BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

BNL Signs Four New Cooperative R&D Agreements

BNL has signed four new Cooperative Research and Development Agreements (CRADAs) with four separate companies, bringing to 60 the total number signed since 1992.

The varied topics of these CRADAs, which range from preventing skin cancer to testing mirrors for defects in advanced synchrotron sources, reflect the broad range of Brookhaven's work. BNL's participation in these CRADAs is funded by the U.S. Department of Energy's Research Laboratory Technology Transfer Program.

• Amoco Production Company, Naperville, Illinois — Methanol synthesis.

Methanol is a chemical with numerous commercial uses. It serves as a fuel, a solvent and a feedstock to synthesize other chemicals. The demand for methanol has increased tremendously in the U.S., due to a new U.S. Environmental Protection Agency mandate that requires that gasoline be oxygenated with a methanol compound, methyl t-butyl ether, to decrease pollution.

BNL's principal investigator in this CRADA, Devinder Mahajan, Department of Applied Science, is working with other researchers from BNL and Amoco to evaluate a novel way to synthesize methanol that could save as much as 40 percent in production costs, according to a preliminary economic study. Even a small decrease in production costs could result in big savings in the over $5-billion market for methanol.

The new method uses a catalyst developed at BNL to convert natural gas to methanol under much lower temperatures and pressures than required with a commercial catalyst.

Associated Universities, Inc., owns the patent for this BNL catalyst and licensed it exclusively to the Electric Power Research Institute (EPRI), which invested over $2 million in the technology to test it extensively at Brookhaven. EPRI selected Amoco as its industrial partner to bring this technology to the marketplace.

"Though optimization of the catalyst formulation will be emphasized, we're planning to set up a state-of-the-art test unit from Amoco to test the catalyst's performance over the long-term," said Mahajan. "In laboratory tests, Brookhaven's method achieves better than 90 percent conversion, compared to 20 percent produced commercially."

The new catalyst may be used to liquefy natural gas into methanol, so that transporting it from remote areas is safer and more economical. Other potential applications include using methanol as a carrier for hydrogen transport.

• Applied Genetics, Inc., Freeport, New York — Preventing skin cancer.

The worldwide incidence of skin cancer in its most deadly form, malignant melanoma, has been increasing at the annual rate of 5 percent among fair-skinned people in the U.S. and Europe. Ultraviolet radiation from the sun causes chemical changes in DNA, including the formation of pyrimidine dimers, a type of DNA lesion that can lead to skin cancer.

Most individuals have several DNA repair mechanisms that remove dimers from DNA. One is called excision repair, and it involves the action of several enzymes, including one called UV endonuclease.

People afflicted with a rare genetic disease called xeroderma pigmentosa lack this enzyme and, thus, develop multiple melanomas that are usually fatal.

Betsy Sutherland, Biology, is BNL's principal investigator working on this CRADA with former BNL visiting fellow Daniel Yarosh, who is now president of Applied Genetics.

They are developing a lotion that contains UV endonuclease encapsulated in liposomes, which can be applied directly to the skin to alleviate the sun-sensitivity of xeroderma patients. Applied Genetics is also looking into wider use of this type of lotion to increase protection against skin cancer among normal individuals who are particularly sensitive to the sun.

• Continental Optical Corporation, Hauppauge, Long Island — Testing high-tech mirrors.

BNL is working with Continental Optical Corporation to develop a device to test mirrors in new synchrotron sources that use x-rays and ultraviolet light for research in many fields, including physics, materials science and biology. These synchrotron mirrors focus beams of synchrotron light onto a sample under study.

The CRADA team, headed by BNL's Peter Takacs, Instrumentation, and Manfred Grindel, president of Continental Optical, had previously developed the Long Trace Profiler II, which tested mirror defects in the laboratory. The new device, called an In-Situ Scanning Surface Profiler, will test mirrors directly in the experimental beam line while the mirrors are exposed to x-rays.

Mirrors in advanced synchrotrons, such as the new Advanced Photon Source now under construction at Argonne National Laboratory, must be continually cooled because excessive heat can cause distortion. The new in-situ profiler will be designed to operate in an ultrahigh vacuum envi-

(cont'd on page 2)

Working under the CRADA with Applied Genetics, Inc., Betsy Sutherland, Biology, evaluates DNA molecular-length standards used to determine if human cells treated with UV endonucleases have fewer DNA lesions than do untreated cells.

Photos on this page by Roger Stoutenburgh

Land Use Meeting

To present a preliminary draft of its Future Land Use Plan, the Lab will host a public meeting on Tuesday, May 2, at 7 p.m. in Berkner Hall. Employees and the general public are invited to attend.

Although there are no plans to close BNL, the plan is being drafted under BNL's Assistant Director for Management & Physical Plant, Michael Bebon, at the request of the U.S. Department of Energy (DOE).

The purpose of the document is to allow the Lab and the community surrounding it to give their input to DOE regarding the site's future use.

The future land-use planning process began on December 13, at a kick-off meeting to which state, county, town and local groups and individuals were invited.

Since then, the opinions of civic associations and focus groups have been sought in discussions and workshops.

After the presentation of the draft's contents and a discussion on how it was prepared, comments from the audience will be welcomed and questions will be answered.

The input from this public meeting will be used in formulating the final draft, which will be presented to the public for comment in August before it is published in its final form and presented to DOE by September 15.

Window on a Workshop on Windows

The area of structural biology research that uses x-rays to determine the atomic structure of crystalline biological macromolecules has exploded in recent years. Accompanying this rise has been a surge in computer software to help scientists measure and interpret the complex data produced at such facilities as BNL's National Synchrotron Light Source (NSLS). Now, crystallographers and computer programmers are teaming up to make the software that controls beam lines and data-measurement instruments more user-friendly. The innovations have come through the use of graphical user interfaces (GUIs), which bring instruments and control programs together in "point-and-click" panels. More than 60 structural biology and computer experts, representing industry and nearly every synchrotron facility in the world, met at BNL on March 19-21 to share ideas and information at a Workshop on GUIs for Synchrotron Protein Crystallography. Among the GUIs demonstrated was one developed for structural biologists using the Biology Department-sponsored NSLS beam line X12-C, demonstrated here by (sitting, from left) John Skinner, Biology, and Kate Feng-Berman, NSLS Department. Looking on are: (standing, from left) workshop co-sponsors Bob Sweet, Biology, and Steven Ealick, Cornell University; and James Pflugrath, Molecular Structure Corporation, who helped Sweet, Skinner and Feng-Berman develop the GUI through a program coordinated by the Argonne National Laboratory Structural Biology Center.

Coming Up

Russian physicist Lev Borisovich Okun, of the Institute of Theoretical and Experimental Physics in Moscow, Russia, will give the next AUI Distinguished Lecture entitled "Vacua, Vacuum: The Physics of Nothing," at Berkner Hall on Thursday, May 11, at 4:30 p.m.

The lecture is free and open to the public.

Club Unites BNL's Physics Grad Students

No matter what the field, every science graduate student's education includes a heavy dose of intense research. And when the long hours in the lab or on the computer are over, it's time for socializing with fellow students.

Recently, that became easier for students in physics-related fields doing research at BNL. Since November, they have gathered every other Tuesday evening for meetings of a club founded by them and for them: the BNL Physics Graduate Students Club.

The club's gatherings, held in the Physics Department lounge in Bldg. 510, give graduate and postdoctoral students a chance to leave their beam lines and workbenches and meet their peers from around site.

But they're also a practicing ground for important career skills: Each week, a member gives an informal talk on his or her research, in fields ranging from structural biology to high energy physics. Meanwhile, other students ask questions and make suggestions as everyone munches on pizza.

But, said club founder Robin Appel, "The main goal is to have something for physics graduate students as a social activity."

Appel, a Yale postdoctoral member of the E865 team, which is looking for rare kaon decays at the Alternating Gradient Synchrotron (AGS), formed the club on the suggestion of her former thesis advisor, AGS Physicist Gerry Bunce.

Said Appel, "After hearing about a similar group at Fermilab, he suggested that there needed to be something for grad students at BNL. So, I looked around for someone to help me with it." She found Tom Hemmick, an assistant professor at the State University of New York at Stony Brook.

Roger Stoutenburgh

Members of the new BNL Physics Graduate Students Club meet every other Tuesday evening in the Physics Department lounge. Led by (from left) Robin Appel, a Yale University postdoctoral student working at the Alternating Gradient Synchrotron (AGS), and Tom Hemmick, a State University of New York at Stony Brook assistant professor, the group has members from around site, including: (from left of Hemmick) Khamit Ardashev, National Synchrotron Light Source; Charles Barton, Reactor Division; Fang Shu, Biology Department; Yingchao Zhang, AGS; and Alok Gambhir, Chemistry Department.

Together, they have organized a schedule of speakers that has included not only graduate students and postdocs, but also AGS Department Chairman Derek Lowenstein, who gave the group an employer's perspective on physics careers. Appel and Hemmick hope to expand the club's activities soon to include visits to members' experiments and more social events like a recent bowling excursion.

The BNL Physics Graduate Students Club is open to any physics graduate student or postdoc working in any field, and welcomes students who are at the Lab for short beam-time experiments or longer assignments. The meeting schedule and talk topics are posted on the AGS Users Executive Committee World Wide Web home page. For other information, call Appel at Ext. 4967, or Hemmick at 632-8120. — Kara Villamil

CRADAS (cont'd)

ronment under extremely high radiation levels.

• LI-COR, Inc., Lincoln, Nebraska — DNA sequencing.

Researchers from BNL and LI-COR, Inc., are developing technology to increase the rate and lower the cost of DNA sequencing — a method used for determining the sequence of nucleotide components in DNA, the carrier of genetic information.

DNA sequencing is essential to biomedical and agricultural research, genetic screening and diagnosis, and to large-scale genome mapping and sequencing projects, such as the Human Genome Project, a national endeavor to identify all 100,000 human genes and to sequence all three-billion base pairs of human DNA.

BNL co-principal investigators John Sutherland, Biology; Erik Johnson, National Synchrotron Light Source; and Peter Takacs, Instrumentation, will work with LI-COR researchers to increase the number of nucleotide bases that can be determined in a single experiment using a technique called gel electrophoresis. It is a process in which DNA molecules migrate in a gel according to size, when an electric current is applied to the gel. — Diane Greenberg

Sign Up for Disney

Openings are still available for BERA's fifth annual trip to Disney World in Florida, October 29-November 4. To sign up, bring a deposit of $125 per person to Recreation Supervisor M. Kay Dellimore, Personnel, Bldg. 185, where you can also stop in to see a "Disney Family Collage."

The seven-day, six-night trip includes round-trip airfare, six nights at Disney's Polynesian Resort, and much more. Costs for adults are: $853-4/room, $924-3/room, $1,066-2/room, $1,592-single. When in an adult's room children ages 3-9 pay $459 each, ages 10-17 pay $541 each, age 2 pay $238 each for airfare only, under 2, no cost.

For more information, call Dellimore, Ext. 2873, or Andrea Dehler, Ext. 3347.

Forsyth Sails Off Into the Sunset, Becomes Overseas Correspondent

Upon his retirement today after approximately 33 and 1/2 cumulative years of service to the Lab, Eric Forsyth, a senior electrical engineer with the Relativistic Heavy Ion Collider Project and the former Chairman of what was the Accelerator Development Department, will have full time to ready himself for an adventure of a lifetime: a two-year cruise around the world in the *Fiona*, the 42-foot cutter which he built and first sailed in 1983.

As he did on his boat's maiden voyage to Bermuda and the 60,000 miles worth of passages since then to the likes of the Azores, the South Pacific and Cape Horn, Forsyth will set sail on July 5. He will leave Weeks' Yacht Yard in Patchogue, heading first for Bermuda, then St. Martin, next Fernando de Noronha, on to Natal, etc., until he comes round again to Bermuda on or about August 10, 1997, and arrives on Long Island around that September 3.

His crew of three, including himself, does not yet definitely include any other BNLers on either the first or second leg of the 30,000-mile voyage, though one berth remains to be filled. While the other crew will come and go at several transfer points along the way, Forsyth has planned one-month vacations, between each May and June, from his maiden retirement cruise, during which he'll fly home and back.

To keep the Laboratory community abreast of his adventures on the high seas, Forsyth plans on sending missives to the Bulletin, which will be published as space permits.

He'll thereby be joining the ranks of the Bulletin's other overseas retiree correspondents: Robert Louttit, who sailed around the world after retiring in 1986, and Dennis Puleston, who, since retiring in 1970, has worked as a ship's resident naturalist on voyages to destinations ranging from the Amazon to the Artic and many places in between.

Eric Forsyth, at the helm of the *Fiona*.

Weight Watchers

Registration for the next Weight Watchers at Work program will be held on Wednesday, May 3, from noon to 1 p.m. in the Brookhaven Center dining room. The fee is $89 for either eight or ten sessions, depending on the number of registrants. For more information, call Health Promotion Specialist Mary Wood, Ext. 5923 or 4567.

Equipment Demo

Hewlett-Packard will hold a 1995 Technology Exposition on Tuesday, May 2, from 10 a.m. to 2 p.m. in Berkner Hall. It will feature the following new instrumentation products: VXI-based high-speed data-acquisition devices; modular microwave instrumentation; basic counters, power supplies and function generators; scopes, prototype and digital communication analyzers; radio-frequency communications and radio test sets; signal analyzers; component testers; and deep-memory and portable logic analyzers.

Perfect Attendance Cash Awards

BNL's 1994 Perfect Attendance Awards, each one a $200 savings bond, have been won by 26 full-time employees who were on the technical and clerical schedules. Seventeen of the awardees were previous winners, and seven of those, whose names are highlighted with a single star, have won for two years in a row; another one, listed with a plus, won also in 1991, the year the award was inaugurated; five others, listed with double stars, have won for the past three consecutive years, and four amazing, three-starred recordbreakers have completed four years of perfect attendance.

Roger Stoutenburgh

Congratulations to the perfect attendees: (seated, from left) William Jew*, National Synchrotron Light Source (NSLS); Lynette Bennett, NSLS; Charles Gardner, Alternating Gradient Synchrotron (AGS) Department; John Bloom*, Reactor Division; Marcia Bero, Safety & Environmental Protection (SEP) Division; Maureen McDonnell, Fiscal Division; (standing, from left) Lawrence Lettieri*, SEP; Paula Pozzoli***, Staff Services Division; Marjorie Chaloupka**, Department of Advanced Technology (DAT); Eric Klug***, SEP; Marc Montemagno+, NSLS; Joseph Lorenzoni, Relativistic Heavy Ion Collider (RHIC) Project; Raymond Van Houten*, Reactor; Donald Von Lintig Jr., AGS; Louisa Barone**, Personnel Division; Maureen Anderson, DAT; and Frederick Orsatti*, RHIC. Not present were: Paul Callegari**, AGS; Joseph Cracco*, SEP; Robin Gianopoulos***, Reactor; Jennifer McNerney, Fiscal; Timothy Murray, Management Information Systems Division; Walter Richters Jr.*, Physics Department; Antonio Rodrigues**, NSLS; Phyllis Tinsley-Smith**, Biology Department; and Patriche Windley*, Fiscal.**

Upton's Archery Champ of the U.S. Northeast: Kathy Greene

"I never expected to win!" exclaims Kathy Greene, a member of the BERA Archery Club, and, since February 26, the female 3-D Indoor Northeast Champion of the International Bowhunter's Organization. In 3-D indoor competitions, archers train their bows on three-dimensional foam targets that are almost life-size models of various game.

"The targets are at an unknown distance, so when you take aim, you have to judge the distance from where your posiiton is to the target," explains Greene. "In most big competitions, everyone shoots the first day, and the top ten in each class qualify for the final contest, usually held on the next day. This was the biggest indoor competition in the Northeast with a total of 600 entrants divided into different classes. Each competitor shot at 40 targets. Then, you had to call a special number in the evening to hear a recorded message of who had qualified to shoot next day."

Greene's class had been accidently left off the tape, so she nearly didn't return. "I didn't think I had done particularly well, and the competition was about an hour's drive from the friends I was staying with," she explains. "Luckily, Bill Schoenig [BERA Archery Clup president] was there, and he insisted we should check it out. We drove back early the next morning. I found out that I had qualified for the final, and in the end, I won!"

Kathy Greene, female 3-D Northeast Indoor Champion of the International Bowhunters Organization, with her compound bow, an Oneida Silver Eagle, and her championship trophy. — Photo by Roger Stoutenburgh

Greene, who is a data analyst in the U.S. Department of Energy's Brookhaven Area Office, was introduced to archery by Schoenig in August 1993. "After watching Bill for about a year, I thought I'd try — and thought it was great," she says. "One of the best things is that it's a very friendly sport that whole families can join. There are classes for all ages and all different kinds of bow."

Greene uses a compound bow, which has complex devices attached — which, she says, make it easier to shoot accurately. Schoenig, on the other hand, prefers the traditional long bow.

One snag, Greene finds, is that most competitions are off Long Island — but at least for the BERA Archery Club, there's plenty of space to practice here on site. The club welcomes new members, and, in good weather, there is generally someone out at lunch time to help beginners and practice.

It's important that Greene practices, as by winning the northeast championship, she qualified for the world championship to be held August 10-13 in West Virginia. "I'm definitely planning on being there," she says.

— Liz Seubert

Another Ace Archer

Another champion in the BERA Archery Club is Mark McNeil, who won first place in the Suffolk County Invitational Indoor Archery Competion held at Smithpoint Archery. McNeil first started this sport 20 years back, gave it up, then, six years ago, began again. He uses a hoyt bow, a type of compound bow, and says that archery is a great way to relax.

Students' Basswood Bridges Falling Down

Each student donned safety glasses and watched intently as his or her carefully constructed small model bridge was placed under a large stress tester and crushed. Often, delicate basswood pieces the size of toothpicks flew several meters into the air, landing a long distance from the bridge.

The bridges were crushed or broken at the rate of one per minute at the BNL Model Bridge Contest, held on Saturday, March 4, in Berkner Hall.

Over 300 Suffolk County high school students entered the fifteenth annual contest sponsored by the Museum Programs of the Public Affairs Office. Each student was required to design and construct a basswood bridge according to certain size and weight specifications, with the goal being to support the greatest weight per gram of bridge mass.

Huntington High School students placed first and third in the contest, while a Patchogue-Medford student won both the second place and aesthetic awards.

Hildi Green, a Huntington senior, crafted the sturdiest bridge, which weighed 22 grams and supported 69 pounds, or 1,391 times its own weight, while Huntington freshman Christopher Hollweg's bridge weighed 19 grams and held 56 pounds — 1,293 times its weight. Michael Yee, a junior at Patchogue-Medford High School, created a 22-gram bridge, which was judged the most attractive and the second-strongest, capable of holding 66 grams or 1,324 times its weight.

The awards were gift certificates to Computer Discount Warehouse for $150, $125, and $100 for the first, second and third prize winners, and a $50 gift certificate for the aesthetic prize. In addition, BNL will treat the first and second place winners to a trip to Chicago, where they will compete in the International Bridge Building Contest on May 6.

Roger Stoutenburgh

Michael Yee, a junior at Patchogue-Medford High School, took both second place and the aesthetic prize with his 22-gram bridge in this year's Model Bridge Contest.

Hospitality

Barbara Jean Garcia, an independent beauty consultant, will be the guest speaker at the next Hospitality Committee meeting on Tuesday, May 2, at 9:30 a.m., in the Recreation Bldg. lounge. Spouses of Lab employees and guests are welcome. Bring the children. Refreshments will be served.

Enjoy Funky Flute and Blues Harp

If you are a jazz and blues fan, get your tickets now — while they are still available — to the special BERA concert to be held on Friday, May 5 at Berkner Hall.

Two local artists — Doug "Harmonica" McLean and his Blues Band and "funky fluteman" Dwayne D. Kerr — will play a mix of innovative music at the concert. Kerr will open the show at 7:30 p.m. with an energetic stage show featuring jazz with rhythm and blues overtones, ballads, hip-hop and dance music. McLean will take the stage at 9 p.m., playing intense, soulful blues on his harmonica and other instruments known as blues harps.

Tickets for the concert cost $10 for adults and $6 for senior citizens and children under 12. Purchase tickets at the door, or in advance at the BERA Sales Office, 9 a.m. to 1:30 p.m. weekdays, or from any of the following:

	Bldg.	Ext.		Bldg.	Ext.
M. Kay Dellimore	185	2873	Luis Nieves	179B	5350
April Donegain	134A	2459	Rosalie Piccione	355	3160
Andrea Epple	750	5943	Bridget Ramos	197	3452
Haskell Frei	750	5651	Edward Sperry IV	902A	2697
August Hoffmann	510C	3884	Arlene Wolochuk	902C	3428
Elliot Levitt	134	2495			

Inside Info

At Brookhaven Town's ninth annual Women's Recognition Night on March 28, BNL retiree **Ella McLean** was one of 11 women and one of two BNLers honored for their accomplishments and contributions.

While BNL Scientist **Prantika Som** was recognized for her excellence in science (see Brookhaven Bulletin of March 24, 1995), McLean was commended for her community service and volunteerism.

Ella McLean came to East Patchogue in Brookhaven Town in 1947, the year her late husband Lowell McLean joined BNL. She was hired by the Lab in June 1966 as a clerk in the then Photography & Graphic Arts (P&GA) Division and retired in June 1988 as a senior PG&A specialist.

The Town cited her volunteer work for various community organizations, including the then East Patchogue School District PTA, which she joined in 1947 and served as its first African American president, and the South Suffolk Council of Girl Scouts, over which she also presided.

In addition, McLean was praised for volunteering some 4,000 hours at Brookhaven Memorial Hospital since 1961 — longer than any other volunteer in the hospital's history.

In 1967, the McLeans donated a parcel of land adjoining the hospital, so it could expand its utility service.

Applause was also given for her volunteer service since 1948 to the Grace AME Zion Church in almost every capacity, from secretary of its board of trustees, to senior choir organist and director, to director of its food pantry and clothes closet. She is also a charter member of the Patchogue branch of the NAACP.

Volleyball

Playoff Final Results

Open League: G-Team 0, The Men & Me 3

League 1: Koopas 3, Rude Dogs 1

League 2: Monday Night Live 3, Fossils 2

League 3: Upton Ups 0, Take Five 3.

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Note to Diners

To accommodate those who want to start their work day, Monday through Friday, with an early breakfast, the Cafeteria will be serving food one half-hour earlier: Starting Monday, May 1, the Cafeteria will open for business at 7 a.m. instead of 7:30 a.m., but will close at 3:30 p.m. instead of 4 p.m. So, the new weekday hours will be 7 a.m. to 3:30 p.m.

Cafeteria Menu

Monday, May 1	
Soup: Three-bean w/turkey	.90/1.20
A la Carte: Hickory-grilled steak	3.95
Lite: Glazed ham & mushroom crêpes	3.65
Deli: Leg of lamb w/roasted garlic	3.20
Grill: Eggplant Parmesan	3.30
Tuesday, May 2	
Soup: Steak & vegetable	.90/1.20
A la Carte: Baked turkey Parmesan	3.65
Lite: Curried shrimp & rice stir-fry	3.95
Deli: BBQ brisket of beef w/slaw	3.20
Grill: Turkey w/apple-raisin sauce	3.30
Wednesday, May 3	
Soup: Minestrone	.90/1.20
Display Cooking: Pasta saute	4.75
Deli: Calypso pork roast	3.20
Grill: French dip	3.30
Thursday, May 4	
Soup: Split pea	.90/1.20
A la Carte: Farm-style shepherd's pie	3.65
Lite: Vegetable lasagna	3.65
Deli: Turkey w/apple-mustard sauce	3.20
Grill: Tuna Niçoise	3.30
Friday, May 5	
Soup: Chicken & wild rice	.90/1.20
A la Carte: Chicken w/peach relish	3.95
Lite: Shrimp & mushroom quiche	4.10
Deli: Dijonnaise pastrami	3.20
Grill: Tex Mex taco bar	3.30

Softball

If you want to play softball but are not on a team, contact Rich Scheidet, Ext. 5284, Bldg. 134C, to be included in a players pool, which will match players with team openings.

Bowling

Red and Green League

J. Griffin 279/256/224/759 scratch series, S. DiMaiuta 255/248/673 scratch, G. Weresnick 248/226/672 scratch, H. Arnesen 245/606 scratch, R. Mulderig Sr. 234/204/636 scratch, R. Raynis 236, R. Eggert 226/202, J. Cuccia Jr. 221/207/608 scratch, R. Wiseman 217/200/609 scratch, E. Larsen 217, J. Goode 216/214/207/637 scratch, R. Mulderig Jr. 215/213/602 scratch, J. Cuccia Sr. 212, F. Wahlert 210, G. Mack 208, R. Prwivo 207, A. Pinelli 202.

Purple and White League

S. DiMaiuta 249/197/181/627 scratch series, R. Eggert 228/222/187/637 scratch, M. Meier 222/213/195/630 scratch, J. Butler 228, J. Sheehan 213/181, T. Farmer 213, M. DiMaiuta 205/174/172, B. Belligan 198, D. Klein 192, C. Wood 191/189, K. Batchelor 191, P. Callegari 186, E. Zukowski, 185, J. Biamonte 183, P. Pozzoli 178, M. Reynolds 176, I. Batchelor 173, L. Farmer 172, M. Picinich 170, M. DiMaiuta converted the 5/10 split, Doug Fisher converted the 6/8/10 split.

Atlantic City Trip

The next BERA-sponsored, one-day trip to Atlantic City will be to the Claridge Hotel and Casino on the Boardwalk, on Saturday, June 10. The initial cost will be $22, but the hotel-casino will give a $12 coin return. The bus will leave the Brookhaven Center at 9 a.m., with an extra pickup at LIE Exit 63, if requested. After a seven-hour stay in Atlantic City, the bus will return around 11:45 p.m.

Buy tickets now at the BERA Sales Office in Berkner Hall, weekdays, 9 a.m. to 1:30 p.m. For more information, call Andrea Dehler, Ext. 3347; Rosalie Piccione, Ext. 3160; or Kay Dellimore, Ext. 2873.

Arrivals & Departures

Arrivals

Yue Peng ..... Biology
Costas G. Magoulas ..... AGS
Gary Miglionico ..... RHIC

Departures

This list includes all employees who have terminated from the Lab, including retirees:

Irene C. Bottke ..... Physics

Classified Advertisements

Motor Vehicles & Supplies

92 GEO METRO - 16k mi., 5-spd., 45 mpg, 3-yr. warr. Joe, Ext. 4496.

92 DOLLY MASTER TOW - 3500# G.V.W.R., surge brakes, swivel base, fender lights, ramps, v.g. cond., $600; cycle carrier, up to 350 lbs., $250. Bob, Ext. 2288.

91 BUICK LE SABRE - 4-dr., 6-cyl., 40k mi., full power, custom roof & trim, orig. owner, excel. cond, $11,950. Peter, Ext. 4235.

88 TOYOTA PICKUP - 4wd, 4-cyl., 5-spd., cap, new tires, good cond., $4,900. Ron, Ext. 5905 or 298-5625.

88 STERLING 825SL - red/camel int., luxury sports car, $5,500. Chellie, Ext. 7416/7426.

88 HONDA ACCORD LX-i - 4-dr., loaded, sunroof, new tires, brakes & exhaust, excel. cond., very clean, $4,500 neg. Jason, Ext. 4060.

88 OLDS FIRENZA - a/t, full power, cruise, ac, 4-dr., 90k mi., excel. cond., $2,500. Arnie, Ext. 2606.

88 MERCURY SABLE LS - s/w, all power, leather int., 15k on rebuilt eng., excel. in/out, $4,800. Ext. 5919 or 929-1099.

87 LAYTON RV - 24', p/tongue lift, full awning, ac, oversized propane tanks, refrig., many extras, $9,000. Gerri, 924-5533, Ext. 252.

87 FORD ESCORT GT - 1.9L, 96k mi., new tires, clutch, batt., muffler, good cond., $1,500. Ext. 4629.

86 HONDA CIVIC - h/b, red, 5-spd., sunroof, am/fm cass., 113k mi., good cond., $2,100. Kevin, Ext. 2963 or 744-0871.

85 TOYOTA CAMRY - 4-dr., 5-spd., ac, maint., orig. owner. Ext. 4342 or 924-3066.

85 MUSTANG - a/t, cruise, p/l, needs minor work, asking $400 or best offer. Steve, Ext 7309.

85 CORVETTE - red, a/t, full power, 29k mi., ac, excel. cond., $14,000 neg. Tom, Ext. 5899.

83 NISSAN SENTRA - 95k mi., 5-spd., runs well, rear end damage, $300 or best offer. 588-3999.

83 DODGE RAM CHARGER - 145k mi., am/fm cass., new muffler, low mi. on tires, excel. cond., $1,200. Al, Ext. 2575.

82 MONTE CARLO - blue, good running & body cond., $950 neg. Jim, Ext 7625.

78 VOLVO 244 DL - 4-spd., green, runs well, looks good, $900. 286-1358. Dan or Amber, 286-1358.

76 VOLVO 242 DL - m/t, good running cond., $900 or best offer; '77 244 DL parts car, not running, good body, $300 or best offer. Steve, Ext. 3018 or 369-5181.

76 CHEVY MALIBU CLASSIC - 350 small block, Holley 4-bbl. carb., Edelbrock manifold, chrome headers, B&M quicksilver posirear, $500. Phil, 286-1348.

72 VW BEETLE - 4-spd., rebuilt motor, VA car, $1,250. 929-8514.

SHOP MANUAL - 1986 Isuzu Trooper, $15. John, Ext. 3292 or 286-1348.

PARTS - Dart/Duster body, Dodge m/t, gear box & steering post, $75; Chevy manifold, 4-bbl. alu. high riser Eldebrock, non-EGR, ask. $75. Billy, Ext. 5046.

BUMPERS - new, front & rear, '95 Chevy van, $100 ea. firm; new radio, am/fm cass., w/speakers, $40. Don, Ext. 7237 or 744-2921 after 5:30 p.m.

ENGINE - Chevy, full race 327 60 over, roller cam, 360+ h.p., trade for pickup truck. Rich, Ext. 2943.

REAR BUMPER - for Ford pickup, w/towing & step capacity, excel., $35. Tom, Ext. 4507 or 878-1060.

Boats & Marine Supplies

14' MFG - fg, tri-hull, good cond., $75. Dave, Ext. 2109 or 472-9199.

23' CHAPPARAL - 1984, UHF/radar, o/riggers, DF, Live-well, full canvas, d/btys, bunks, excel. cond., must see, $10,000. Marilyn, Ext. 2259.

19' CRUISERS - fg, 115-h.p. Johnson, new trailer, p/winch, $2,200. Jim, Ext. 3372 or 821-0250.

19' O'DAY MARINER - w/trailer, good cond., $3,000. 286-1097.

19' CITATION - 1987, cuddy cabin, 165-h.p. i/o, Shoreline trailer, radio, DF, extras, very low hours, excel. cond., $10,000. Pete, Ext. 4235.

17' O'DAY SAILBOAT - outboard, trailer, excel. cond., $2,200. Ed, 581-1509.

14' HOBIE CATAMARAN - sail in good cond., $800. George, 878-1178.

CANOE - artistically hand-crafted wood-strip canoe, weights 64 lbs., unique, $3,200. Steve, 286-1474.

STAR SAILBOAT #6210 - fg, double hull, alum. spars, 2 sets sails, cover, trailer, meas. cert., good cond., $1,900. 472-1735.

BOAT TRAILER - galv., Shoreline EZ load, new axle & light for 19'-21' boat, excel., $665. Carl, Ext. 4420 or 722-3338.

BOAT CRADLE - welded steel, 6'x12' for 28' sloop, fits boats 28'-32, orig. $650, ask. $150. 744-5096.

PROPELLER - 13¼"x17", fits 70-h.p. OMC from late '70s to present, excel. cond., $40. Brian, Ext. 2799.

Furnishings & Appliances

DESKS - 30"x50" wood, $40; 36"x72" wood, $40; 30"x48" metal, fair cond., $25; 30"x60" metal, needs assembly, $20. Victor, Ext. 2395.

DINING ROOM - Queen Anne, cherry wood, 4 chairs, 2 armchairs, leaf, good cond., $500. Dave, 395-3484.

DISHWASHER - Westinghouse, heavy-duty deluxe, Potscrubber, black reversible panels, excel. cond., $170. Frank, Ext. 4220 or 277-0464.

DISHWASHER - Maytag, good cond., you take away, $25. 924-8213.

EARTHENWARE - 4 place settings, mix & match colors, Keratable, from Michael C. Fina, never used, $50. Bob, Ext. 2514.

MICROWAVE CART - oak look w/leaf, 2 door storage, excel. cond., $50. Donna, Ext. 2826.

REFRIGERATOR - Kenmore, almond, $200; elec. range, self-clean, $150; duo-jog bicycle cart, for 2 kids, $125; air conditioner, $125. David, 929-5521.

REFRIGERATOR - side-by-side, 21.5 cu., harvest gold; kero heater, round almond kitchen set; mica top table; 2 naug. chairs. Bill, 924-6940 after 7 p.m.

BEDROOM SET - 5-piece, 2 dressers, headboard w/ sliding doors, double mirror & lights, queen or dbl., excel. cond., asking $450. 744-3284.

BISTRO SET - w/2 chairs, glass top, black wrought iron frame, gray linen seats, excel., must see, orig. $600, sell for $275. 584-3830.

BUNK BEDS - mattresses, flat boards, good cond., $200. Steve, Ext. 7309.

CAR BED - for boy's room, w/matching chest, bookshelf, desk; infant's changing table, $250. Devinder, Ext. 4985.

CHEST - 8 drawers, tall, cherry wood, Pennsylvania House, $125; matching night table, excel. cond., $50. Ann, Ext. 7611.

CHINA - Sasaki Anello Gray, service for 16, service for 8 still in orig. boxes, $75. Carol, Ext. 2673 or 744-8632.

COUCH - 6', fabric, tan, floral print, wicker base, good cond., $150 neg. Tom, Ext. 5899.

COUCH - chair, recliner, $225. Cathy, Ext. 4037 or 744-8338.

DINING ROOM - circa 1950s, blond mahogany table, buffet, china closet, no chairs, $150. Pat, Ext. 3275, or 298-5648.

FOOD PROCESSOR - La Machine, Molinex, blender, veg. slicing discs, access., manuals, hardly used, $25 neg. Bill, 281-6498.

HOUSE CONTENTS - bedroom sets; antique sofa; chair; teak dining table; buffet; china closet; kitchen ware; reasonable prices. Niels, Ext. 3774.

MATTRESS - boxspring, frame, queen size, $230; 2 sofas, $70 & $90; storm door, $60; very clean, v.g cond. Ext. 3842 or 929-6925 after 7 p.m.

REFRIGERATOR - 16 cu. ft.; sofa; elect. range, $100/ea. Steve, Ext. 7862.

ROCKING CHAIR - solid pine, natural wood finish, like new, $150. Donna, Ext. 2716.

RUG - area, brand-new, spruce green, $60; sofa bed, $125; end tables, $40/pair; cocktail tables, $80/pair; lamps, $30/pair. Cathy, Ext. 4037 or 744-8338.

TABLES - 2, end, leather top, mahogany, $100; 36" wicker storage hamper; patio lounge chair, wood, $50. Kathy, 744-2203.

WASHING MACHINE - elec., GE, large capacity, family size, 5-cycle, works well, $100. Ext. 5076 or 744-4615.

Tools, House & Garden

POOL LINER - new, still in box, 15'x30', oval, orig. $200, asking $150. 744-8087.

ANNUALS - flowers, $10/flat, $5.50/½ flat; vegetables, $1/pack. Ray, 727-6818 after 4 p.m.

BULBS - canna, giant red, 3/$1; fig trees also avail. Jim, 325-9293.

GRILL - Quick-Cook, uses only newspaper for fuel, 5 times faster than charcoal, portable, used once, $10. Linda, Ext. 2733 or 395-6784.

MACHINIST TOOLS - D'Andrea model TA 120, boring & facing H.D. Dumore tool post grinder, 3"-7" micrometers, many more. 298-3855.

OUTDOOR TABLE - white, 5' octagonal, w/umbrella, $75; chairs, 8, white, plastic, stacking, $5/ea. 473-2473.

HEATER - quartz, Murray, $35; 24" square fluorescent fixture 2 U tubes, $50; 27" rust/gold lamps, w/ shades, $40/pair. 588-3999.

SHRUBS - & bushes, various types, sizes, will deliver, best offer. Kathy, Ext. 2267 or 395-6520.

SPRUCES - dwarf, Alberta, 1'-7'/$5 ft.; arboritaes, to 3', $2/ft., all nursery grown. 744-5867.

STOVE - coal/wood, Victory 700, excel. cond., thermostat control, access., flue pipe, elbows, damper, $200. Rich, Ext. 2410.

Sports, Hobbies & Pets

BICYCLE - Nashbar 300ETR, 27"x1⅛" tires, 67cm frame, 18-spd., Shimano Exage components, asking $250. Phil, Ext. 5669.

BIKE - men's, Fuji, 10-spd., $100 neg. Sue, Ext. 7235.

GOLF CLUBS - men's, RH, metal woods, 3 iron through sand wedge, putter, $100/set. John, Ext. 4185.

GOLF CLUBS - women's RH set w/bag, $100; men's RH set w/bag, $75. Paula, Ext. 4619 or 928-7769 after 5:30 p.m.

HOME GYM - Weider, body building system, v.g. cond., $55. Frank D., Ext. 2022 or 399-4480.

ORGAN - Lowry, needs cleaning & tuning, you pick up, asking $250. John P., Ext. 4867 or 928-8389.

PIANO - very old, oak, upright, full size, needs tuning, $400 neg. Frank D., Ext. 2022 or 399-4480.

PHOTO EQUIPMENT - cameras, projectors, many makes & models, all old types in good to new cond., list avail. Rich, Ext. 2410.

PHOTOGRAPHY - 27" square softbox w/louvres & mount for White Lightning light, $95. Pat, Ext. 3275 or 298-5648.

PUPPIES - yellow Labs, males, $500; females, $525; avail. June 1. 924-5505.

SCOOTER - 1993, elect., heavy duty, Rascal model 245, poss. medical reimbursement, $1,500 neg. 878-1572.

Audio, Video & Computer

ANTENNA - rotor, Channel Master, 50 pt. cable, used indoor only, $50; flash, Vivitar 550fd, $40. Ext. 5826.

COMPUTER - Mac Plus, 20 MB HD, printer, modem, software, $500 neg. Steve, Ext. 7309.

TV - 46", Sony projection screen, picture-in-picture, excel. cond. Bob, 286-2484.

TV - Mitsubishi, 46" projection screen, oak wood case, $400. 363-7633 after 5 p.m.

VCR - RCA VR 503, 4-head, remote, 3 mos. old, like new, $150; keyboard, Casio CT-150, 61 full size keys, loaded, $150. John, 722-5524.

VIDEO & CCTV EQUIPMENT - cameras, video camera, lenses, access., most new. Rick, Ext. 2410.

Miscellaneous

BABY'S ITEMS - single carriage, like new, $50; high chair, $25; Fisher Price workshop w/access., $50; wood table w/2 chairs, $20. Rex, 929-3235.

DRAFTING EQUIPMENT - 54"x38" BD w/desk, adjustable, Mutoh machine, 5-drawer E size flat dwg. file cabinet, print machine, exec. desks. 298-3855.

DRESS - suitable for mother of the bride, size 16, lilac, like new cond. Amy, 225-2487.

THEATRE TICKETS - 2, *Guys & Dolls*, Gateway, Bellport, May 7, 7 p.m., 4th row center, other shows also. Frances, Ext. 4382.

Free

BASSETT HOUND - lovable, approx. 18 mos. old, great w/children, no papers, house broken. Roberta 924-7854.

Yard & Garage Sales

BELLPORT - 4/29, 9 a.m .-3 p.m., 9 George Court.

RIVERHEAD - 4/29, 10 a.m.-4 p.m., north of Sound Ave. near Roanoke, follow signs, multifamily.

Car Pools

LIE EXIT 36 - fourth needed. John, Ext. 5181.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, religion, sex, age, national origin, disability or veteran status of the applicant.

For Rent

BELLPORT VILLAGE - upstairs, 1-bdrm. apt., full bath, all new, village amenities, $625/mo. incl. util. & cable. Jim, 744-2095 after 6 p.m.

CALVERTON - 2-bdrm. townhouse, 5 appl., carpeted, cac, f/p, patio, upper deck. Henry, Ext. 3558.

CENTER MORICHES - 1-bdrm. apt., full bath, large rms., parking, close to all, $550/mo. incl. all. George, 878-1178.

CENTER MORICHES, SOUTH - 1-bdrm. apt., 2 pvt. ents., ground floor, lg. sunny rms., parking, w/d, fully furn., sep. therm., cable ready, avail. now, $600/couple, $575/single, incl. util. 878-6760.

LAKE RONKONKOMA - 1-bdrm. apt. w/lovely lake view, 20 min. to Lab, sep. ent. w/parking space avail., $550/mo. all. Dom, 363-8206.

MIDDLE ISLAND - 1-bdrm. apt., pvt. ent., balcony, a/c, heat incl., a/c, kit., $650/mo. + 1mo. sec., avail. immed. 821-5484.

PATCHOGUE - 1 bdrm., pvt. ent., all new, nonsmoker pref., $625/mo. incl. all + sec. 289-0967 after 6 p.m.

WADING RIVER - 4-bdrm. contemporary home, SWRSD, 2½ baths, lg. bsmt., cac, 2-car gar., w/w & hardwood floors, all appl. 929-8613.

KEY WEST, FL - oceanfront studio timeshare, 5-star Coconut Beach Resort, sleeps 2, refrig., microwave, ac, tv, pool, jacuzzi, fish, swim, nightlife, week of July 29-August 5. Pat, Ext. 2539 or 929-3586.

LAKE GEORGE - lakefront cottage, sleeps 4-5, swimming 15' from your door, fishing, boat docking, fully equipped kit., 4 hrs. from NYC. 518-747-7821 or 518-499-2581.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, fully furn., 2 baths, pool, beach, golf nearby, April through Sept., $475/wk. Guy, Ext. 3147 or 689-5378.

For Sale

BELLPORT - 2-bdrm. ranch, 1 bath, fenced back yard, 100'x100' property, in village, walk to everything, $148,000. Frances, Ext. 4382.

EAST MARION - 1 acre bldg. lot, adjacent to greenbelt, walk to Sound. 325-0447.

EAST NORTHPORT/HUNTINGTON - 4 bdrms,, 1½ baths, remodeled, new deck, ½ acre, sprinklers, 2 miles north LIE Exit 52, $215,000 neg. Inn, Ext. 7111.

RIDGE - 4-bdrm. Colonial, new kit., new bathroom, new heating system, f/p, den, 2-car gar., lake rights, $137,000. Mike, 929-5035.

ROSLYN - sunny, corner 1-bdrm. co-op, w/w, renovated, close to RR, RSD, must sell. Smita, Ext. 3924 or 246-5064.

SHIRLEY - 3-bdrm. ranch, gar., bsmt.,new appl., d/r, d/w, new kit., alarm, close to Southaven Park & BNL, fixed assum. 8% mortgage, home warranty, $95,000. Jim, Ext. 4150 or 281-0489.

STONY BROOK - 3-bdrm. Devon ranch, 2 baths, l/r, d/r, eik, fam. rm w/fp, 1.5-car gar., new carpet, parquet ent., new major appl., new heat. syst., M-section, 3VSD, $168,000. Ext. 5855 or 689-7462.

WADING RIVER - 3-bdrm. Colonial, 2½ baths, 2-car gar., custom kit., Jennair, gazebo, shed, igs, igp, deck, steam bath, satellite dish, SWRSD, 1.1 acre, $199,900. 929-8323.

PORT CHARLOTTE, FL - ¼ acre bldg. lot, developed neighborhood, ready to build, $9,000. 929-8323.

Wanted

AMPLIFIER - public address 100 watt min tube-type preferred, can repair if needed. Joe, 281-7683.

CAR TO RENT/LEASE - for summer, May-August, must run. Ext. 2432 or 821-9178.

CHILD CARE - f/t, my home, caring nonsmoker, refs., June/July start date. Paula, Ext. 3293.

CRIB - baby's crib within 5 yrs. old. Liz, 369-4361.

DONATIONS FOR UPTON NURSERY SCHOOL - tag sale on 5/6. Cindy, 874-3652 or Jane, 929-8513.

DRAWING TABLE - Anco-type, all wood, A-frame stand, 23"x31" size. John, Ext. 7671.

HOUSEKEEPER - p/t position avail. 744-4611 after 6 p.m.

HOUSEMATE - share 3-bdrm. house in Wading RIver w/1 other person, l/r, d/r, kit., nonsmoker, $500/all. Ext. 5919 or 929-5308.

KITTEN - female, to adopt for loving children. Roberta, 924-7854.

MINERALS - mineral collections, mineral books, old, any language. Plotkin, 798-2887.

MOTORCYCLES - bent or broken, any age or condition. Kevin, 281-8031.

ROTOTILLER - gas-powered, mini size. John, Ext. 7671.

TAPE RECORDER - reel-to-reel, cheap/loan. Animesh, Ext. 7329 or 474-0056.

VCR - Panasonic or GE, 6-10 yrs. old, for parts, need not work. John, Ext. 4214.

Classified Ad deadline is 4:30 p.m. Friday for publication Friday of the next week.