

## Environmental Report for 1996 Shows Pollution-Prevention at Lab Is Paying Off

BNL's pollution-prevention efforts continued to reduce emissions to air and surface water in 1996, according to the Laboratory's just-published Site Environmental Report (SER) for that year.

The SER presents the results of BNL's environmental monitoring program and provides an assessment of the Lab's environmental impact in 1996. It also reports the results of routine testing for chemical and radioactive contaminants in fish, shellfish, deer, vegetation, sediment, groundwater and surface water on and near BNL's 5,300-acre campus.

Using these testing data and conservative assumptions, the report calculates the maximum potential radiation dose a member of the public could get from BNL through any of these sources. These calculations assume that all radioactivity detected originated from BNL operations and that an individual was exposed to the highest level detected during the year.

Doses were calculated for the following possible pathways by which someone could be exposed to radioactivity from BNL operations: air, drinking water, fish and deer meat.

The maximum hypothetical dose from any of those pathways was approximately five percent of the 100-millirem federal limit for public radiation exposure from BNL operations.

Because of the conservative nature of the calculations, it is unlikely that any individual received the maximum dose calculated from any one pathway, and implausible that any individual received the sum of the individual pathways. None of the pathways influenced by BNL constitutes a significant radiation dose to humans.

To put the doses in perspective, an individual on Long Island receives an annual dose of about 300 millirems from natural background radiation. Radioactive materials are found in cosmic rays (a dose of 24 millirems), the Earth (36 millirems), food and water (40 millirems) and radon (up to 200 millirems). In addition, the average dose to an individual in our society from medical exposures is approximately 50 millirems per year.

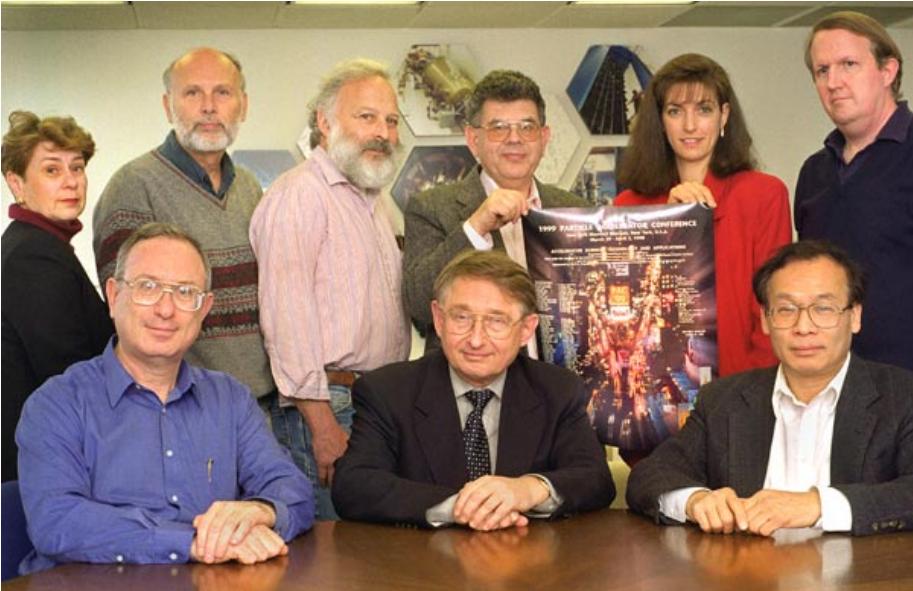
Among the testing data are results from ongoing monitoring of areas of the BNL site where past activities caused groundwater, soil and sediment contamination. Such areas are already being addressed under BNL's Superfund cleanup program, in cooperation with the New York State Department of Environmental Conservation (NYSDEC), the U.S. Environmental Protection Agency (EPA) and

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## As Conferences Go, PAC'99 Will Have It All — Particle Accelerators, BNL, RHIC and the Big Apple

Every other year since 1965, the accelerator community of North America has organized a highly successful Particle Accelerator Conference, attended by thousands of physicists from the U.S., Canada and around

the world, and covering new developments in all aspects of the science, technology and use of accelerators. Although one of the world's major players in the field of accelerator physics, Brookhaven has never hosted this



Meeting with Peter Paul (front, center), BNL's Deputy Director for Science & Technology, and Derek Lowenstein (back, center), Chairman of the Alternating Gradient Synchrotron Department, are some of the BNL staff working to make the 1999 Particle Accelerator Conference a success: Conference Chair Bill Weng (front, right); Ilan Ben-Zvi (front, left), the conference's Program Chair; and some members of the Local Committee: (back, from left) Elaine Lowenstein, Harold Kirk, Peter Yamin, Mary Campbell and Walter MacKay.

conference. But this will change next summer, when BNL will host the 18th Particle Accelerator Conference — PAC'99 — from March 29, to April 2, 1999.

Some 1,200 scientists are expected to attend PAC'99. Since the Lab site cannot accommodate an influx of this many visitors at one time, the conference will be held in New York City (NYC), at the New York Marriott Marquis hotel.

As Conference Chairman, BNL's Bill Weng, Alternating Gradient Synchrotron (AGS) Department, has been thinking about PAC'99 since 1993, when Brookhaven submitted its proposal to host the conference to its sponsors, the American Physical Society's Division of Physics of Beams, the Institute of Electrical & Electronic Engineers and the Nuclear & Plasma Sciences Society.

As a result, said Peter Paul, BNL's Deputy Director for Science & Technology, "Despite the fact that BNL has made numerous crucial contributions to accelerator science and technology over the past 50 years, PAC'99 will be the first time this prestigious series on particle accelerator physics is hosted by BNL. We have to be very grateful to Bill Weng and his collaborators and committees for their unselfish and

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## BNL Experimenter Asks: Can Plants Root Out Low-Level Contamination in Soils on Site?

In the 1950s and '60s, during enlargement of the Lab's former Hazardous Waste Management area, up to 10 inches of topsoil were scraped off several acres of land and stored.

Later, the soil was used as fill in eight grassy areas around the site. However, the soil was contaminated with low-level radioactivity — so low that the contamination could not be detected by the radiation survey instruments of the time.

In early 1982, BNL received the results of an aerial radiological survey that had been done at the request of the U.S. Department of Energy. As reported in the Brookhaven Bulletin of August 26, 1982, "When the results were compared with known on-site sources of radiation, there were a few surprises. . . previously unidentified small areas of low-level ground contamination. . ."

The Bulletin article described the detective work that led to the realization that contaminated soil had been used as fill. It also explained that cesium-137, a radioactive isotope of the element cesium, was the major man-made radionuclide present in those soils. Though cesium-137 is commonly found in low levels in soil everywhere because of fallout from atmo-



Mark Fuhrmann prepares the field behind the Medical Department building for his phytoremediation experiment.

spheric weapons testing during the 1950s and '60s, the amount of cesium-137 at the eight locations generally exceeded the amount normally occurring due to fallout.

Nonetheless, the contamination was very low-level, presented no danger and did not require special posting. For example, in an area behind the Medical Department, Bldg. 490, the highest level of contamination is about 400 picocuries per gram about 2 to 3 inches beneath the surface; at the surface of this area, the maximum level is about 150 picocuries per gram.

At these levels, said Health Physicist Bob Casey of the Director's Office, "We know there is no health hazard from walking or working near or on the grass, or from mowing or digging it. There seemed to be no pathway by

which people would be affected by this radioactivity, so no remedial action was planned in 1982. Since 1992, however, these areas have been scheduled for investigation under the federal Superfund law."

In conjunction with BNL's Environmental Restoration Division, Geochemist Mark Fuhrmann, Department of Advanced Technology, is starting a soil remediation experiment in the field behind Medical to see whether the contaminated soils can be absorbed through the roots of plants like *Amaranthus retroflexus* (Red Root Pigweed).

**The Experimental Approach**

Fuhrmann's approach is called phytoremediation, from the Greek suffix *phyto*, meaning plants, and *remediation*, the term used when remedial action is being taken to meet cleanup goals. Funded by the U.S. Department of Energy's Office of Science & Technology, the BNL research is being done in collaboration with the U.S. Department of Agriculture/Cornell University and MSE Technologies, a Montana-based remediation firm.

In the experiment, the plants are expected to absorb the low-level contamination in the soil. When the plants are harvested, the contamination will be removed with them. The process will be repeated until the soil is clear.

"First, we'll till the area and put up a fence to restrict access during the experiment," said Fuhrmann. "Then, we'll construct a small irrigation system and fertilize and seed the site. When we did this type of work in a much more contaminated area at the old Waste Management facility, we

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# Site Environmental Report Shows Pollution-Prevention Paying Off

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the U.S. Department of Energy. On-going monitoring helps guide the Superfund process.

The data for the SER come from an extensive monitoring program that BNL conducts, both at the point where contaminants are released to the environment and at many locations on and off the site. The monitoring is used to demonstrate that operations are in compliance with appropriate permits and standards for release, to track the contaminants and to evaluate potential exposure to people from various pathways.

BNL has reported this monitoring annually since 1971, and the 25 continuous years of data show that BNL is fulfilling a major commitment with a steady reduction of BNL releases to the environment.

Following are the highlights of the SER; to obtain a copy of the full report or a summary booklet, call Community Involvement & Public Affairs, Ext. 2345, or visit a library near BNL.

• **Airborne Releases** — In 1996, all of BNL's nonradiological airborne emissions were in compliance with the EPA's Clean Air Act.

BNL also emits small amounts of radioactive elements to the air, mostly from the two research reactors, both of which operated during 1996, and from a facility where radioisotopes are made for medical research and treatment. In 1996, the maximum dose to a member of the public from radioactive emissions was 0.07 millirem, a small fraction of the EPA public dose limit of 10 millirems per year for air releases.

• **Liquid Discharges** — Levels of radioactive elements in discharges from the sewage treatment plant to the Peconic River met all New York State and DOE regulations in 1996. Tritium in this effluent, which originates in the building housing the High Flux Beam Reactor (HFBR), was at an all-time low due to tritium reduction efforts by reactor staff.

Discharges from the sewage treatment plant were monitored and reported for 27 nonradioactive param-

eters. Compliance with the NYSDEC permit for these discharges was excellent. Occasionally, however, specific samples exceeded BNL's discharge limits. Most exceedances were related to the dilution of the influent, the material coming into the plant, making it difficult to meet required reductions in the effluent, the outgoing material. BNL has prepared a plan to reduce unnecessary water in the plant's in-

fluent and submitted it to NYSDEC. • **Groundwater** — While BNL is working hard to minimize new contamination of groundwater, 1996 gave the first indication that a plume of groundwater contaminated with radioactive tritium was moving southward from the spent-fuel pool of the HFBR (see box below for more on groundwater). • **Wildlife, Soil, Sediment and Vegetation** — To assess the impact of

past and current BNL emissions on local wildlife, soil, sediment and vegetation, in 1996, BNL and several regulatory agencies conducted a wide range of sampling programs. While radioactivity was found, none poses any threat to the life, health or well-being of humans or wildlife (see box at bottom of page for more on wildlife, soil, sediment and vegetation).

—Kara Villamil & Anita Cohen

## Monitoring BNL's Groundwater

As explained in the Laboratory's 1996 Site Environmental Report released this week, BNL tests groundwater for radiological and nonradiological parameters using 220 monitoring wells on site and 40 monitoring wells off site, as well as 25 private drinking water wells.

In a cooperative program that began in 1985 with the Suffolk County Department of Health Services, 25 off-site private potable wells located in Manorville, east of BNL, were sampled for radionuclides in 1996.

As reported in previous years' SERs, tritium was detected at low levels in six of the private wells. The average concentration in these wells was about one-eighth of the Environmental Protection Agency's (EPA) drinking water standard. The tritium in this groundwater is known to have originated in effluent from the BNL sewage treatment plant in years when tritium levels were higher than today, though still within annual average limits set by environmental authorities. Consumption of two liters per day of the water with the highest tritium concentration would result in a dose of 0.18 millirem added to the 300 millirems per year that Long Islanders get naturally from background radiation.

There are areas of the BNL site where radioactivity levels in groundwater are above the relevant drinking water standards. In those areas, the U.S. Department of Energy, EPA and New York State Department of Environmental Conservation are working together with BNL to formulate and carry out remediation plans. *Water in these locations does not serve as drinking water either on or off the BNL site. BNL's drinking water is tested regularly for both radioactive and chemical contamination and is well within all drinking water standards.*

The report also discusses the groundwater sampling taken in 1996 that led to the tritiated groundwater plume issue of 1997.

Nonradiological sampling of groundwater at BNL in 1996 continued to show metals and volatile organic compounds exceeding state standards in a number of locations on and off site, which were generally traceable to past activities, such as known spills or waste storage and former disposal areas. These locations are being addressed under the federal Superfund program.

As a precaution against potential future chemical contamination of private wells at levels above drinking water standards by these off-site chemical plumes, DOE is providing a free connection to the public water supply to each home in a specified area around BNL, including the area where tritium is found in private wells.

— K.V. & A.C.

## Cleanup With Plants

(cont'd.)

were able to do this without spreading any contamination. So there should be no problem at the new site, but we'll be checking."

Fuhrmann explained that, to minimize any dust falling on cars during plowing, parking in the adjacent lot will be prohibited during the first few weeks of the experiment.

"We'll wet the soil before plowing to minimize dust, and we'll put down a mulch layer after seeding," he said. "However, I want to be especially cautious in this regard. There's a steep slope of about four feet from the field down to the parking lot, so we'll install something — probably hay — to minimize runoff of soil from the site to the blacktop."

During the experiment, Fuhrmann will measure soil samples taken at five-meter intervals on a grid system and do gamma spectroscopy measurements to get detailed information on the contamination. "We'll measure the plant density and the cesium-137 activity in the plants. To determine how clean the soil is, we will measure the cesium-137 level in the harvested plants and compare soil measurements before and after harvesting," he said. "We hope to have two crops a year."

Based on the earlier work done, Fuhrmann believes that phytoremediation should prove successful in this area. "In our earlier work," he said, "we tested many different plant types, and we found that *Amaranthus*

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## Looking at BNL's Impact on Wildlife, Soil, Sediment, Vegetation

The 1996 Site Environmental Report describes the following programs that focused on collecting and analyzing samples of fish, shellfish, deer, soil, sediment and vegetation from BNL and near the site, and, for comparison purposes, from locations further from BNL.

• **Peconic River** — Some of the sampling of fish and sediment in the Peconic River at BNL and immediately downstream was conducted for the federal Superfund program. While a full report on the results of this testing will be available later in 1998, partial results, reported in this SER, show low levels of the radioactive elements americium, cobalt, cesium and strontium in sediment and detectable levels of radionuclides in some fish on the Lab site. With the exception of tritium, all of these radioactive elements are largely present due to past activities.

• **Surface Water** — The New York State Department of Environmental Conservation (NYSDEC) collected sediment, water, vegetation and fish in the Peconic River and nearby ponds, as well as at comparison locations not impacted by BNL, including the Carmans River on the Shirley-Brookhaven Hamlet border and Fresh Pond in Montauk. The 1996 sampling covered more locations than previous years and, as in the past, showed low levels of cesium and strontium.

These results are not unexpected and are attributable to global weapons-testing fallout. It is of interest to note that concentrations of cesium-137 in fish in a pond just downstream of BNL are lower than those in fish from Fresh Pond, 60 miles from BNL.

While BNL's releases over the years have resulted in additional low-level radioactivity in portions of the Peconic River near the site, this year's monitoring program indicates that the concentrations of radionuclides in the local environment fall within the normal range of radionuclide concentrations found in other local ecosystems on Long Island. Further testing at more locations is planned for 1998.

In addition to the NYSDEC sampling, the New York State Department of Health has sampled fish in the Peconic River system for over 20 years. Their report issued in 1996 stated that concentrations of cesium-137 in those fish have declined since the 1970s.

Based on the 1996 sampling and analysis for the radionuclides cesium-137 and strontium-90, the dose that a person would receive from eating 15 pounds of fish containing radionuclides at the highest concentration seen in a Peconic-fed pond in 1996 would be 0.46 millirem, or about 0.5 percent of the

U.S. Department of Energy's annual dose limit for the general public. This value uses Peconic River fish consumption rates recommended by NYSDEC and assumes that the radioactivity in the fish is solely attributable to BNL.

These assumptions are very conservative, particularly in light of the sampling results showing higher concentrations in some off-site locations not impacted by BNL. This dose would be in addition to the internal dose of about 40 millirems that a person receives annually from naturally occurring radionuclides in foods.

Sediment tests from six off-site locations showed levels of radionuclides in ponds directly downstream of BNL that were similar to levels in comparison ponds not fed by the Peconic River.

• **Shellfish Testing** — In 1996, BNL conducted a series of tests on clams and mussels from the Flanders Bay-Peconic Bay system downstream of BNL and from a comparison location in Lloyd's Harbor-Northport Bay. No man-made radionuclides were found in either location.

• **Deer Testing** — In conjunction with NYSDEC, BNL measured deer on and off the Lab site for radioactivity. The ten on-site meat and liver samples came from deer that had been killed in automobile accidents; hunting is prohibited on the BNL site. NYSDEC provided nine meat and liver samples from deer from off site. Similar, but less extensive, studies were reported in 1986 and 1993.

As in earlier years, and as might be expected because of the presence of low-level cesium in soils at some locations at BNL, cesium-137 concentrations in deer meat were greater in deer sampled on the BNL site than in those sampled off site. Cesium-137 concentrations averaged 6 picocuries per gram (pCi/g) and ranged from as low as 1.01 pCi/g to as high as 11.74 pCi/g in the five samples of deer meat taken from on site. Concentrations in the liver were lower. No other man-made radioactivity was found in the meat. The concentration of cesium seen in all deer is low and is not harmful to the deer or potential predators (see page 1 story, "BNL Experimenter Asks: Can Plants Root Out Low-Level Contamination in Soils on Site?").

• **Farm Testing** — Soil and vegetation in farms around the Lab site were sampled in June 1996 as part of a cooperative program between BNL and the Suffolk County Department of Health Services. No radionuclides above background levels attributable to BNL operations were detected in any of the samples, although radionuclides from natural sources and weapons test fallout were found.

— K.V. & A.C.

Cleanup With Plants (cont'd.)

was the best at taking up cesium-137. “Our objectives are to see how effectively and quickly plants can remove cesium-137 from this site and what the actual costs are using this method. If it is successful, we could use phytoremediation elsewhere and avoid large-scale excavation.” While it could take a few years to complete the experiment and potentially begin phytoremediation of the other affected sites, Casey said, “There is still no need to put those areas off limits. They pose no hazard to humans either directly or indirectly.”

Deer — An Indirect Pathway

The only viable direct pathways for humans to be exposed to the cesium-137, Casey explained, would be for someone to ingest the soil or plants growing in the soil — an unlikely scenario that led to the 1982 conclusion that there was no pathway by which people would be affected by the radioactivity. Other pathways, such as living in homes constructed on top of the soils or eating a creature that had eaten a plant that had grown in the soil, were discounted. Small numbers of deer have been analyzed periodically for cesium-137, and the results were reported in BNL’s Site Environmental Reports (SER) for 1986, 1992 and 1993. In recent years, this sampling program has been expanded, and the 1996 SER, which was released this week (see stories on pages 1 & 2) contains results of tests of deer meat taken from deer killed in auto accidents on site, which continue to show that deer on the Lab site have more cesium-137 in their bodies than do deer from outside the Lab. However, those same analyses also show that if an individual ate one pound of venison in one year that contained the highest amount of cesium-137 measured, that person’s annual burden of radioactivity would increase by only one quarter of a millirem — a millirem being the standard measure of radiation dose. For comparison, everyone living on Long Island automatically gets an annual radiation dose of about 300 millirems from natural sources, and people who live in places like Denver get about 50 millirems more each year because they are exposed to more solar and terrestrial radiation.

In addition to background exposures, the U.S. Department of Energy’s dose limit for the general public is 100 millirems each year. The quarter millirem a person would get from a pound of venison from BNL’s deer is only 0.25 percent of the DOE standard. “Since deer are protected on the Laboratory site, and deer tend to stay in a familiar habitat, it is unlikely that many deer have strayed off site, so it is also unlikely that few, if any, have been hunted,” Casey said. “However, because it is still a possibility, it is important to note that consumption of these deer is not a hazard.” Anyone who would like more information about the cesium-137 contamination on site, may call Casey at Ext. 4654. — Liz Seubert & Anita Cohen

Coming Up: NSLS Users to Hold Annual Meeting

Ernest Moniz, Under Secretary of Energy in the U.S. Department of Energy (DOE), will deliver the keynote address at the 1998 Annual Users’ Meeting of the National Synchrotron Light Source (NSLS) on Tuesday, May 19. Moniz’s 4 p.m. talk, which is open to all, will conclude the day’s program, which will begin at 8 a.m. in Berkner Hall. Registration for the meeting will start at 7:30 a.m. The scientific highlight of the meeting will come at 1:30 p.m., when James Watson, President of Cold Spring Harbor Laboratory, who shared the 1962 Nobel Prize in Physiology or Medicine for the discovery of the structure of DNA, discusses going “From the Double Helix to the Human Genome Project.” In addition, BNL Director John Marburger will give a BNL update at 9 a.m., and Patricia Dehmer, Associate Director of Energy Research in DOE’s Office of Basic

Energy Sciences will give the annual DOE update at about 11 a.m. The full program includes presentations on environmental and biological applications of synchrotron radiation, in-situ surface studies, infrared techniques, microbeam x-ray diffraction, recent advances in high-resolution photoemission and the latest results from protein crystallography. On the days before and after the meeting, workshops on topics related to synchrotron-radiation research will be held from 9:30 a.m. to 5 p.m. Full details of the meeting and the workshops are available on the World Wide Web at [www.nsls.bnl.gov/Intro/usrmtg/meet98.htm](http://www.nsls.bnl.gov/Intro/usrmtg/meet98.htm). Or, get more meeting information by contacting Linda Feierabend at [LSUSRMTG@BNL.GOV](mailto:LSUSRMTG@BNL.GOV), [feierabe@bnl.gov](mailto:feierabe@bnl.gov) or Ext. 5763.

Survey to Secure BNLers’ Views On Laboratory’s Strengths & Weaknesses

Within the next few months, BNL will be conducting an Organizational Survey to measure employees’ attitudes and opinions on their management and workplace and on Laboratory policies. The results of the survey will be used to identify BNL strengths and areas that need improvement. As BNL Director John Marburger explained in an April 27 memo to all employees, “To improve the work environment at BNL, it is important to have a clear understanding of the views and attitudes of employees on issues that are important to them. During my brief tenure as Director, I have gained some insight into what motivates our employees to perform at a high level, and I have learned about some concerns regarding the future of the Laboratory. “But this is anecdotal evidence,” Marburger continued. “We need a more systematic survey to capture completely and accurately your collective perception of the Laboratory’s strengths and weaknesses. This survey should be a snapshot of the Laboratory at present and a guide for future planning.” Planning the survey process has been the charge of the Survey Steering Committee, chaired by Lorraine Merdon, Diversity Office, and including: Bob Bari, Department of Advanced Technology; Peter Bond, Director’s Office; Terrence Buck, Division of Contracts & Procurement (DCP); Robert D’Angio, Human Resources (HR) Division; Susan Foster, HR; Robert Gordon, U.S. Department of Energy’s Brookhaven Group; Mary-Faith Healy, DCP; Derek Lowenstein, Alternating Gradient Synchrotron Department; Marge Lynch,

Community Involvement & Public Affairs; Satoshi Ozaki, Relativistic Heavy Ion Collider Project; and Otto White, Environment, Safety & Health Services Division. Over the past few months, the committee has identified an outside consultant, International Survey Research (ISR), to design and administer the survey. Said Marburger, “ISR has a proven track record with other national laboratories for survey design, confidentiality and providing valuable feedback of survey results.” ISR consultants are beginning to conduct employee focus groups and one-on-one management interviews on site with randomly selected employees. Marburger urged anyone chosen “to participate and to be candid.” ISR will use the information from these meetings to develop a questionnaire that identifies issues that are important to BNL employees. Once the survey is designed, it will be administered to all employees. “If the questionnaire is like others I have seen,” Marburger noted, “it will be somewhat long, so I am asking for your patience and your time in advance. I am committed to taking actions in response to your recommendations, and steps will be taken to brief employees on the results of the survey so you will know what the recommendations are.” Any employee who was not selected randomly for a focus group or management interview but who would like to suggest topics or questions for the survey can send ideas to the Human Resources Hotline via e-mail to [hrhotline@bnl.gov](mailto:hrhotline@bnl.gov) or phone to Ext. 8200.

PAC’99 (cont’d.)

successful effort to bring this event to the Laboratory. “With over one thousand expected participants, this large conference will require a tireless effort and unflinching attention to detail by many people, not just the organizers,” Paul said. “The Director’s office pledges its full support to this effort. I am sure everybody at BNL shares in the pride of hosting PAC’99 and will want to contribute to making it a complete success.” “We made the proposal first and foremost because Brookhaven wants to participate in this great tradition,” Weng explained. “We proposed hosting it in 1999 because we expected RHIC to be completed in that year, an opportune time to open up BNL to the world accelerator community.” In fact, RHIC, the Relativistic Heavy Ion Collider is on target to begin operations at BNL in mid-1999. The major new accelerator project now under construction in the U.S., RHIC will be a unique facility providing physicists with an unprecedented tool for understanding the earliest moments of the universe. On Saturday, April 3, at the end of the conference, participants will come out to the Laboratory to tour RHIC other BNL accelerator facilities, in-

cluding the AGS, the Accelerator Test Facility and the National Synchrotron Light Source (NSLS). “This will be an ideal confluence of BNL, RHIC and New York City,” said Derek Lowenstein, Chair of the AGS Department, which runs the versatile Nobel Prize-winning accelerator that will serve as the particle injector for RHIC. “The PAC is the single most important conference in the accelera-



1999 PARTICLE ACCELERATOR CONFERENCE  
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tor field. The members of the local committee have got a lot of work ahead of them for the next year, and it’s important to Brookhaven that we all support their efforts.” As Conference Chairman, Bill Weng also chairs the 26-member Organizing Committee, whose members are drawn from all of the U.S. Department of Energy’s (DOE) national laboratories, DOE, several U.S. universities, laboratories in Canada and Japan, and representatives of the Asian and European Particle Accelerator Conferences (APAC and EPAC), which were initiated in 1998 and 1988, respectively. BNL members of the Organizing Committee also include Ilan Ben-Zvi, NSLS Department, who is Program Chair for PAC’99, and Samuel Krinsky,

NSLS. Mary Campbell, AGS, is Conference Secretary. These BNLers are working closely with the Local Committee, whose members and their responsibilities include: Jesse Becker, AGS, fiscal; Harold Kirk, Physics Department, coordinating posters and exhibits; Jack Laurie, Information Services Division, printing; Elaine Lowenstein, Community Involvement & Public Affairs, BNL site tours; Peter Lucas of Fermi National Accelerator Laboratory, publishing; Alfredo Luccio, AGS, and William MacKay, RHIC, editors; Christine Ronick, Administrative Support Division, hotel coordinator; John Smith, NSLS, electronic publishing; and Peter Yamin, Director’s Office, social and spouse activities. “Each hosting laboratory provides professional support,” said Weng, “with most of the financial support coming from registration fees, as well as federal agencies, such as DOE, the National Science Foundation and the Office of Naval Research.” The 1993 proposal was made with the full support of then BNL Director Nicholas Samios, said Weng, who thanked Samios for starting Brookhaven on this venture and Brookhaven Science Associates for “reconfirming the total support of PAC’99.” — Anita Cohen

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Outreach Workshop

Exploring the ‘Why?’ of Being Fat or Thin

“Overweight people may believe their greatest wish is to be thin, but it is their unconscious wishes which prevail,” says pyschotherapist Michelle Joy Levine, the author of the book *I Wish I Were Thin . . . I wish I were fat: The Real Reasons We Overeat And What We Can Do About It* and the next speaker in the Outreach workshop series sponsored by the Employee Assistance Program (EAP) of the Occupational Medicine Clinic.

On Wednesday, May 6, at noon in Berkner Hall, Levine will explain that only through awareness of why we overeat can we ever gain control over overeating. She will help individuals identify their own specific hidden wishes and fears that result in overeating and provide ten-minute exercises to resolve those sabotaging wishes.

Levine, who has been in practice for over 22 years, holds a C.S.W. degree and a certificate in psychoanalysis. In addition to having a private practice in Dix Hills, she is on the Board of Directors of the Society for Psychoanalysis and Scientific Research, and teaches and supervises other pyschotherapists.

To register for the workshop, return the bottom portion of the flier recently sent to all employees to Dianne Polowczyk, EAP, Bldg. 490, Ext. 4567.

Swing Into Spring

A few tickets remain for the Swing Into Spring Dance to be held at the Brookhaven Center tomorrow, Saturday, May 2, 8-11 p.m.

At the dance, which is sponsored jointly by the BNL Ballroom, Latin, & Swing Dance Club and Swing Dance Long Island, you will swing, fox-trot and sway to the Latin music of the 14-piece Black Tie Affair Orchestra featuring the K-tones.

Dance-goers are asked not to bring their own refreshments as was suggested in the previous announcements of this event. Instead, a cash bar will be on hand all evening.

Tickets are \$5 for members and \$7 for nonmembers. Contact Gwyn Williams, Ext. 7529, e-mail gwyn@bnl.gov, or Rudy Alfoque, Ext. 4733, e-mail rudy@bnl.gov. Buy tickets now, as none will be sold at the door.

Classified  
Advertisements

Placement Notices

The Laboratory’s placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status.

Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people.

Except when operational needs require otherwise, positions will be open for one week after publication.

For more information, contact the Employment Manager, Ext. 2882; call the JOBLINE, Ext. 7744 (344-7744), for a complete list of all job openings; use a TDD system to access job information by calling (516) 344-6018; or access current job openings on the World Wide Web at <http://www.bnl.gov/JOBS/jobs.html>.

The following vacancies are exempt from the Director’s hiring freeze.

**SCIENTIFIC RECRUITMENT** - Doctorate usually required. Candidates may apply directly to the department representative named.

**POSTDOCTORAL RESEARCH ASSOCIATE** or **JUNIOR STAFF** — Trained in experimental nuclear or high energy physics. Experience in at least one of the following is required: object-oriented analysis and design, databases, high-speed networks, VME, VxWorks and EPICS. Will assist in the design and implementation of the on-line computing system for PHENIX, a large relativistic heavy-ion experiment at RHIC, which will begin operation in the fall of 1999. Contact: Christoph Witzig, Physics Department.

**POSTDOCTORAL RESEARCH ASSOCIATE** - Trained in atmospheric science or related area, with a specialization in aerosol and/or cloud microphysics. Work involves interpretation of in-situ aerosol and cloud data collected by aircraft; cloud radar data collected at the surface; and surface, aircraft and satellite radiometric data. The objective is to develop sufficient understanding of the relationship between the properties of pre-cloud CCN, cloud dynamics and the resultant cloud properties to develop better parameterizations of these relationships for GCMs. Experience in interpretation in in-situ cloud and aerosol data and/or cloud modeling is highly desirable. Contact: Peter Daum, Department of Applied Science.

**LABORATORY RECRUITMENT** - Opportunities for Laboratory employees.

DD7547. **SECRETARIAL POSITION** - Requires an AAS in secretarial science or equivalent experience, and a working knowledge of WordPerfect and basic office practices and procedures. Will provide secretarial support to the clinical effort associated with Boron Neutron Capture Therapy (BNCT). Will handle confidential patient information. Medical Department.

Music and More: Pianist Justin Kolb

At the next BERA Concert, on Thursday, May 7, at 8 p.m. in Berkner Hall, pianist Justin Kolb, who has performed with the Chicago Symphony Orchestra and the Hamburg Philharmonic in Germany and solo in Carnegie Hall, will play Franz Liszt’s piano transcription of Ludwig van Beethoven’s Symphony No. 5.

In a departure from traditional concert programs, in addition to his solo performance, Kolb will discuss the strategy and tactics he employed to prepare for his triumphant performance of this concert transcription during the 1997 International Liszt Festival in Nashville, Tennessee. He will address some of the underlying political considerations that stimulated Beethoven to compose this symphony, the reasons Liszt felt compelled to develop the transcription and the art of transcription in general.

Kolb, who performed with the U.S. Military Concert Band at West Point, made his New York City orchestral debut with the Jupiter Symphony this spring. His most recent recording, “Robert Starer Solo Piano Music 1946-96,” has been enthusiastically received. He is frequently engaged by colleges and universities to present his inter-

Computer Training

The Computing & Communications Division will offer Introduction to C++ Programming class from Tuesday to Friday, May 26-29, to be held in the seminar room, Bldg. 515. To register for this four-day class, send an ILR for \$1,295 to Pam Mansfield, Bldg. 515, by Friday, May 8. For more information, contact Mansfield at [pam@bnl.gov](mailto:pam@bnl.gov).



**Justin Kolb**

active lecture “Know the Score: Inspiration and Motivation for Surviving in the Business of Music,”

All are welcome at the concert, which is free. However, donations are greatly appreciated and are used to help fund other concerts. Donors making a single contribution of \$25 or more will be listed in each concert program for the rest of the season.

Watch Hill Camp Out

The BERA Mountain & Canoe Club will camp at the group campsite at Watch Hill on Fire Island, from Friday through Sunday, May 29-31. Members old and new are invited to join the fun — for the whole time or for as long as you can. For more information, call Nancy Kuehner, 878-6947.

Arrivals & Departures

| Arrivals                            |                |
|-------------------------------------|----------------|
| <b>Pauline E. Carter</b> .....      | Medical        |
| <b>Richard A. Horstman</b> .....    | Plant Eng.     |
| <b>Christopher F. Simeone</b> ..... | Fin. Services  |
| Departures                          |                |
| <b>Karim Ashktorab</b> .....        | Physics        |
| <b>Deborah A. Cullen</b> .....      | Info. Services |