Particle Post August 2011

"I can't change the direction of the wind, but I can adjust my sails to always reach my destination."

~Jimmy Dean

Previous issues October 2004 GO

Note from the Chair

The recent RHIC run was reviewed at the RHIC retreat, highlighting the new record luminosities achieved for both gold-gold and proton-proton collisions but also the substantial problems with the reliability of our equipment. Even after discounting the lengthy downtime from the RHIC cryo breaker failure and the repair of a 13.8 KV feeder cable the uptime of the RHIC facility was lower than in previous years. Several additional factors such as the larger than normal number of snowstorms and the lengthy troubleshooting of the noise problem of the RHIC abort kicker contributed to the downtime as well as a longer repair time for the RHIC power supplies. We have to redouble our efforts to identify and address reliability issues with our equipment.

Although it seems that summer just started it is soon time to get ready to start EBIS and Booster operation during September. Thanks to the great

efforts by many groups the brand new Main Control Room on the second floor of 911 will be ready for this next NSRL run.

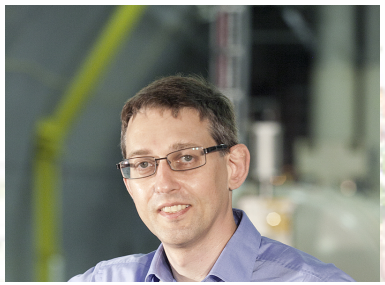
Administration

Barely one month after receiving final budget guidance for FY 2011, it is time to turn our attention to the financial outlook for FY 2012 which begins on October 1, 2011.

In all likelihood, we will begin the new year on a Continuing Resolution during which DOE will provide periodic funding installments as a percentage of the FY 2011 budget. For example, a Continuing Resolution through November 15th would typically provide funding for 46 days, approximately 11.5% of the prior year's funding. The difficulty for RHIC is that monthly costs vary significantly throughout the year due largely to the incremental cost incurred to fill the ring with helium and power the compressors in the cryogenic facility. It is the incremental cost to commence operations that drives the need to carry forward unencumbered funding into each new fiscal year. The department carried forward substantial funding in FY 2009 and 2010, but has consumed considerable reserves in FY 2011.

Therefore, you are again urged to *make every purchase count. Buy only what you need to support critical work scope for which purchasing now is necessary to maintain schedule and achieve programmatic milestones.* Additionally, Thomas has strongly encouraged C-AD personnel to reduce vacation carry forward to a maximum of 20 days by September 30, 2011 which will reduce the labor cost charged to the Department.

Accelerator Division



The annual RHIC Retreat, reviewed last year's performance and the planning for the RHIC Run-12. Last year RHIC ran with polarized protons at 250 GeV, and Au-Au at 9.8, 100, and 13.5 GeV/nucleon. All peak performance goals were reached with protons, and exceeded with ions. However, during the polarized proton operation an unusual rise in downtime was observed. While 2 weeks could be attributed to the a breaker opening and shutting down, and the failure of an AGS power cable, no common theme could

be identified for the remaining increase in the failure rate.

EBIS commissioning with Au beam is progressing over the summer, and last week the design electron current of 10 A was exceeded.

The new MCR is nearing completion with the installation of screens, computers, and the access control racks. We will use the new MCR for the first time for the NSRL run starting in mid-Sep.

Experimental Support & Facilities Division

We are now well into the summer shutdown preparing for Run 12. Our present plan is to begin Run 12 about 1 January 2012 and run until the end of June, subject of course to budget limitations. The STAR experiment will add a new detector system during this shutdown, something called a Forward GEM Tracker (FGT) that will enable the experiment to key on W mesons . This will require the STAR detector solenoid to be moved from the collision hall to the assembly building, something we have not done for a few years and a delicate operation. The PHENIX experiment successfully commissioned a new silicon based vertex detector (VTX) system during Run 11. During this shutdown period the VTX detector will be removed for maintenance and put back in together with a new forward vertex detector system (FVTX). In addition, the last complement of the resistive plate chambers (RPC's) will be installed and possibly more shielding to alleviate issues with background in the muon detector arms.. We continue to support the build-up of the new A_NDY experiment. We are also helping with several other projects for the department including the new MCR, stochastic cooling, eLens, 56 MHz cavity, ERL etc.

The summer shutdown for the Booster and EBIS injector will end in September since the next round of NSRL experiments will begin near the end of September and run until about Thanksgiving. This will be the first time we will be using our new MCR to control and monitor the machines.

Accelerator R&D Division

eRHIC is the BNL's vision for the future high-energy high-luminosity electron-

ion collider, where a 30 GeV energy-recovery linac collides polarized electrons with various hadrons species circulating in a RHIC hadron ring. Such electron-hadron collisions would serve as a high precision microscope capable of revealing deep secrets and processes of Quantum Chromo-Dynamics.

On August 1-3, the eRHIC's conceptual accelerator design was reviewed by the committee comprised of world leading accelerator experts from around the world: Frank Zimmerman (CERN, chair), Jean Delayen (Old Dominion University), George Ganetis (BNL), Hsiao-chaun Hseuh (BNL), Valery Lebedev (FNAL), Mathew Poelker (JLAB), Eduard Pozdeyev (FRIB/MSU) and Peter Wanderer (BNL).

During two days twenty-five presentations and discussions covered various aspects of accelerator physics and R&D incorporated into eRHIC conceptual design. At the closeout the committee shared with the eRHIC team that it was "very impressed by the ingenuous design of eRHIC", and, most importantly, provided its expert opinion on further design improvements.

The eRHIC team is now turning its attention to a new challenge – the costing of this new collider.

The SRF Group finished conditioning of the 500 kW Fundamental Power Couplers of the SRF gun, going in pulsed mode up to 2 ms at 100 Hz, and reached 250 kW pulsed at different reflection phases, as well as 125kW CW mode. The SRF gun hermetic string was delivered to BNL after processing and assembly at Jefferson Laboratory. The gun will now be assembled into its cryomodule. Testing of the ERL power supplies has started.

Operations

The CAD complex in will remain in shutdown for the month of August. Most of the planned major work is well under way. Ion the Booster, refurbishment of the Band II RF system, vacuum upgrades and EBIS to Booster transfer line modifications are in process. Replacement of Sextupole magnets in the AGS ring is nearing completion while a survey of the ring is ongoing.

Major projects in and for RHIC are progressing. Work on the RF and stochastic cooling systems, e-lens infrastructure, instrumentation, cryogenics, vacuum and others is progressing well.

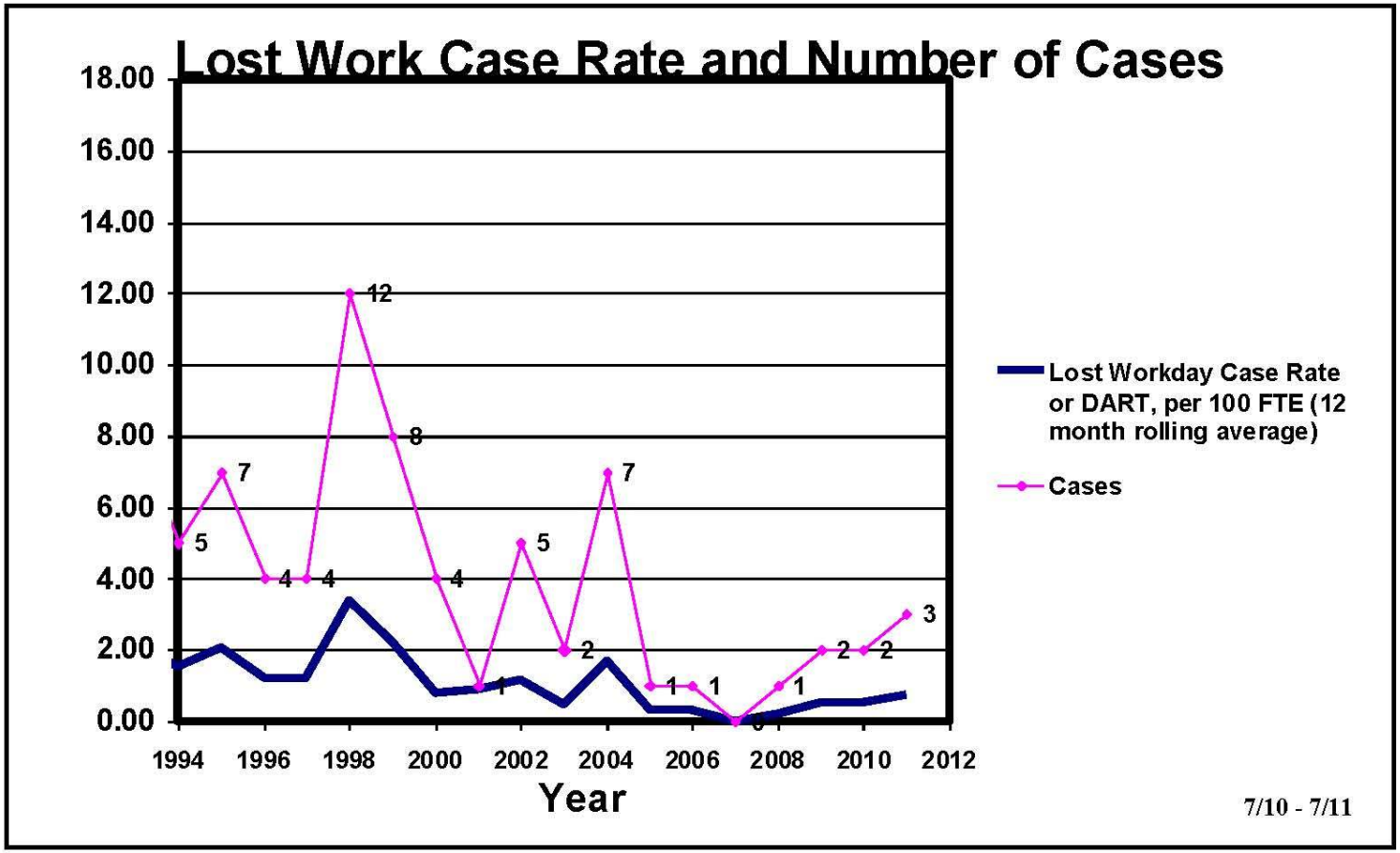
EBIS commissioning has resumed following maintenance and work on the source's electron gun. This work will continue throughout the shutdown

and fall NSRL run.

Booster Start up for NSRL will commence next month. A schedule detailing startup activities is available on the Maintenance Support webpage.

For updates on shutdown progress see: Shutdown Progress

Safety Stats



C-AD Occupational Injury

Statistics

	For Year* 2010	For Year* 2011
First Aid Cases	5	2
Recordable Cases	2	2
Lost Work Cases	1	2

* Calendar Year through 7/11

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

EXCHANGE DATE: FRIDAY, September 2, 2011

Pete Cirniglario

Arrivals

Jin Dai joined the department on July 15. He is collaborating with Ilan Ben-Zvi in the Accelerator R&D Division.

Eric Riehn joined the department on August 1. He is working with Ilan Ben-Zvi in the Accelerator R&D Division.

WELCOME!

Student Departures

Aubrey Campbell, Preinjector Systems Group will be leaving August 12.

Jeremy Feinstein, Controls Systems Group will be leaving August 12.

Chris Galarraga, Controls Systems Group will be leaving August 12.

Genevieve Gish Allouche, Preinjector Systems Group will be leaving August 12.

Kendra Jones, Controls Systems Group will be leaving August 12.

Drew Kinsey, Preinjector Systems Group will be leaving August 19.

Kyle Kulmatycski, Communications and Electronic Support will be leaving August 12.

Athena Marneris, Controls Systems Group will be leaving August 12.

Jonathan Pai, Collider/SRF Mechanical Group will be leaving August 12.

Theodoro Samms, Electrical Systems Group will leave on August 12.

Amit Shah, Controls Systems Group will be leaving August 12.

Francis Smith, Preinjector Systems Group will leave on August 12.

Matthew Steski, Preinjector Systems Group will be leaving August 12.

Brian Streckenbach, Mechanical Systems Group will leave on August 26.

Steven Trabocchi, Mechanical Support Group will be leaving August 12.

Stephen Tuozzolo, Accelerator R&D Division will be leaving August 19.

Ryan Welsch, Controls Systems Group will be leaving August 12.

Xinyi Xie, Experimental Support & Facilities Division will be leaving August 12.

Xiao Xu, Electrical Systems Group will be leaving August 12.

Don Yu, Controls Systems Group will be leaving August 12.

Vladislav Zakharov, Preinjector Systems Group will be leaving August 12.

Departures

Christopher Dudley, Cryogenic Systems Group will leave on August 12.

Yann Dutheil, Accelerator Physics Group left on July 29 but is expected to return in October.

Yury Filatov, Accelerator Division will leave on August 15.

Andy McNerney, Preinjector Systems Group will retire on August 19.

Ryoichi Miyamoto, LARP Group will leave on September 30.

GOOD LUCK!

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

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

C-AD Service Awards July

20 years	George Mahler Loralie Smart
10 years	Margaret Harvey

Congratulations!

DID YOU KNOW

Masahiro Okamura (Preinjector Systems Group) has received notification that he has won the 2011 Brightness Award, given for "The Ion Source Prize will be presented for an outstanding recent contribution to the fields of ion source physics and technology". This award is given every 2 years, and he will officially receive the award at the International Conference on Ion Sources, which is held in September in Sicily. The award is sponsored by Bergoz.

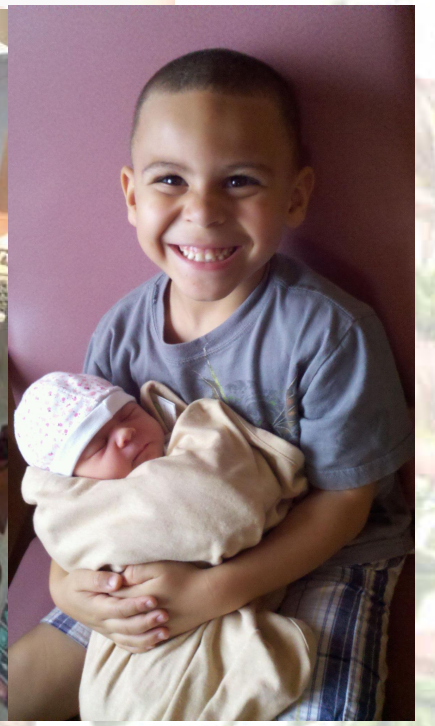
Congratulations to Masahiro for a great job!!

Francis Smith, a C-AD GEM fellow working with Masahiro Okamura (Preinjector Systems) for the summer was recently selected as one of eight finalists from BNL to present his summer research to The National GEM Consortium at the 35th Anniversary and Gala on August 3 to August 5. He will compete against other GEM fellows from all over the nation.

The National GEM Consortium is a unique and powerful connection to a national network of universities and employers. This partnership promotes the participation of under represented groups in post-graduate science and engineering education and technical workforce. The employees shaping our nation's ability to remain a global leader in innovation and economic prosperity must fully utilize the talents of all Americans and reflect the country's changing demographics.

The mission of The National GEM Consortium is to enhance the value of the nation's human capital by increasing the participation of under represented groups (African Americans, American Indians and Hispanic Americans) at the master's and doctoral levels in engineering and science.

Gladys Blas, Chairman's Office, recently became a grandmother for the second time, this time to a beautiful, healthy girl, Alyssa Marie, born on August 3, 8 lbs 6 oz, 20 inches. Here is also a picture Gladys' first grandchild, big brother Jayden who will turn 4 in September.



Congratulations!!

July 29, 2011

In Memoriam: John Marburger

John H. Marburger, III, February 8, 1941 – July 28, 2011

Former Brookhaven National Laboratory Director John ("Jack") H. Marburger III — a physicist who also served as President of Stony Brook University, Science Advisor to the President, and Director of the Office of Science and Technology Policy — died at his home in Port Jefferson, NY, on July 28, 2011, after four years of treatment for non-Hodgkin's lymphoma.

Under his leadership at Brookhaven, the Laboratory commissioned the Relativistic Heavy Ion Collider (RHIC)

and advanced a range of scientific programs and industrial partnerships, achieved ISO14001 certification of its environmental management system, and established a Community Advisory Council that fostered significantly improved support among the Lab's neighbors and other stakeholders.

"Jack Marburger was an inquisitive thinker and a champion of Brookhaven Lab's research," said Sam Aronson, current director of the Laboratory. "Throughout his long and fascinating career, his finest qualities included his ability to listen and to find common ground among people with very different points of view. He led Brookhaven Lab through one of the most challenging times in its history, restoring public trust and putting in place policies of openness, inclusion, and environmental stewardship that still guide us today.

"Jack was an expert in bringing people together — even in his final weeks and days, he dedicated his time to enhancing the relationship between Brookhaven and Stony Brook University through strategic collaborative initiatives. His calm, reasoned demeanor, elegance, and bright smile will be missed by all."

Mike Holland, manager of the Department of Energy's Brookhaven Site Office, added, "Jack Marburger's contributions to science and to society were generous and profound. His vision, leadership, and gentle manner will be missed."

Background in Physics

John Marburger was born on Staten Island, N.Y., on February 8, 1941, and grew up in Maryland near Washington, D.C. He earned a bachelor's degree in physics from Princeton University in 1962, and worked for a year at Goddard Space Flight Center before returning to school to earn a Ph.D. in applied physics from Stanford University in 1967.

Marburger joined the faculty of the University of Southern California (USC) in 1966, as a Professor of Physics and Electrical Engineering, eventually becoming Chair of the Physics Department and then Dean of the College of Letters, Arts and Sciences. While at USC, he contributed as a theoretical physicist to the rapidly growing fields of nonlinear optics and quantum optics, subjects transformed by the invention of the laser in 1960. He was a co-founder of the university's Center for Laser Studies, a consultant at Lawrence Livermore Laboratory on high power laser phenomena, and a frequent public speaker on science, hosting a series of educational programs called "Frontiers of Electronics" on CBS television.

Growth at Stony Brook

In 1980, at age 39, Marburger came to Long Island to become the third President of Stony Brook University. During his tenure, the university's federally sponsored scientific research grew to exceed that of all other public universities in the northeastern U.S. The University Hospital opened during this time, and

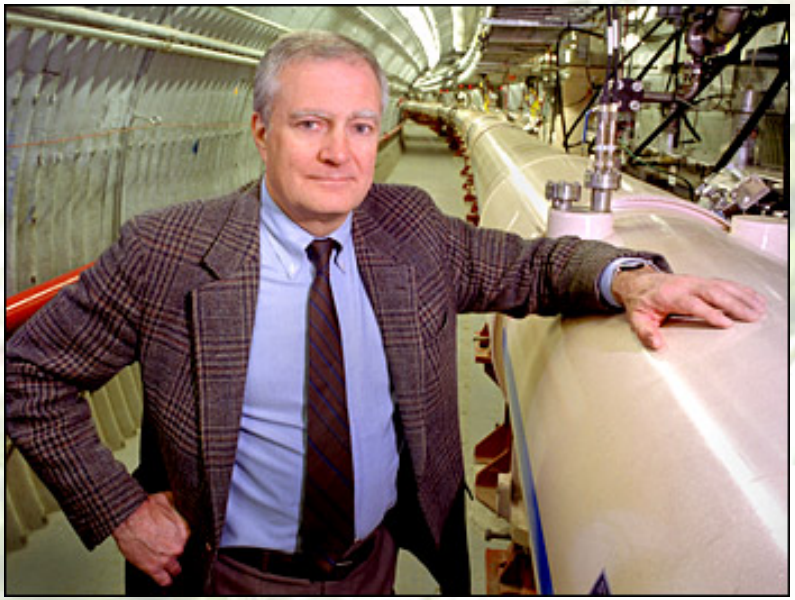
biological sciences became a major strength of the university.

During his presidency at Stony Brook, Marburger served on numerous boards and committees. He chaired the New York State Governor's Commission on the Shoreham Nuclear Power Plant and the 80-campus Universities Research Association, which runs Fermi National Accelerator Laboratory and operated the former Superconducting Super Collider Laboratory during the lifetime of that project. He also served as a trustee of Princeton University and a trustee or director of many other organizations.

In 1994, Marburger stepped down from the presidency, becoming a member of Stony Brook's faculty and resuming research in optical science as a professor in Stony Brook's departments of Physics and Electrical Engineering.

Challenges at Brookhaven

In January 1998, Marburger was named the first president of Brookhaven Science Associates (BSA), which made a successful bid to manage Brookhaven Lab for the U.S. Department of Energy, replacing Associated Universities, Inc. Two months later, he became the Laboratory's first director under BSA.



John Marburger in the tunnel of Brookhaven's Relativistic Heavy Ion Collider in 2000.

As Brookhaven's director, Marburger was faced with the challenge of restoring the local community's trust in the Laboratory after legacy environmental problems, including a long-term leak of tritium from the Lab's now closed High Flux Beam Reactor, came to the fore. He played a significant role in the Lab's environmental restoration, and he successfully rebuilt the Lab's reputation as a responsible environmental steward. Under his leadership, nine internal Laboratory organizations achieved ISO 14001 registration, an internationally recognized standard of excellence in environmental management. Further, he was a strong advocate of community involvement and transparency as a way to foster better relationships with the Laboratory's neighbors and stakeholders.

Marburger also presided over numerous groundbreaking scientific advances at the Lab, including commissioning of the Relativistic Heavy Ion Collider, the Laboratory's world-class accelerator, which produced intriguing results in record time. He also expanded a program in medical imaging and neuroscience that has gained worldwide recognition for studies of how various diseases, aging, and addictive drugs affect the brain. Recognizing the importance of industrial partnerships, Marburger also placed more emphasis on Brookhaven's technology transfer program.

Achievements as Science Advisor

Marburger's eight-year term as Science Advisor to President George W. Bush and Director of the Office of Science and Technology Policy began immediately following the terrorist attacks of September 11, 2001. Among his significant achievements were helping to establish a science agency within the Department of Homeland Security and working to prevent the reaction to 9/11 from undermining U.S. participation in global science. He also worked to preserve independence in Internet governance, freeing up large blocks of the broadcast spectrum for commercial wireless applications. In addition, he re-oriented the nation's space policy following the crash of the Columbia space shuttle in 2003.

Marburger played a significant role in international negotiations on climate change that would form the basis for U.S. climate policy. Further, he played an important part in developing the president's American Competitiveness Initiative and energy-related goals, including the U.S. re-entry into a project to build a fusion reactor, the International Thermonuclear Experimental Reactor. Serving the nation at a time of deep ideological divisions, Marburger sought to objectify decision-making in science policy through a movement known as the "science of science policy," which won international recognition. At the end of the Bush presidency in 2009, Marburger was longest-service science advisor in history.

Return to Stony Brook

Marburger returned to Stony Brook University as a physics professor in 2009. The next year, Stony Brook's new president, Samuel Stanley, asked him to take on the job of Vice President for Research. He retired for

health reasons on July 1, 2011.

The author of numerous papers in the area of non-linear optics and quantum electrodynamics, Marburger co-edited ***The Science of Science Policy: A Handbook***, which was published this spring (2011) by Stanford University Press. In September 2011, Cambridge University Press will publish his book on quantum mechanics: ***Constructing Reality: Quantum Theory and Particle Physics***.

Marburger is survived by his wife, Carol Preston Godfrey Marburger of Port Jefferson, NY; his son John and daughter-in-law Marianne D'Amato of Annandale, Virginia; his son Alexander and daughter-in-law Tracy Lampula of Jamaica Plain, Massachusetts; and his grandson Ian, of Annandale, Virginia.

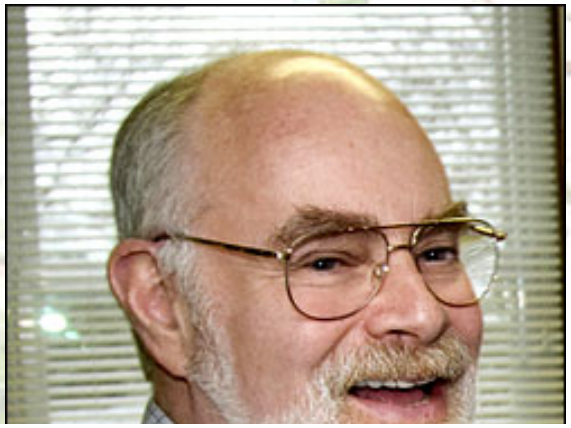
In lieu of flowers, the Marburger family requests that memorial gifts in Jack's name be directed to the John H. Marburger, III Memorial Fund. Please contact the Office of Advancement at (631) 632-6300 for information.

A memorial service will be held at Stony Brook University in the fall.

See also: Message to the Stony Brook University community from President Samuel L. Stanley Jr.

By Diane Greenberg | August 4, 2011

In Memoriam: Michael Marx



Michael Marx, long-time Brookhaven Lab (BNL) and Stony Brook University (SBU) physicist and SBU's Associate Vice President for Brookhaven National Laboratory Affairs, died at his home on August 2.

Since 2008, when he assumed the role of liaison between SBU and BNL, Marx put numerous programs in place to strengthen the relationship between the two institutions. His achievements included arranging for BNL staff to receive the same benefits as Stony Brook staff when using SBU facilities; enhancing communications between the Lab and SBU, resulting in more visibility for both; and, most recently, working on a joint BNL-SBU Center for Accelerator Science and Education and several other strategic initiatives still in development.

BNL Director Sam Aronson commented on Marx, "His dedication to the SBU/BNL partnership knew no bounds, and he brought a wellspring of ideas to the discussion. He was a valued friend to the Lab community and will be missed."

"He had a love for science, which was evident when I worked with him at Brookhaven," said Deputy Chair of BNL's Physics Department Howard Gordon. "He was particularly dedicated as an ambassador for both the Laboratory and Stony Brook University, forging new connections between the two institutions."

Another colleague at BNL, Associate Chair for High-Energy Physics Laurence Littenberg, said, "Mike was a most valued friend and collaborator. He had a rare combination of insight, imaginativeness, and resourcefulness, and was a pleasure to work with. His loss leaves a big hole personally and professionally."

After earning a B.S. in physics from City College of New York in 1967 and a Ph.D. in physics from the Massachusetts Institute of Technology in 1974 while performing his thesis research at BNL, he joined the Laboratory's staff as an assistant physicist in 1975. At BNL, he worked on numerous physics experiments, including kaon-decay experiments and neutrino studies.

He joined the SBU faculty in 1980, but he continued to collaborate closely with BNL scientists and other physics institutions on numerous projects. He was deputy spokesperson and co-initiator of the groundbreaking DZero experiment at Fermi National Laboratory that was successful in finding the top quark and achieving other significant physics results. He also developed an experimental program for

the Superconducting Super Collider Laboratory before the funding for the project was cancelled in 1993.

In 1994, Marx became SBU's Associate Dean, Physical Sciences & Mathematics, and, from 1996 to 2000, he was also the Deputy Project Director of the PHENIX Experiment during the construction phase of the Lab's Relativistic Heavy Ion Collider. From 2001-2005, Marx was project manager of the KOPIO Experiment at BNL, part of the Rare Symmetry Violating Processes Project (RSVP). Although RSVP was cancelled in 2005, a continuing legacy is the MARIACHI (Mixed Apparatus for Radar Investigation of Cosmic Rays of High Ionization) Teaching Center at SBU, which Marx developed with BNL's Helio Takai. The center unites physics teachers, students, and scientists to explore cosmic ray physics using advanced computing tools.

From 2006 to 2008, Marx was SBU's Associate Dean for Operations & Budget, College of Arts & Sciences, before taking on the full-time position as the liaison between BNL and SBU. Marx was a Fellow of the American Physical Society.

Marx's survivors include his wife, Lynn Liebert Marx; children Vincent, Teresa, Clara, Rachel, Miriam and Richard; and his sister, Susan Tabin.

The Marx family welcomes visitors while they are sitting Shiva, on Saturday, August 6, from 8 p.m. to 10 p. m.; Sunday, August 7, from 1 p.m. to 8 p.m.; and Monday, August 8, from 4 p.m. to 8 p.m. at their home, 9 Waterview Drive, Port Jefferson.

A memorial scholarship has been established in Michael Marx's name. It will help to support Stony Brook physics graduate students who elect to conduct their research at Brookhaven National Laboratory. Donations can be made payable to the Stony Brook Foundation and mailed to: Michael Marx Memorial Fund c/o Brian Woods, 488 Administration Building, Stony Brook University, Stony Brook, NY 11790.

FUN TIME

HOW LONG WILL YOU LIVE ?

This is pretty interesting. Watch the age prediction on the top right of the screen change as you answer the various questions.

Click here: http://www.nmfn.com/tnetwork/longevity_game_popup.html

The Food Pantry needs our help…

If everyone can bring in at least one non-perishable food item, this would help the local food pantries in our area. There are so many families who are in need of food and depend on their local food pantry to have at least one meal a day. With the food supply so low, the volunteer's who help out at our local food pantries can't help those in need. So please……bring whatever you can to replenish the food supply for those in need.

Your donation of any non-perishable food item can be left in the box marked "Food Drive" located in the 911A Lobby. Your continued support is appreciated.

Thank you.

ALUMNI NEWS: AGS/RHIC/C-AD RETIRED CROWD - We'd enjoy hearing from you and what you have been up to. Please send your notes to pmanning@bnl.gov

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

We've heard that Fred Kuehl has stage 4 cancer in his stomach, lungs and brains. He is in hospice care. I know many of you were able to see him recently at our annual BBQ, he didn't appear ill at all then. If you would like to let him know you are thinking of him you can send mail to: 25 Pine Street, Holbrook, NY 11741

August 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11 AP Seminar "Future Directions of Accelerator-Based NP and HEP", T. Roser, 4pm, Snyder	12 2011 DOE Summer Intern Closing Ceremony, 9am Berkner AP Seminar "eRHIC Design Status", e-RHIC Design Group, 4pm, LCR	13
14	15	16 Andy McNerney Get Together, 3pm, Lobby	17 TIAA/CREF Seminar, 12 to 1pm, Berkner Room B	18	19	20
21	22	23	24 Vocalist Melissa Errico to perform, noon, Berkner	25	26	27

28	29	30	31			

September 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5 Labor Day Lab Holiday	6	7	8 BSA Distinguished Lecture "Creating 'Personalized' Solar Energy for Six Billion People", Daniel Nocera, MIT, 4pm, Berkner	9	10
11 Grandparent's Day  Patriot Day	12	13	14	15	16	17

18	19	20	21 471st Brookhaven Lecture 4pm, Berkner	22	23 Autumn Begins	24
25	26	27	28 "The Opportunities for polarized He-3 beams for RHIC and EIC Workshop", 8am, Brookhaven Center	29 Rosh Hashanah "The Opportunities for polarized He-3 beams for RHIC and EIC Workshop", 8am, Brookhaven Center	30 "The Opportunities for polarized He-3 beams for RHIC and EIC Workshop", 8am, Brookhaven Center	

We Remember
Sept. 11, 2001

USS New York - A ship forged from the steel of the World Trade Center

Editor: *Pamela Manning* ***x4072***