the department for contributing to the run's success in one way or another." - Marsha Belford

(800) 642-7131.

Potluck Party

The Hospitality Committee welcomes Lab newcomers and BNLers at its potluck party on Friday, May 14, at 6 p.m. in the Recreation Hall in the apartment area.

Bring your family, friends, and your favorite dish to share for six people. Drinks and live piano music will be provided. For more information, contact Monique de la Beij, 399-7656.

Cafeteria Survey

In order to serve the Lab's food service needs better, the Staff Services Division and FLIK International ask all BNLers to take the online survey located at www.bnl.gov/ staffservices/foodservices/ foodservices.asp.

9 a.m.-2 p.m., Berkner Hall. Representa-tives from National Bond and Trust, a licensed issuing agent of the U.S. Treasury, will present BNLers with information about payroll-deducted savings bonds and will enroll those who are interested. Jane O'Malley, (516) 979-6970.

- WEEK OF 6/7 -

Thursday, 6/10

Costco Wholesale Club Demo

9 a.m.-2 p.m., Berkner Hall. Representatives from Costco Wholesale Club (Price Club) will present BNLers with a special offers, including a \$45 annual membership that includes 2 membership cards and an additional \$10 cash card. There will also be a raffle for a free one-year membership. Kendra, 366-1506.

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.

Tennis Reservations

Two tennis-court reservation systems will be in effect weekdays from May 3rd through October 29: 11:30 a.m. to 2 p.m., and 4:30 to 7 p.m. The rules for court use are posted on the bulletin board on the west side of the courts.

Under the advance reservation system A, three of the courts (courts 1, 2 and 3 on the south side of the wall) may be reserved for weekday play the day before play. If two players are not on the court within 15 minutes of the reserved time, the court reservation is forfeited and the reserver loses his or her right to reserve courts for one week. In other words, it is incumbent upon the reserver to cross out his/her name and make the court available for others if he/she cannot play. For this system, lunchtime play is limited to one hour for both singles and doubles.

For system A, reservations must be made on sign-up sheets, posted at the tennis courts, no sooner than noon on the day before play; Monday play may be reserved on the Friday before. The person who signs up must be one of the intended players and must include a legible last name and phone number. No one playing on a reserved court at noon may reserve a court until after 1:00, thus providing a one-hour window of opportunity for nonplayers to reserve a court. Additionally, no one may reserve a noon court on 2 consecutive days. Persons reserving a noon court for Friday may not reserve a noon court for Monday.

The on-court scheduling system B offers the two remaining playable courts to players who sign the blackboard at court side at the time of play, first come, first served. Under this system, lunchtime play is limited to 1 1/2 hours for both singles and doubles.

System A can be used only by Group 1 of the priority players listed below. System B may be used only by groups 1 and 2. Groups 3 and 4 may play during non-reservation times only:

- Group 1: Lab employees, including those with visiting and guest appointments, and BNL retirees
- Group 2: Lab employees playing with family members or personal guests
- Group 3: Immediate family members of Lab employees Group 4: Personal guests of Lab employees.

For more information call the Joe Carbonaro, Tennis Committee Chair, Ext. 5139, Frank Stubblefield, Ext. 4165, or Ken Perkins, Ext. 2147.

On-Site Service Station Tip of the Month: Timing Belts

A timing belt failure can be a serious problem — leaving a driver stranded and causing engine damage costing \$2,000-plus to fix in certain cars. Most vehicles require this service at 60,000 or 90,000 miles. If you are not sure when your vehicle's timing belt was last changed, the on-site service station, Upton Industries, Inc., invites BNLers to stop by and have them check with your vehicle's manufacturer for specifications. Contact the station at Ext. 4034.

Cafeteria Hours, 5/8

The Berkner Hall Cafeteria will be closed on Saturday, May 8, because BNL's Annual Elementary School Science Fair will be held there. Instead, the Center Club in the Brookhaven Center, Bldg. 30, will be open 7:30 a.m.-2 p.m. to serve a continental breakfast in the morning and cold sandwiches at lunchtime.

Attention: Dual Coverage **Participants** With CIGNA **Medical Coverage**

As a result of system changes at CIGNA Healthcare, there is a new process for submitting medical bills for payment. Effective immediately, you will be required to submit bills under your policy and your spouse's policy separately. Bills will no longer automatically be processed under the second participant's policy. Bills must first be submitted to CIGNA under the primary policy. Upon receipt of the Explanation of Benefits (EOB) from CIGNA, submit the claim and a copy of the EOB under the secondary policy. Claims for participants with Medicare coverage may require additional filings.

Detailed information regarding the submission of bills will be mailed to you in the near future. For more information, contact the Benefits Office, Ext. 2877 or 5126, or 1-800-353-5321.

'Blues Legends' Concert, 5/22

With David 'Honeyboy' Edwards, Hubert Sumlin Doug "Harmonica" McLean Blues Band, Kerry Kearney



concert featuring two blues legends - David "Honeyboy" A Edwards and Hubert Sumlin — will be held at Berkner Hall on Saturday, May 22, at 8 p.m. Long Island blues artists Doug "Harmonica" McLean and Kerry Kearney will perform with these two giants of the blues. Sponsored by the BNL Music Club and the Long Island Blues Society, the concert will be open to the public. All visitors to BNL age 16 and over must bring a photo ID.

Performing for 75 years, David "Honeyboy" Edwards, at age 89, is one of the few living original practitioners of the acoustic Delta bluesstyle guitar. Edwards has toured Europe and performed at the Chicago Blues Festival, and the San Francisco Blues Festival.

Born in Greenwood, Mississippi, in 1931, Hubert Sumlin played with his childhood friend James Cotton. In 1954, he joined the famous blues band, "Howlin' Wolf," and he remained the band's guitarist for 25 years. The late Stevie Ray Vaughan, famous blues guitarist, said, "Hubert is the heaviest, most original guitar player I've ever heard."

The Doug "Harmonica" McLean Blues Band will be backing Sumlin on stage. McLean has played the Long Island blues scene since the 1970s when he teamed with another blues innovator, Louisiana Red. A master of all styles of mouth harp, McLean has performed at BNL several times.

Kerry Kearney will be on hand to play with Edwards. Kearney has recently performed in two sold-out performances at BNL. Whether performing at the Lab, at the Riverhead Blues Festival, or at a small club, Kearney is always greeted with great enthusiasm for his unique slide guitar blues.

Tickets for the concert cost \$20 each when purchased in advance, and \$25 at the door. Buy tickets at the BERA Sales Office in Berkner Hall, weekdays, 9 a.m.-3 p.m.; at the Bluepoint Brewery (631) 475-6944; Mr. Beery's (516) 731-5979; Sound Beach Music (631) 476-3850; or Eastport Luncheonette (631) 325-8887. For more information, call (631) 344-3846.

Motor Vehicle & Supplies

03 VOLKSWAGON GOLF GL - 5spd, a/c, p/s, p/b, p/w, c/c, 2dr, blk., cd/tape, lg. trunk, 12K mi., \$10,980. Vasilii, Ext. 8209.

02 MERCURY MOUNTAINEER - a/t, a/c, p/s, p/b, p/w, blue, grey leather, 7pass., cd, awd, mint, 30K mi., \$20,000. Darlene, 924-2583.

01 FORD MUSTANG - a/t, a/c, p/s, p/b, p/w, V6, rem. start, abs, airbags, leather, convtbl, new tires, 37K mi., \$14,500. John, 584-0002. 01 MITSUBISHI GALANT GTZ - a/t, a/c, loaded, pwr. sunroof, abs, airbags, new tires & brakes, 18K mi., \$13,000. John, 226-8090. 01 YAMAHA ROADSTAR SILVERADO -1,600cc windshield, saddle bags, red/br. excel cond., 5K mi., \$8,000. Peter, 645-5844. 99 CHRYSLER CONCORDE - V6, 2.7L, low

mi., Lo-Jack security, many extras, gar., new tires, excel. cond., \$8,200. JoAnn, 924-4147. 96 AUDI A4 - a/t, a/c, p/s, p/b, p/w, vgd. cond. well maint., orig. owner, 112K mi., \$6,500. Sharon, Ext. 3217. 95 HONDA 750 NIGHTHAWK - 5spd, sap-

phire blue metallic, full Targa, new batt., runs well, \$2,750. Ed, 765-9521.

95 SATURN SLI - 5spd, a/c, pwr sunroof, dark blue, all serv. records, runs well, 158K 88 CHEVROLET CELEBRITY - a/t, p/s, p/b, am/fm, new batt., 40K mi., \$550. Tirre, Ext. 3288 or 344-1018.

88 323 MAZDA - 5spd, a/c, everything works, some rust, gd. on gas, AnnMarie, Ext. 7007, 473-9678, after 6 p.m.

88 PONTIAC FIREBIRD FORMULA - a/t, a/c, p/s, p/b, p/w, new tires, T-tops, 102K mi.,

\$2,050. Francine, Ext. 3381, 744-4061. 87 CHEVY MONTE CARLO - a/t, lux. sport, racing mot., 540 hp, 7K mi., \$4,800; 85 Chevy S-10, a/t, newly painted, \$6,000. 821-9073.

CAP - grey, for '01 Dodge Dakota Quad cab truck, 64"w x 67"l, \$400. Jim 289-0967.

BUMPER - '94-'98 front Mustang GT bumper, blk., \$100. AnnMarie, Ext. 7007, 839-5741. RIMS - '03 Toyota OEM, 16", 5-spk. alum. alloy whis., 6-hole pattern w/ P265/70R16 Dunlop tires, \$350/obo. Frank, Ext. 5131. TOOL BOX - Weather Guard steel cross-bed w/2 wing type locking drs. for stepside or mini pick-up, ask \$100. 878-8302.

Boats & Marine Supplies

38' BERTRAM - '65 Sports Fish-2, 6V53's Detroit Diesel. 3 steering stations, appraised at \$80,000, must sell, \$65,000. Bill, 331-8882. CRUISERS '88 Holiday 5

DINING ROOM - 3-leaf maple table w/pads, chairs, closet-hutch, buffet table & tea serv. wagon, \$800. Bette, Ext. 4117, 589-8331. DRESSER - w/2 mirrors, armoire, \$350; 2 nightstands, \$150; paintings, \$75-\$100; rugs, more. Upendra, 444-0195, 751-4539. ENTERTAINMENT HUTCH - Brovhill

box, more, \$250-\$350/obo. Frank, Ext. 5131. MICROWAVE OVEN - 1kw pwr., white midsize, convenience controls, removable turntable, used 9 mos., \$25. Marco, Ext. 2110. SOFA - 2-yr.-old sleeper, like new, mauve, comfortable, thick mattress. Theodore, Ext.

Ext. 8209.

screen, brand new, \$100. Richard, Ext. 3239.

Tools, House & Garden

EDGER - Jacobson, B/S eng., vgd. cond., runs well, new belt & blade, \$60. Edgar,

Free

MEDICINE CABINET - recessed type, sliding mirrors, gd. cond., Subhash, 696-4608.

Miscellaneous

DOOR KNOBS - polished brass, 3 baths, 2 bdrms, 3 halls, all, \$45; Moen chrome faucets, single level, 3/\$25 ea. Bill, 452-1726. JEWELRY - Vintage rhinestone, many pieces, simple to ornate for proms, weddings. Linda, 924-7476.

PATIO DOOR - Anderson 6' slider, white, new cond., \$300/obo. Emil, 921-5189.

PHOTOGRAPHS - view my photos for sale at www.jmjohnson.com or at the BERA store, Berkner Hall. Jim, Ext. 2238.

UNIQUE PIÑATAS - all occasions & characters, cartoon, Disney, Sesame Street. Donna, 821-0359.

STOVE - wood burning cast iron, all nighter, u-pick-up. Gary, Ext. 8580 or 821-7952. SUIT JACKETS - Brooks Brothers, wool, \$10: London Towne trench coats w/lining, \$10; both

men's sm., never worn. Peter, Ext. 2913. RADIO FLYER - Town & Country wagon, never used, must sell. \$50. Norm, 874-2529

or Ext. 2950.

Sports, Hobbies & Pets

YAPANK - Ig., newly decorated & fully furnished studio apt., priv. home, sep. ent., 4 mi. from BNL, \$700/mo/incl. all. Camelia, 924-3049.

YAPANK - 2-bdrm house, priv. yd., suitable for couple or 2 singles, \$1,200/mo. + util. Sharon, 924-5505.

ARUBA - Marriott t/share mstr. suite. 2-bdrm. lockoff, q-bed, sofa bd, sleeps 4, kit., Ir, dr, fb, \$1,200; Studio, q-bed, sofa bd, sleeps 4, fb wet bar, \$700, wk. 11/5-12. 467-5853.

CANCUN, MEXICO - 2 bdrm. villa w/pool & ocean view, Thanksgiving wk., 11/20-27 \$1,200/wk. John, 543-7065.

KISSIMMEE, FL. - 5 bdrm., 4 baths, priv pool/ spa, tennis courts, 3 mi. to Disney, \$800-\$1,150/wk. Carrie, 878-6968.

WILLIAMSBURG, VA - 2-bdrm condo, full kit., min. fr. Busch Gardens, Col. Wmsburg., Water Country, close to Washington, pool, golf, 6/26-7/3, \$750. MaryAnn, Ext. 5124. LAS VEGAS, NV - timeshare, 7/11-18, 1 bdrm, condo in Polo Towers, sleeps 4, on

strip next to MGM Grand, walk to all major casinos, \$300. Chuck, Ext. 2705. For Sale

RIDGE - 4-bdrm Colonial + M/D ground flr. apt., 3.5 bath, fp, cac, igp, igs, fin. bsmt., 345

Fontana, 2pc, 50.5"x26"x54.5"h, VCR/DVD

5645 SOFA BED - Italian leather, high back. convrts. to full bed, excel. cond. Vasilii,

TV STAND - Ikea, Benno, beech veneer, \$50; 72-bottle Ikea wood wine rack, unfinished, \$30. Jim, Ext. 7607 or 821-8594. WINDOW - white replacement, 32"x38" double hung, clear Thermopane glass, full

mi., \$1,200. David, 258-6087

94 DODGE DAKOTA - 5spd, cap, bedliner, very clean in/out, runs well, looks great, high hway mi., \$1,500. Theodore, Ext. 5645.

94 FORD CUSTOM VAN - a/t, a/c, p/s, p/b, p/w, capt. seats, TV, VCR , rear bed, fr./ rear a/c/heat, radio, 52K mi., \$7,000. 698-2521.

94 JEEP GRAND CHEROKEE LAREDO -6cyl., 4L, alarm, extras, gar., orig. owner, vgd. cond., \$4,200. JoAnn, 924-4147.

92 FORD TAURUS GL SEDAN - a/t, a/c, p/s, p/b, p/w, runs well, gd. cond., 135K mi., \$1,200. John, Ext. 8082, 929-8204.

92 INFINITI M30 - a/t, a/c, p/s, p/b, p/w, c/c, leather, moonroof, orig. owner, 110K mi., \$3,500. Herb, 928-0297.

91 BUICK LESABRE - a/t, a/c, p/s, p/b, p/w, alarm sys., gd. tires, gd. cond., 93K mi., \$2,000. Katherine, 981-5993.

91 FORD E-250 VAN - new batt., starter, & rebuilt tranny, ladder racks, shelves, runs well, \$500. Rich, Ext. 5319.

90 TOYOTA CAMRY - a/t, a/c, p/s, p/b, p/w, overall gd. cond., runs well, 135K mi., \$1,650. Jim, Ext. 2014.

Mercruiser I/O, full galley, shower, sleeps 6, excel. cond. in/out. John, 543-7065.

22' CATALINA - furling jib, spinnaker, 7.5 motor, \$4,200. Meyer, Ext. 2169.

19.5' WELLCRAFT 196 - '94 cubby cabin, 210hp Merc. I/O, runs well. incl. trailer w/electric winch. \$6,900. Tom, 878-6417.

18' BAJA ISLANDER - '86 w/trailer, I/O 3.7 Merc., \$2,000. Gary, Ext. 8580 or 821-7952.

CHAIRS - \$30° Engine Flushing Kit - compati w/inbrd. dir. drv., outdrv. w/o int. impeller pump, onbrd. generators, new, \$30. Penny, 467-8297.

OUTBOARD BRACKET - alum 23" setback ask \$100; Hydraul. steering cyl., hynautic side mount, w/instruc., ask \$50. 878-8302.

OUTBOARD ENGINE - 9.5hp Johnson, excel. cond., short shaft, \$250. Chris, Ext. 2094 or 929-5008.

Furnishings & Supplies

DEHUMIDIFIER - Kenmore, 40 pts./day, works well, \$55. John, Ext. 4028. DEHUMIDIFIER - gd. cond., \$75. Joe, Ext. 3787 or 929-8321.

Ext. 2262.

LAWN MOWER - 4 hp, 22" cut, like new, \$75. Chris, Ext. 2094 or 929-5008.

LAWN TRACTOR - Sears, 11hp, 36" cut riding, elect. start w/owner's manual, ask \$250. 878-8302.

POOL - 12' easy set, 3 yrs old, excel. cond., incl. pump, ladder, skimmer & cover, \$100. Lynn, 821-1271.

Audio, Video & Computers

DVD PLAYER - Sanyo, \$40, Infinity video 1 wide ctr. channel spkr, \$60, never used. Ext. 3747 or reddy@bnl.gov.

Lost & Found

LOST - engagement ring, gold baguette, high stone diamond, Tiffany style. Carol, 284-3387.

Community Involvement

OUTDOOR ART SHOW/SALE - Sunday, 5/23, 10 a.m.-4 p.m., William Miller House, 1720 North Country Rd., Miller Place, hosted by the North Shore Art Guild. Jim, Ext. 2238.

26' CAMPER - '98 Starcraft pop-up, sleeps 6, heat, self cont., shower boat rack, awning, \$4,500. Lawrence, Ext. 7460, 874-2789.

GOLF BALLS - clean, used, \$15 per 100. Pete, Ext. 5114.

HOME GYM - Weider, model 850, multiple workout stations, like new, \$100/obo. Mary, Ext. 2815 or 472-4087.

For Rent

BELLPORT VILLAGE - Ig. 1-bdrm. apt., Ir, dr, full kit. & bath, village amenities, no smkg/ pets, \$1,200/mo, incl. util. & cable. Pat, 744-2095 after 6 p.m.

EAST SETAUKET - 5-bdrm., 3-bath, 3-level house, sliding dr. leading to wraparound deck. cul-de-sac, all hardwood flr, 2.5 car gar., 3VSD, \$2,400/mo. Mei Han, 689-6495.

SELDEN/CORAM - 1 bdrm., eik, lr. priv. ent. w/yd., cable & util incl., no smkg/pets, \$950 + 2 mos sec. Arthur, 698-7564.

SHOREHAM VILLAGE - 5 bdrm., 3 baths, f/p, det. gar., wraparound porches, beach access, avail. July, 2 yr. lease pref., \$3,500/mo., Michael, Ext. 2927 or farnitano@bnl.gov.

before 8 p.m.

NEW PORT RICHEY, FL - 2 bdrm., 2 bath, 2 car gar., 20'x25' family rm., cath. ceilings, f/p. furn., all appl., golf, pools & more. \$165,000. Luke, 928-9136.

Wanted

COMPUTER - wanted for disabled person, free, will only be used for internet, gd. working order, pls. Mary, Ext. 6344.

HIGH SCHOOLER - or someone to weed garden, mow lawn, Bellport. Ext. 2346.

POND FISH - have extras? I'll take them. Angela, 475-2946.

RESEARCH VOLUNTEERS - men and women who smoke cigarettes, ages 18 and over, are needed for PET study. Strictly confidential, fee provided. 344-5015.

SHOTGUN - model 870 in 410Ga,. Joe, Ext. 3783 or 929-8321.

TREADMILL/EXERCISE BIKE - looking for elec. Bruce, Ext. 5229.

Services - The Bulletin web-site (see below) lists services provided by employees.

Bulletin

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