BROCHHAIEN BULLETIN Vol. 52 - No. 21 BROOKHAVEN NATIONAL LABORATORY

BNL-Developed Sensor Shows Promise in Detecting Chemical Weapons



Art Sedlacek (left) and Mark Ray of the Department of Advanced Technology with the mini chemical sensor they developed that works at short distances (see story at right). Behind them is the BNL-developed 33-foot-long mobile detection van from which chemicals can be identified in the atmosphere several miles away (see story below left). When New York City's Office of Emergency Management staged a drill in December to test the city's response to a possible terrorist attack involving chemical weapons, BNL demonstrated a novel chemical sensor as a part of the exercise. The Brookhaven sensor successfully detected the chemical used in the drill — acetone, the active ingredient in nail polish remover — from a distance of about 15 feet.

BNL Scientist Arthur Sedlacek, Department of Advanced Technology, who was instrumental in designing the sensor system, said, "The sensor performed well in just eight minutes, under difficult conditions, specifically, at night, in driving rain. We are excited about its potential as an invaluable tool for assessing unknown chemicals in the field."

Besides using the sensor in response to terrorist attacks, potential applications include identifying chemical weapons production, monitoring industrial emissions, investigating environmental crimes, determining the effectiveness of environmental cleanups and assessing the hazards of chemical fires.

The BNL-designed mini sensor, the size of a two-foot cube, works at short distances of a few feet to tens of feet. The device combines the latest laser and detector technology with a phenomenon known as Raman scattering.

To detect chemicals, laser light is aimed at a target and scattered off its molecules. An instrument called a spectrometer analyzes the scattered light, revealing a chemical fingerprint. That signature fingerprint is then compared with a computerized library of chemical fingerprints.

The mini sensor is an offshoot of a large chemical sensor system developed at BNL — a 33-foot-long mobile detection van that can identify chemicals in the atmosphere from several miles away (see story on Brookhaven Lecture, below left).

While the larger sensor system is best used for atmospheric applications, the mini sensor is most efficient in determining ground or surface contamination. A big advantage is that it can identify chemicals from a safe distance. — Diane Greenberg

337th BNL Lecture Laser Sleuthing — Fingerprinting Chemicals From Afar

To find out whether certain chemicals are lurking in the atmosphere miles away, you might use a specially equipped airplane to fly up and take air samples for analysis.

Or, you can stay on the ground and use a technique studied at BNL that can detect and identify chemical effluents from far away.

Chemical detection from long distances has been the focus of research by Scientist Arthur Sedlacek of the Department of Advanced Technology (DAT). He will discuss this work when he delivers the 337th Brookhaven Lecture, "LIDAR: Chemical Analysis From Afar," on Wednesday, May 27, at 4 p.m. in Berkner Hall. He will be introduced by DAT's Safeguards, Safety & Nonproliferation Division Head Joseph Indusi.

One of Sedlacek's research concen-(continued on page 2)

Community Involvement & Public Affairs: New Deputy

Robert Kinkead, an experienced communications professional with substantial background in media relations and internal communications, joined BNL on May 15, as Deputy to Marge Lynch, BNL's Assistant Director for Community Involvement & Public Affairs (CI&PA).

In this position, Kinkead manages CI&PA's day-to-day operations, with a particular focus on press contacts and BNL's internal publications and periodicals.

"Bob's impressive mix of communications experience is an important complement to the talent we already have assembled in CI&PA," said Lynch. "I am happy to welcome him to BNL."

Kinkead is "just delighted" to be here. "I have always been attracted to science, and Brookhaven is a magic name. There are a handful of places on the planet that you would say, 'Yes, I would like to work there' sight unseen, and this one of them."

BNL also meets another Kinkead criterion: "If you're going to be a com-

municator, be a communicator for someone who has something to say. Brookhaven really has something to say."



Bob Kinkead

Bob Kinkead has a B.A. in communications from Seton Hall University and an M.S. in management from Pace University. He comes to BNL after 18 years at American Telephone & Telegraph Co. (AT&T), where he was the Technology System's Division Manager-Executive Communications when he left in 1988. After that, he served seven years as General Manager, Corporate Communications & Advertising, with the Public Service Electric & Gas Company of New Jersey (PSE&G). He left PSE&G in 1995, to serve as President of CS&A Services, Inc., a family-owned business providing water-recycling and industrial-cleaning equipment to major industries in the New York metropolitan area.

Now that he's at BNL, Kinkead looks forward to working with people at the Lab, learning more about Brookhaven's research, and then "helping to communicate the exciting things being done here, to the community and the public." To reach him, call Ext. 5322. — Anita Cohen

Experienced Consulting Firm to Conduct Survey of BNLers

Right now, in the Chicago offices of International Survey Research (ISR), the final tweaks are being made to the Organizational Survey that all BNL employees will have the opportunity to complete between June 16 and 19.

The more employees who participate in the survey, the better ISR will be able to measure BNLers' attitudes and opinions about the Lab as a workplace and about its management and policies. With that information, ISR will identify BNL's strengths and areas that need improvement.

That sounds like a tall order, but ISR has had lots of experience designing and implementing employee/manager surveys for large national and multinational organizations. The independent consulting firm has clients worldwide, including more than 1,900 companies in over 106 countries. Since 1974, ISR has surveyed more than 29,000,000 employees.

Starting with a concept similar to that used at the other U.S. Department of Energy national labs that ISR has surveyed, including Lawrence Livermore, Los Alamos, Pacific Northwest and Sandia, ISR has worked with many people at BNL to tailor a survey that fits Brookhaven Lab.

This interaction has included initial planning with the BNL Survey Steering Committee chaired by Lorraine Merdon, Diversity Office (see Brookhaven Bulletin, May 1, 1998), followed by meetings with members of BNL management, the Human Resources Division, and employee focus groups representing a variety of departments and divisions, positions and employment classifications.

After incorporating the thoughts and opinions gathered from these groups into a preliminary survey, ISR administered a pretest to a small but

diverse group of BNLers. After the pretest, this group critiqued the survey, prompting additional revisions by ISR.

Mark Royal, an associate project director with ISR, emphasized that the names of those completing both the pretest and the actual survey will be kept strictly confidential and anonymous.

Employees are encouraged to take the survey and will be given time away from their jobs to complete it. Average completion time will be about one-half hour, though employees may take as long as they need. Completed surveys will be placed first in a sealed envelope and then in an ISR ballot box, which will go to ISR intact so no one at BNL will see its contents.

Though the coding section of the survey asks for information about an employee's work area, job classification and status, and a voluntary section inquires about length of service, gender, ethnic/racial background, education and age, the data will be used only for statistical purposes: ISR will not report any individual responses and will not attempt to identify individual respondents.

For that reason, ISR will report statistical summaries to BNL only for groups of 20 or more respondents. The responses of those who work in an area with fewer than 20 employees will be combined with other such areas.

For more information about ISR, check out the firm's home page on the World Wide Web at http://www.isrsurveys.com. To see a sample of a typical ISR employee survey, go to http://www.isronline.com.

If you have questions about the survey at BNL, call Lorraine Merdon, Ext. 3318. — Anita Cohen

Office of Scientific Personnel, which

administers the scholarship at BNL,

thanked "AUI for its foresight and

BSA for its understanding of the im-

portance of the scholarship program

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.

of Zoreh Parsa, RHIC, and William

Marciano, Physics, resides in Port

Jefferson and is a senior at Port

Jefferson High School. To pursue pre-

medical studies, he will major in phys-

ics and biology at the University of

California, San Diego.

David Parsa Marciano, the son

Each BSA Scholar is a high school

to Lab personnel."

BNL Lecture (cont'd.)

trations is a remote sensor technique involving laser light and a phenomenon known as Raman scattering. It is one of the several laser-based chemical sensor systems referred to as LI-DAR, for LIght Detection And Ranging, that are being explored by a group of national laboratories in a U.S. Department of Energy program. LIDAR techniques promise applications that range from detecting the presence of chemical weapons or illegal narcotics to verifying environmental cleanup.

As Sedlacek will explain, the LIDAR technique studied at BNL is based on the known phenomenon of Raman scattering, in which laser light aimed at a target is scattered off the molecules in the target, then collected by a telescope and analyzed by an instrument called a spectrometer. Because the pattern of scattered light is different for each chemical species, it provides a "fingerprint" that identifies the chemical.

With his Optical & Remote Sensing (ORS) Group, Sedlacek first developed a specialized laser laboratory and performed experiments to build up a fingerprint library of the chemicals of interest. Then, by finding a way to intensify the scattering signals, and, using state-of-the-art advanced technology and instruments, they produced a technique to detect chemicals in the atmosphere from several miles away.

Sedlacek will describe this work and how, by selecting the best lasers, computers and software for portability, the group was able to set up a prototype mobile detection van for use in the field. Additionally, the group developed a mini chemical sensor that works at short distances that is described in story on page 1, but which will not be discussed in the lecture.

Sedlacek received a B.S. in chemistry from the University of Wyoming, 1983, and his Ph.D. in physical chemistry from the University of Utah, 1988, then joined BNL's Chemistry Department as a research associate in 1989.

After working on energy transfer mechanisms and reaction dynamics in the gas phase using tunable diode laser spectroscopy, he moved to the then Department of Nuclear Energy, now DAT, to help establish BNL's first remote-sensing program, becoming an assistant scientist in 1992. Named Scientist in 1996, he leads the ORS Group.

After the lecture, all are invited to join Sedlacek for discussion and refreshments. To accompany him for dinner at a restaurant off site, call Liz Seubert, Ext. 2346, by noon on Wednesday, May 27. — Liz Seubert

Honors for Teacher With BNL/DOE Ties

BSA Awards Scholarships to 15 BNL Sons & Daughters

Brookhaven Science Associates (BSA) this week announced the 15 winners of the first BSA Directors' Scholarships, which go to children of BNL employees in continuation of a tradition instituted 33 years ago by Associated Universities, Inc. (AUI).

In anticipation of BSA's continuing the scholarship, AUI had invited students to submit applications last fall, then assured that the applications were registered with the College Scholarship Service (CSS).

As a result, in April, when the BSA Board of Directors agreed to sponsor a scholarship program, CSS was ready to move ahead with the selection of winners from the 48 students who had applied.

E. Gail Williams, Manager of the

Christina Blas, daughter of Gladys Blas, Relativistic Heavy Ion Collider (RHIC) Project, is a senior at Sachem High School and lives in Holbrook. At Pace University, she will probably major in business studies.

Stephan Bosshard, son of Heinz Bosshard, Biology Department, is a resident of Yaphank and will be graduating from Longwood High School. He will attend The Johns Hopkins University, where he is likely to study engineering.

> **Meena Fatimi** is the daughter of Khem Fatimi, Medical Department. She lives in Bellport, where she is a senior at Bellport High School. With the goal of becoming a family doctor, she will do her undergraduate work at the University of Pennsylvania.

Tomoko Fujita, the daughter of Etsuko Fujita, Chemistry Department, is in her last year at Earl L. Vandermeulen High School. A resident of Port Jefferson, she will major in music performance and liberal arts as a Shepherd Society Award Scholar at Rice University.



Alix Gmur is the daughter of Eloise Gmur, Community Involvement & Government Relations Office, and Nicholas Gmur, National Synchrotron Light Source (NSLS) Department. As a resident of Bellport, she attends Bellport High School. She will major in math at Haverford College.

Bethe Gordon, the daughter of Howard Gordon, Physics Department, lives in Southampton and goes to Riverhead High School. She has not decided on her major, but she will matriculate at Barnard College.





Maximilian Jo is the son of Jae Jo, Department of Advanced Technology, and a resident of Setauket. After graduating from Ward Melville High School, he will study economics at the University of Michigan.



Courtney Ka'ohinani Rowe, daughter of Mona Rowe, Media & External Publications Office, and Michael Rowe, retired from DAS, is a senior at Westhampton Beach High School. This fall, she leaves East Moriches for Brown University, where she plans to create an independent major to combine mathematics, writing and the dramatic arts.



Lisa Tannenbaum, daughter of Michael Tannenbaum, Physics, is a resident of Belle Terre. Now in her last year at Earl L. Vandermeulen High School, she will matriculate at Yale University, majoring in chemistry and classics.



Lotje Van Asselt, the daughter of Willem Van Asselt, Alternating Gradient Synchrotron Department, is a senior at Longwood High School and lives in Yaphank. She will attend a university in Holland, where she may undertake biomedical studies.

Emily Weinert is the daughter of Michael Weinert, Physics, and a resident of Bellport. After being graduated from Bellport High School, she will attend Duke University to major in biology or biochemistry.





Giles Siddons is the son of Peter Siddons, NSLS, and lives in Shoreham. After his graduation from Shoreham-Wading River High School, he will study electrical engineering at Union College.





For several years, Arthur Sedlacek, Department of Advanced Technology (see stories above and at top of page one), was a sponsoring scientist in the U.S. Department of Energy's Teacher Research Associate Program at BNL, which ran from 1989 to 1996, and was organized by the Educational Programs Office.

One of the teachers he worked with was Eric Cohen, a Manorville resident who teaches 9th grade earth science at Wantagh High School and advises on the school's science research program — and who has won the July 1998 "Teacher of the Month" award given by Hofstra University and News 12.

Under Sedlacek's guidance, Cohen, did research on remote sensor technology, during the summers of 1994, 1995 and 1996. **Austin Johnson**, son of Brant Johnson, RHIC, resides in Wading River and is a senior at Shoreham-Wading River High School. At the College of William and Mary, he will major in medieval history, languages, theater, music or theoretical physics.





Vanitha Krishna is the daughter of C.R. Krishna, Department of Applied Science (DAS). Living in Mount Sinai, she goes to Mount Sinai High School. She will matriculate at Boston University to study biology.

Computer Class: PERL

The Computing & Communications Division will offer a three-day class in PERL programming, Monday-Wednesday, June 8-10, in the seminar room, Bldg. 515. To register, send an ILR for the training fee of \$450 to Pam Mansfield, Bldg. 515, by Monday, June 1. For more information, contact Mansfield at pam@bnl.gov or Ext. 7286.

Quality Training Offered

The next series of training sessions offered by the Quality Management Office to quality-assurance representatives and other interested Lab personnel will start on Wednesday, June 10.

The first session will cover an introduction to quality concepts and the BNL approach to quality. It will be held in the conference room, Bldg. 426, at 51 Bell Avenue. The remaining 11 sessions will run on successive Tuesdays, usually in Berkner Hall, Room D. All sessions will start at 9:30 a.m. and last for approximately $1\frac{1}{2}$ hours.

The sessions are open to Quality Representatives and other interested Lab personnel. If you plan to attend or would like a course schedule, contact Gina Bernard, Ext. 3689, or e-mail ginab@bnl.gov by Wednesday, June 3.

Holiday Notes

In observance of Memorial Day, the Lab will be closed on Monday, May 25, as will the following on-site entities:

- Omega Leisure Travel Office
- Recreation Building
- Research Library
- Teachers Federal Credit Union • U.S. Postal Service
- In addition:

• ATM — The Credit Union's automatic teller machine in the foyer of Berkner Hall will be open over the three-day weekend. • Food Service — The Cafeteria will offer weekend snack-bar service from 9 a.m. to 2 p.m. Saturday through Monday, May 23-25. The Brookhaven Center Club will be closed Saturday & Sunday, May 23-24; it will reopen on Monday, May 25, 5-9 p.m.

• Gym & Pool — The gymnasium and swimming pool, Bldg. 478, will be closed all weekend, Saturday-Tuesday, May 23-26. • Research Library — The library will remain open from 9 a.m. to 5 p.m. on Saturday & Sunday, May 23-24.

Bowling

Red & Green League

May 5 — R. Mulderig Jr. 224/212/212/ 648 scratch series, M. Meier 246/214/609 scratch, R. Eggert 244/215/650 scratch, E. Meier 222/212/602 scratch, R. Mulderig 214/ 201/605 scratch, R. Larsen 239/633 scratch, R. Raynis 247, J. Toner 232, J. Giuffre 221, J. LaBounty 211, A. Pinelli 203, N. Besemer 202, W. Powell 201, J. Mayeski 200.

May 12 — R. Raynis bowled a perfect 300 game, followed by a 222/719 scratch series, R. Eggert 257/247/222/734 scratch, R. Mulderig Jr. 249/215/214/678 scratch, M. Meier 238/232/223/693 scratch, R. Mulderig Sr. 236/235/202/673 scratch, J. Mayeski 243/ 205, E. Larsen 231/224/638 scratch, B. Giuliano 222/213, G. Mack 204/203, R. Larsen 229, J. Goode 221, A. Pinelli 221, K. Koebel 219, N. Besemer 214, G. Miltenberger 213, H. Arnesen 209, S. Frei 205

Winners of the Second Half: Force

Purple & White League

May 7 — R.Eggert 245/233/211/689 scratch series, R. Koebel 245/186/173/604 scratch, D. Riley 242/224/190/656 scratch, M. Meier 232/224/651 scratch, B. Tozzie 248/195/616 scratch, R. Mulderig 234, S. DiMaiuta 230, R. Raynis 227, N. Besemer 220, B. Giuliano 215, E. Sperry III 201, R. Picinich, 185/181, T. Mehl 173/172, G. Mehl 195, B. Rothe 178, M. Picinich 171.

May 14 - K. Koebel 267/213/663 scratch series, J. Gormley 246/184, R. Mulderig Sr. 216/205, S. Frei 216/214, B. Mullany 202/ 195/194, P. Wynkoop 191/191, M. DiMaiuta 181/179, K. Conkling 180/173, S. DiMaiuta 230, K. Burns 219, A. Pinelli 216, K. Dilgen 215, P. Wichrowski 210, R. Eggert 209, G. Mehl 208, B. Tozzie 201, D. Riley 192, J. Pinelli 187, T. Mehl 184, P. Manzella 181, G. Riker 180, D. Keating 177, B. Rothe 177

Winners of the Second Half: High Hopes

Bowling Awards Party

The Bowling Awards Party will be held at Rock Hill Country Club on Friday, June 5, from 6 to 10 p.m. The cost is \$5 each for bowlers and their guests, which includes dinner and open bar.

Coming Up Around BNL

On Friday, May 29, the Greater New York Chapter of the Health Physics Society (GNYCHPS) will hold a symposium on "Brookhaven National Laboratory: Lessons Learned," at the Brookhaven Center. The symposium theme will review the BNL experience of discovering elevated tritium levels in the on-site groundwater. The registration fee of \$45 covers lunch and snacks, however, Lab personnel may attend the talks only at no charge. To register, contact Kathleen McIntyre, Ext. 5868, fax Ext. 7497, or e-mail, McIntyre@bnl.gov, by Tuesday, May 26. The agenda includes: 8:30 a.m. Registration

9:15 a.m. GNYCHPS President William Duggan - Welcome

- 9:30 a.m. Robert Crease, BNL Historian & State University of New York at Stony Brook (USB) - BNL history and the social dimension of science
- 10:15 a.m. Robert Casey, Special Assistant for Environment, Safety & Health and Quality - Environmental, safety & health issues
- 11:15 a.m. Douglas Paquette, BNL hydrogeologist A technical discussion of the groundwater issues
- 1:30 p.m. John Marburger, BNL Director BNL 's future direction 2:00 p.m. Mona Rowe, Manager, Media & External Publications - The
- public affairs perspective 2:45 p.m. Charles Billups, U.S. Department of Energy's (DOE) Office of
- Energy Research The impact on DOE science and environmental, safety & health programs 4:00 p.m. Conclusion

Peter Ells, Chief of Gastroenterology at USB, will discuss "Common GI Problems" at the next Healthline Lecture offered by the Health Promotion Program of the Occupational Medicine Clinic, on Tuesday, June 2, at noon, in Berkner Hall.

A Department of Advanced Technology seminar of Lab-wide interest, "The China Academy of Engineering Physics (CAEP): An Overview of Its Past, Present & Future," will be given by CAEP President Side Hu on Wednesday, June 3, at 10 a.m. in the Physics Seminar Room, Bldg. 510.

Pianist Lucerne DeSa will return to BNL to give the next BERA Concert on Wednesday, June 3, at 8 p.m. in Berkner Hall. On the program will be Ernest Nazareth's Three Tangos and Alberto Ginastera's Sonata No. 1, Opus 22, and selections from Enrique Granados' Goyescas, Isaac Albeniz's Suite Española and Heitor Villa-Lobos' Cirandas. The concert is open to the public, and all are welcome. While admission is free, donations to the BERA Concert Committee are gratefully accepted to help fund future programs.

BERA Announces Changes, Swim Classes

dren must be a minimum of 42 inches

tall. Each child will be scheduled for

one lesson a week for a total of eight

lessons. On completing the course,

children who qualify will be awarded

with American Red Cross certificates.

ending on Monday, August 31, classes

will be held Monday through Friday,

2:15-3:15 p.m. Participants should

time of registration, plus a \$2-a-day

admission fee that will be waived on

presentation of a season pool ticket.

form at Human Resources, Bldg. 185,

8:30 a.m.-5 p.m.; the BERA Sales Of-

fice, Berkner Hall, Tuesday-Friday, 9

a.m.-1:30 p.m.; or the swimming pool

during scheduled hours. Mail or de-

liver applications with the \$50 regis-

tration fee in a check made payable to

BERA to the Recreation Office, Bldg.

185, no later than Friday, June 12.

The fee will be \$50 per child at the

To register, pick up an application

arrive at 2 p.m for preparation.

Starting on Tuesday, July 7, and

Summer schedules will be in effect at facilities run by the Brookhaven Employees Recreation Association (BERA), as follows:

• Sales Office — Effective June 1, the BERA Sales Office will be closed on Mondays until further notice. It will continue to be open Tuesday through Friday, 9 a.m.-1:30 p.m.

• Gym & Pool — The gym and pool will close for the Memorial Day weekend (see Holiday Notes). After that, the gym will be closed on weekends for the summer months. The usual schedule will resume on Saturday, September 12. A copy of the summer schedule is available at the gym office.

Effective June 1, the pool will be closed on Sundays.

Children's Summer Swim Class

Applications are now being accepted for BERA's summer swim program, which is open to children of all Lab employees. For their safety, chil-

June Book Fair

Fun reading ranging from children's stories to cookbooks to The New York Times' best sellers will be in stock and available at great prices at Berkner Hall on Thursday and Friday, June 18 & 19, when BERA will once again sponsor a book fair, 10 a.m.-3 p.m. These new, hardcover books will sell at a 50-70 percent reduction. In addition, some gift items will be available. Charge cards - Discover, Master Card and Visa — will be accepted.

Call Andrea Dehler, Ext. 3347, or Kay Dellimore, Ext. 2873, if you have any questions.

Softball

Results reported as of May 15

Results reported as of May 15				
	League E1		League M1	
	Cleen Sweep	1-0	Gour-Mets	2-0
	Cobras	1-0		2-0
	Magnuts	1-0	OER Wellheads	0-2
	Blue Jays	0-1	Stingrays	0-2
	Phoubars	0-1	League M2	
	Scram	0-1	 rained out 	
League E2				
	CCD	1-0	Hy Tech	0-1
	Gas House Gorillas	1-0	Mesocyclones	0-1
	Hammerheads	1-0	Phase Out	0-1
	Lights Out	1-0	Rockets	0-1

League E3 — no scores reported

Amateur Radio

The BERA Amateur Radio Club will next meet at noon on Thursday, May 28, in Room D, Berkner Hall. All Lab employees, guests and licensed amateur-radio operators are invited. For more information, call Chris Neuberger, Ext. 4160; or Nick Franco, Ext. 5467.

Be Suspicious About Counterfeit Items

Since the 1980s, faulty, fraudulent parts have plagued the U.S. Department of Energy (DOE), as well as the U.S. Department of Defense and industry. Sold and distributed through various channels, these suspect/counterfeit items (S/CI), as they are commonly known, usually look like the real thing, but often they do not comply with established standards.

S/CIs range from fasteners to electrical items to piping components, and, at BNL, they have been found in inventory and installed in equipment.

"It is important that Lab personnel learn how to identify suspect/counterfeit items, and that they know what action to take if they find any," said Victor Gutierrez, who heads BNL's Quality Management Office (QMO).

As a reference for scientists, engineers, technicians and maintenance personnel, QMO has developed a laminated pocket card that details suspect fasteners and a booklet that describes both the typical features found on suspect items and pictures of actual counterfeit items discovered at DOE facili-

For tickets, contact Debbie Keating, Ext. 3888, or Tracy Blydenburgh, Ext. 4422, no later than Friday, May 29.



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Safeguards & Security Update

Foreign Visits and Assignments

Responsibility for the Lab's Foreign Visits & Assignments (FV&A) Program has been assigned to BNL's Safeguards & Security Division (S&SD). All required reports related to this program should be forwarded to its coordinator, Hank Raimondo, in Bldg. 30. For more information, call him at Ext. 7258.

DOE Safeguards & Security Profile Visit

The U.S. Department of Energy (DOE) has been conducting site profile visits of all its facilities over the past year, developing individual site safeguards and security profiles to determine the overall status of the Safeguards & Security Program throughout the DOE complex. BNL is scheduled for its site profile visit June 15-26. The profile visit will be conducted by a team of approximately ten DOE personnel from the Office of Independent Oversight at DOE Headquarters.

The activities during the BNL profile visit will be coordinated by S&SD in coordination with the DOE Brookhaven Group.

The DOE team will be examining the Lab's safeguards and security programs, such as physical security, operations security (OPSEC), unclassified computer security and classified computer security. Their examination will include document reviews and may include site interviews to determine a base-line for these programs.

ties

The card and the booklet can be viewed on QMO's home page on the World Wide Web, at http://www.qmo. bnl.gov/, under "Suspect/Counterfeit Items (S/CI) Information." Hard copies of both are available from Gina Bernard, Ext. 3689.

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 re-(continued on page 4)

Classified Ads

(cont'd.) quest 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 Man-ager, 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 de partment representative named. Send C.V. to M. Kipperman, Bldg. 185.

POSTDOCTORAL RESEARCH ASSOCIATE - In the Imaging & Neuroscience Group, to examine the effect of dopamine neuron activity on the binding of PET and SPECT radiotracers to dopamine receptors. The project will examine radiotracer binding using both in vivo rodent models and in vitro rat brain slice model. Objectives include evaluating the potential for using PET and SPECT radiotracers to monitor and quantify endogenous levels of synaptic dopamine in the brain during imaging experiments. Background in neuroscience or pharmacology required and experience with small animal studies, binding assays and/or autoradiography preferred. (reposting) Under the direction of Drs. S.J. Gatley and A.N. Gifford. Medical Department

POSTDOCTORAL RESEARCH ASSOCIATE - Strong background in the use of ultrahigh vacuum tech-niques for surface characterization and chemical reactors for catalytic studies under high-pressure conditions. Will participate in studies of the structural, electronic and chemical properties of metal and metaloxide surfaces. Experiments will be carried out at beamlines of the National Synchrotron Light Source: UV ring (single crystals, photoemission, NEXAFS) and x-ray ring(high-surface area catalyst, XRD, EXAFS, high-pressure reaction kinetics). Under the direction of J.A. Rodriguez. Chemistry Department.

SCIENTIST - Will head a theory group of the Accelerator Test Facility in support of the research planned on plasma wakefield acceleration, Compton backscattering for the production of picosecond x-rays and similar projects. Requires significant previous expe-rience, an established reputation in field of strong laser, electron beam and laser, plasma interaction theories and simulations. Position will require guiding research associates and students, and collaboration with other groups both inside and outside the Laboratory. Under the direction of Ilan Ben-Zvi, National Synchrotron Light Source Department.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees

MK 2579. INDEPENDENT OVERSIGHT ASSESSOR -Requires a BS in science or engineering and at least several years' experience in implementing a quality-assurance program and/or self-assessment programs. Experience in the implementation of DOE Order 5700.6C Quality Assurance is also required. Lead auditor certification and/or knowledge of ISO 14000 preferred. Management and policy development experience, and a working knowledge of the Malcolm Baldrige process desirable. Responsibilities will include conducting formal evaluations of Laboratory programs, processes, systems, Directorate self-assessment programs, as well as special studies. Will assist in the development, coordination and execution of an Independent Oversight Assessment Pro-gram. (reposting) Independent Oversight Office.

MK9999. TELEPHONE OPERATOR - (substitute position) Under general supervision, places incoming and outgoing local, toll and long-distance commercial and FTS calls in the operation of multiple position switchboard. Must be familiar with Laboratory organization, personnel and methods of locating unlisted individuals and contacting emergency personnel at all times. Maintains necessary records of toll charges and performs telephone-related clerical duties (reposting) Computing & Communications Division.

DD7780. SECRETARIAL POSITION - Requires an AAS degree in secretarial science or equivalent experience, excellent communication and interpersonal skills, and a thorough knowledge of Lab policies and procedures. Experience with IBM PC, Windows 95 and IPAP, and the ability to make travel arrangements also required. Knowledge of DBase, Excel and Access desired, as is previous accounting experience. Duties will include handling telephones, supplies, mail and filing. Will provide backup support to the Administrative Office. (reposting) Computing & Communications Division

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates. MK7014. SPECIAL ASSISTANT TO THE ASSISTANT DIRECTOR FOR COMMUNITY INVOLVEMENT & PUBLIC AFFAIRS - Requires a bachelor's degree in DD7857. TECHNICAL POSITION - (term appointment) Requires an AAS in an electrical or mechanical discipline, or equivalent experience in one or more disciplines, such as mechanics or electromechanical assembly. Must be able to work from prints, sketches and verbal instructions. Work involves the construction of prototypes through final testing and installation. Responsibilities will include working directly with engineering in the design, fabrication and main-tenance of power supplies and related equipment. Relativistic Heavy Ion Collider Project.

DD7640. TECHNICAL POSITION - (term appointment) Requires an AAS and a knowledge of mechanical construction and shop techniques, as well as general knowledge of simple electrical circuits. Du-ties will include mechanical assembly, as well as the maintenance of turbo pumps and foreline pumps for various vacuum systems used in the Electron Spectroscopy Group. Physics Department.

DD7323. PLUMBER A POSITIONS - (temporary) Under minimum supervision lays out, constructs or installs, repairs, and maintains water and gas distributions systems, related facilities and auxiliary equipment and equipment utilizing water, gas and heat distribution services. Plant Engineering Division.

DD7325. ELECTRICIAN A POSITIONS - (temporary) Under minimum supervision, lays out, constructs, installs, maintains, repairs and operates (in accordance with the National Electrical Code, or as otherwise directed) electrical systems equipment controls and related devices. May be required to perform similar duties on other than maintenance division equipment and facilities. Plant Engineering Division.

DD7854. TECHNICAL POSITIONS - (temporary) Requires a high school diploma or equivalent and the ability to work well as a member of a team. Under direct supervision, will perform routine functions, including cable installation, fabrication, installation, assembly, operation or maintenance of equipment or facilities. Agility, stamina and the ability to work at heights of up to 25 feet also required. Prior technical work experience is a plus. Relativistic Heavy Ion Collider Project.

NS7444. CNC PROGRAMMER - (term appointment) Requires a minimum of five years' programming experience using manual and computer-assisted methods. Under general supervision, is responsible for preparing programs of moderate complexity for computerized numerically controlled equipment. Determines the most economical and expeditious methods for use of numerically controlled equipment dealing primarily with two and three axes, occasionally four axes. Prepares and verifies numerical control programs for machine uploading, along with numerical control methods operation sheet, including setup information and sketches. Performs other related assignments as required. Central Shops Division.

NS7698. ENGINEERING POSITION (term appointment) - Requires an advanced degree in an appropriate engineering field, Ph.D. preferred, and training in thermal sciences and cryogenics. Proficiency with computational analysis on thermodynamics, mass and heat transfer, fluid mechanics and gas dynamics required. A strong background in cryogenic systems and techniques, including large helium refrigerators and small cryocoolers (GM coolers), necessary. Work will include the design analysis of the cryogenic systems for superconducting magnets, which include helium two-phase flow calculations, cryocooling analysis against thermal and nucleus particle heating fluxes, magnet cooling flow circuits analysis, magnet quench pressure and temperature calculations, and design analysis for electrical power leads of magnets. Alternating Gradient Synchrotron Department

NS7476. P&GA SCANNING CLERK B - (term appointment) Under direct supervision and administrative direction, performs routine scanning, indexing, and electronic file and CD creation functions, including preparation of documents for scanning, keyboarding of indexed fields, inspecting scanned images to ensure quality and legibility, and generating or duplicating electronic files for CDs containing scanned images and indices. Required qualifications include experience working with a personal computer and keyboarding skills. Experience with scanning and indexing desirable. Information Services Division

an engineering-related discipline and significant experience in nuclear facility operations, health physics, chemistry and project management. Significant experience in all aspects of public and community affairs, particularly with local community organiza-tions is necessary. Skills in developing and conduct-ing training and public presentations is highly desirable. Will be directly accountable to the Assistant Director for Community Involvement & Public Affairs to provide technical assistance in developing and implementing strategic communications and community-involvement programs. Will be expected to provide technical assistance in planning and implementing communications programs in connection with the BGRR, the HFBR and the CERCLA process, and will assist in the preparation of briefing books position papers, press releases and fact sheets. Will also assist in the preparation of performance-mea-sure project management, oversight of divisional training activities, and activities supporting the Citizens Advisory Committee and Brookhaven Executive Roundtable. Director's Office.

DD7852. TECHNICAL POSITION - (term appointment) Requires an AAS in mechanical technology or equivalent experience and demonstrated mechani cal aptitude, including a knowledge of machine tools, precision assembly and gluing techniques. Previous experience with construction of wire-chamber detectors highly desirable. Will participate in the fabrication of time expansion chamber detectors with a small team of physicists and technicians for PHENIX ex periment at RHIC. (reposting) Relativistic Heavy Ion Collider Project.