

HFBR Resumes Operations At 30 Megawatts

At 9 a.m. on Wednesday morning, May 15, Edward Sierra turned a lever on the control panel, taking the first step in restarting BNL's High Flux Beam Reactor (HFBR). At 12:30 p.m., within the reactor vessel 20 feet below the control room where Sierra sat, the nuclear fission process became self-sustaining — the reactor achieved criticality.

Sierra's actions that day were the culmination of two years of hard work by the Reactor Division to restart the HFBR, which had not operated since March of 1989.

"We're glad to be out of the reactor shutdown business and back to what we do best — reactor operations," said Michael Brooks, Head of the Reactor Division. "It's been two years of extra effort, long hours, deadlines, minor disappointments, and, finally, success. Although we would never want to go through such a period again, we all take pride in how the Reactor Division staff and the Laboratory came together to return the HFBR to operation. Some may think that a reactor runs on paper, but we all know that it's the people."

On May 9, Secretary of Energy James Watkins authorized BNL to begin the process of restarting the HFBR, and this action opened the way for the May 15 restart.

Along with Brooks and Sierra in the control room that day were: Louis Evers, operator; Douglas Ports, shift advisor; Craig Diaz, shift supervisor; Joseph Barkwill, assistant operations group leader; Albert Queirolo, operations group leader; Raymond Karol, safety evaluator; and Lance Junker, plant manager.

Observing the start-up for the U.S. Department of Energy (DOE) were Michael Holland, Chief of the Nuclear Programs Branch, and engi-

neers Mark Parsons and Peter Kelley, all of the on-site Brookhaven Area Office.

According to Brooks, after Reactor Division personnel have gone through a period of training and testing, the research program at the HFBR will resume sometime early this summer, with the reactor operating at a power level of 30 megawatts (MW).

National Research Council Report

A research reactor, the HFBR first began operating in 1965, at 40 MW. In 1982, the reactor was upgraded to 60 MW, and this higher power level



Roger Stoutenburgh

In the control room of the High Flux Beam Reactor: (seated, from left) Lou Evers, Joe Barkwill, Ed Sierra; (standing, from left) Lance Junker, Al Queirolo, Ray Karol, Craig Diaz and Doug Ports.

gave a 50 percent increase in neutrons for experiments.

In 1988, the National Research Council of the National Academy of Sciences completed a review for DOE of the five test and research reactors owned by the federal agency.

Specific to the HFBR, the report noted that, among other findings, a significant change in safety philosophy had occurred when reactor power was increased from 40 to 60 MW.

Referencing earlier BNL documents, the report pointed out that, at 60 MW, about one percent of the fuel could be damaged during a worst-case loss of coolant accident (LOCA), whereas no fuel damage was postulated at 40-MW operation. The report recommended that a realistic assessment be made of potential radiation exposures to reactor operators during possible accidents at 60 MW, to ensure that the operators were adequately protected.

Following the release of the National Research Council report, the Reactor Division initiated a review of the issues raised. One of the analyses did indicate that, in the event of a LOCA, the 60-MW reactor might experience some damage to the reactor fuel, which could result in (continued on page 2)

Reactor Users Ready to Go

The High Flux Beam Reactor (HFBR) is one of the Lab's major user facilities and a world-class research tool. There is no other comparable reactor in the United States.

Physicists, chemists, biologists and materials scientists have used the neutrons produced by the reactor as probes of matter on the nuclear, atomic and molecular levels. Research at the HFBR has ranged widely, and recent studies have investigated high-temperature superconductors, novel catalysts, and cyclosporin and other anti-rejection drugs.

"We are tremendously pleased that the HFBR is finally back in operation," said John Axe, speaking for the user community.

Axe, who is BNL's Associate Director for Basic Energy Sciences and serves as head of the HFBR scientific programs, also commented, "We have always had great respect for the professionalism of the personnel of the Reactor Division. In signing the restart order, Admiral Watkins, of course, has reached the same conclusion. The users were pretty glum as the months stretched out, and some researchers lost funding in the process. But we still have a very strong program, with a backlog of exciting projects that we're eager to get on with."

During the course of a year, the reactor can accommodate well over 200 visiting scientists. Major users have included AT&T Bell Laboratories, DuPont, Exxon, IBM, Argonne National Laboratory, Lawrence Livermore Laboratory, Los Alamos National Laboratory, Massachusetts Institute of Technology, University of Pennsylvania and Yale University. — M.R.

NRC Commissioner at BNL



Roger Stoutenburgh

A tour of the National Synchrotron Light Source (NSLS) capped the day spent at BNL on May 9 by Forrest Remick, Commissioner of the U.S. Nuclear Regulatory Commission. Shown here flanked by (right) NSLS Chairman Denis McWhan and (center) Department of Nuclear Energy (DNE) Chairman Walter Kato, Remick was accompanied by assistants (from left) Elizabeth Doolittle and Jack Guttman.

Prior to the tour, Remick was given an overview of the Lab's programs by BNL Director Nicholas Samios. Kato filled Remick in on the various DNE programs, while DNE Deputy Chairman Robert Bari focused on the many DNE programs that are sponsored by the NRC. Several DNE members made presentations in key areas of research and technical assistance being conducted for NRC.

Then Remick addressed the DNE staff who are involved in NRC-sponsored programs and thanked them for their efforts. In discussing where NRC and the nuclear industry are heading, Remick emphasized that the next generation of commercial reactors is being designed to take advantage of natural physical processes to provide safety margins.

Friedlander to Receive Honorary Doctorate From Clark

At the commencement exercises for Clark University this Sunday, May 26, Senior Chemist Gerhart Friedlander will receive an honorary Doctor of Science degree.

Friedlander is being honored for his long and influential career in nuclear chemistry, which began in 1942, when he earned his first doctorate, in nuclear chemistry at the University of California, Berkeley.

After stints as an instructor at the University of Idaho, 1942-43; a group leader at Los Alamos Scientific Laboratory, 1943-46; and a research associate with General Electric Co., 1946-48; Friedlander joined the staff of BNL's Chemistry Department as a chemist in 1948. He has been with BNL ever since, being named senior chemist in 1952 and serving as Chemistry Chairman from 1968-77.

Over the years, Friedlander's research has included the chemical effects of nuclear transformations, the properties of radioactive nuclei, and high-energy nuclear reactions. He has been part of the BNL team participating in the GALLEX collaboration that is trying to solve the solar neutrino puzzle. He is also one of the discoverers of "cluster fusion" who are continuing their research into this method of inducing fusion by cluster-ion impact at surprisingly low energy.

In 1949, Friedlander and J.W.



Roger Stoutenburgh

Gerhart Friedlander with the Cockcroft-Walton for the cluster fusion experiment.

Kennedy first had their textbook *Introduction to Nuclear Chemistry* published. Now in its fourth edition under the title *Nuclear and Radiochemistry*, the book has been translated into eight languages and is considered a classic in its field.

Friedlander's previous honors have included the American Chemical Society Award for Nuclear Applications in Chemistry, 1967; and the Alexander von Humboldt Senior U.S. Scientist Award, 1978-79. He is a member of the National Academy of Sciences and the American Academy of Arts and Sciences, as well as a fellow of both the American Physical Society and the American Association for the Advancement of Science.

Science Stars Fairly Shine



The exuberance of the ribbon winners was infectious. It was only matched by the fresh outlook and enthusiasm that marked the hundreds of projects entered in BNL's 1991 Elementary School Science Fair held at Berkner Hall on Saturday, May 18.

Since 1985, the Science Fair has been organized annually by the Tour Program in the Public Affairs Office. With an ever-increasing number of participants, an extra room was needed this year to give space to the 385 exhibitors from 90 Suffolk County schools.

From 8:30 to 11 a.m., chaos reigned as parents escorted their young scientists to their exhibit locations. Then, all was calm while teams of BNL scientists and local elementary school teachers judged the many ingenious displays on their scientific thought, creativity, thoroughness and clarity. On this basis, each grade level was

awarded one prize and several honorable mention ribbons.

Winners were: Grade 6, Leslie Arons, Commack Middle School, "Effects of Acid Rain on Living Organisms"; Grade 5, Alix Gmur, Hampton Avenue Intermediate, South Country School District, "Do High and Low Tides Affect My Stream?"; Grade 4, Jennifer Sweet, Branch Brook School, Smithtown, "Does Color Affect Our Memory?"; Grade 3, Tom Whitehead, Boyle Road Elementary School, Comsewogue, "Can a Worm Learn?"; Grade 2, Christopher Kane, Kreamer Street School, South Country, "Does Color Affect Food Choice?"; Grade 1, Jennifer Logan, Walters Elementary School, Longwood, "Which Kind of Airplane Flies Best?" Kindergarten, Daniel Raps, Norwood Avenue School, Northport, "Optical Illusions." And there were 66 honorable mention ribbons.

— Photos by Stoutenburgh



Holiday Notes

The Lab will be closed on Monday, May 27, for Memorial Day. The following schedules apply:

- **Food Services** — The Brookhaven Center will be closed on Sunday, May 26, and on the Memorial Day holiday, Monday, May 27. It will reopen the evening of Tuesday, May 28; the Cafeteria will remain open over the holiday weekend, May 25-27, from 9 a.m. to 2 p.m.; as usual, food service will be continuously available from the vending machines in Bldg. 912.

- **Pool & Gymnasium** — The pool and gymnasium will be closed beginning Saturday, May 25. They will resume their regular hours on Tuesday, May 28; however, the gymnasium will remain closed on weekends through the summer, reopening after Labor Day, on September 7.

Catch a glimpse of

GLANCE

playing in Berkner Hall
weekdays, 11:30 a.m. to 1:30 p.m.
Show changes every Tuesday.

Coming Up

The Stony Brook Piano Trio will appear in a free concert in Berkner Hall on Monday, June 3, at 8 p.m. The program will include Beethoven's Trio for Piano, Violin and Cello, Opus 1, No. 1; and Brahms' Trio for Piano, Violin and Cello, Opus 87.

HFBR Operations (cont'd)

unacceptably high levels of radiation exposure for the reactor operators.

Taking a conservative position, in April of 1989, the division recommended to BNL Director Nicholas Samios that reactor operations be limited to 40 MW until further analysis was completed. At the time, the reactor was already not operating, having been shut down in March for routine maintenance. DOE subsequently notified the Lab that the HFBR could be restarted only with formal DOE concurrence.

Two Years of Safety Reviews

In the ensuing two years, continuous and thorough reviews of the reactor's readiness to restart were carried out. Major committees and reviews included: the Advisory Committee for Nuclear Facility Safety, DOE; Ames Laboratory Committee; Office of Energy Research Review, performed by Burns and Roe Utility Management Consultants for DOE; Office of Nuclear Safety, DOE; and Office of Nuclear Energy Independent Oversight, DOE.

All of these independent review committees recommended that the HFBR be restarted.

BNL's own oversight committee — the Reactor Safety Committee — monitored each step of the lengthy start-up process. A long-established group that oversees safety issues at the HFBR and BNL's Medical Research Reactor, the committee is composed of: chairman Joseph Hendrie, John Carew, Robert Fitzpatrick, Robert Hall and Michael Todosow, all in the Department of Nuclear Energy; Carl Czajkowski, Department of Applied Science; Henry Kahnhauser, Safety & Environmental Protection Division; and Thomas Prach and Paul Tichler, Reactor Division.

Several of the reviews focused on materials analyses, in particular, embrittlement of the reactor vessel itself, which can occur because of radiation exposure. Extensive tests were performed on material originally put into the reactor for this

purpose, as well as parts of auxiliary control rods. The testing was done at BNL and at Oak Ridge National Laboratory, and, according to Brooks, the results were very reassuring — the reactor vessel is in good shape.

Another important activity during the two-year hiatus was intensive training for reactor operators and supervisors, both to keep them in readiness and to incorporate new procedures. In addition, several safety-related modifications were made to the reactor itself.

At present, DOE and BNL are fully satisfied that the HFBR can be operated safely up to 35.4 MW. Again in a conservative move, the Lab has decided to operate the reactor initially at 30 MW, although additional testing and analyses are planned to support a return to 60 MW in the future.

To address the question of fuel damage at 60 MW in event of a LOCA, the Reactor Division is planning to perform thermal hydraulic tests on fuel element prototypes, in order to determine the maximum safe operating power level for the reactor. Brooks said that preliminary analyses indicate that 60-MW operation can be supported easily, but these analyses must be validated by the planned testing program.

According to Brooks, during the shutdown period, when it became clear that lengthy thermal hydraulic testing would be required to assure safe operation at 60 MW, "We opted to accelerate the restart by using ultraconservative analyses that would not require testing to determine a safe operating power level."

He added, "Initial operation at 30 MW will allow the scientific community to return to research, and at the same time provide an unquestionable level of safety until safe operation at higher power levels can be equally assured."

— Mona S. Rowe

Note to Employees:

Attendance at lectures, meetings and other special programs held during normal working hours is subject to supervisory concurrence.

Outreach Workshop

To Retire, or Not to Retire — That Is the Question

At age 55 or older, employees with at least five years of service and a combination of age and service that adds up to at least 70 years may retire from BNL with their AUI medical benefits intact.

Given that, when you can retire from Brookhaven, the question is: Do you *want* to retire?

"Retirement: Whose Life Is It?" is the question that will be answered during the ninth Outreach workshop sponsored by the Employee Assistance Program (EAP) of the Occupational Medicine Clinic.

To be presented by clinical psychologist Frank Verdicchio, the workshop will take place on Tuesday, May 28, in Berkner Hall, Room B. Retirees and present employees, as well as their spouses and dependents, are invited to attend; bring your lunch.

Verdicchio will discuss the question of whether or not to retire from a psychological perspective. He will examine conscious and unconscious motives that may be causing conflict about the retirement question and, as a result, indecision about the answer.

The retire-or-not conflict will also be looked at from the philosophical point of view, as Verdicchio will consider retirement in relation to the meaning of life; the concepts of life, death and immortality; and free will versus compulsion.

Now practicing clinical psychology and psychoanalysis full-time in St. James, Frank Verdicchio, Ph.D., knows about what he speaks: He retired as the Chief Psychologist from the Kings Park Psychiatric Center in 1983.



Verdicchio earned his doctorate in clinical psychology from the University of North Carolina in Chapel Hill. He was graduated from the postdoctoral program in psychotherapy and psychoanalysis at Adelphi University. He currently serves on the faculty of the Pederson-Krag Institute of Psychotherapy in Huntington.

To register for this workshop, return the bottom portion of the Outreach flyer that was sent to all employees to EAP, Bldg. 490, or call Ext. 4567. Registration will also take place at the door, space permitting. Audio cassettes will be available to borrow afterwards in the Research Library, Bldg. 477. For more information about EAP or its Outreach workshop series, call Ext. 4567.

Local Users Group

The next meeting of the Upton Local Users Group (LUG) will be on Wednesday, May 29, at 10:30 a.m., in Room B, Berkner Hall. The meeting will include an update on graphics at BNL; a presentation, "Relational Database in a Heterogeneous Computing Environment"; and a DEC product announcement.

All are welcome. For more information, call Zohreh Parsa, LUG Chairperson, Ext. 2085, or send E-mail to LUG@BNL.

Arrivals & Departures

Arrivals

Anthony F. Arno III.....Accel. Dev.
Laura J. Ayres.....Staff Serv.
Marco Chinol.....Medical
Michael P. DePhillips.....App. Science
Thomas Martin.....Chemistry
Richard R. Pardi.....App. Science
Matthew Randesi.....Biology
Shiping Zhang.....Biology

Departures

None



On the Tour Circuit

When college students tour BNL, as they do throughout the year, they may be guided or otherwise assisted by some of the people shown here. For their involvement in various aspects of the college tour program run by Public Affairs' Tour Program, these volunteer tour guides and others were feted at a thank-you luncheon on May 14: (front, from left) Graham Smith, Lucy Sanchez, Eva Bozoki, Rosemary Cohen, Michiko Tanaka, Violet Bezler, Brenda Laster, Peter Mendolia, Lynette Finlay, Elaine Lowenstein, Janet Tempel, Sue Monteleone, Victor Gonzalez; (center, from left) Pat Glynn, David Comstock, A.J. Francis, Donna Earley, Elizabeth Mogavero, Garry Barnett, Mark Culp, Evelyn Ritter, Frances Scheffel, Janet Sillas, Thelma Dawson, Betty Pergan, Peter Kohut, Ron Clipperton, Barry Karlin, Gerhard Redelberger, Arlene Clay; (back, from left) Gerry Van Derlaske, Nelson Tyler, George Taylor, Al Campbell, Mark Walker, Teddy Robinson, and Tom Dickinson.

— Photo by Stoutenburgh

Atlantic City Trip

The next BERA-sponsored bus trip to Atlantic City will be to Trump Castle Hotel & Casino on the Marina, on Saturday, June 29. The one-day trip will initially cost \$20, but the hotel/casino will give a \$10 coin return, \$4 towards food or \$2 extra coins, and a \$5 deferred voucher.

Tickets are on sale now at the BERA Sales Office in Berkner Hall, weekdays from 9 a.m. to 2 p.m. Participants must be at least 21 years old. The bus will leave the Brookhaven Center promptly at 9 a.m. and return about 11:45 p.m. There will be an extra pick-up at LIE Exit 63, if necessary.

For information, call Louisa Barone, Ext. 3347; Rosalie Piccione, Ext. 3160, or Kay Dellimore, Ext. 2873.

Movie Discounts

The BERA Sales Office in Berkner Hall now has discount movie tickets for Cineplex Odeon Theatres. The regular movie price is \$6.50-\$7 per person, depending on location, but BERA is selling tickets for \$4.75 — a savings of \$1.75 to \$2.25. Tickets are valid to July 1992, which makes them also a great gift idea.

Also available at the BERA store, open weekdays, 9 a.m. to 2 p.m.:

- Great Adventure tickets, at a savings of almost \$8 for the park only or a park/safari combo.
- BNL T-shirts, \$7 — watch for our new color, coming soon; sweatshirts, \$13.
- New BNL buttons, \$1.25,
- Discount theater tickets for plays in New York City.

BROOKHAVEN BULLETIN

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LIZ SEUBERT, Reporter

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Volunteers Needed

BNL now sponsors Introduction to Computer courses for young people in the communities within the South Country and Riverhead School Districts. In September, this program will be expanded to include the Longwood School District. As a result, additional volunteer instructors must be recruited. If you would like to share your computer know-how with eager young minds, call program coordinator Frances Ligon, Ext. 3709.

Bowling

Contact your team captain for tickets to the annual Bowling Awards Dinner being held on Friday, June 7, at 5:15 p.m. at the Brookhaven Center. The cost is \$5 for bowlers and \$10 for guests.

Red/Green League

The Pinball Wizards are the first-place winners in this league. T. Prach had a 214, J. Muller 212/202/606 scratch series, A. Borrelli 211, F. Hohmann 208.

Cafeteria Menu

Monday, May 27 - Memorial Day	
Snack bar service — 9 a.m. to 2 p.m.	
Tuesday, May 28	
Soup: Old-fashioned lentil	.75/.95
Entree: Italian sausage w/peppers & onions & 1 veg.	3.10
Entree: Linguini w/clam sauce	3.10
Carvery: Hot roast beef sandwich	2.85
Grill: Chicken cutlet w/cheese & bacon	2.85
SPICE: Mexican fiesta - Baja pizza (slice)	.75
Wednesday, May 29	
Soup: Corn cilantro	.75/.95
Entree: Pueblo pork and chicken	3.10
Entree: Border burger	3.10
Fitness: Ham & nacho cheese tortilla	3.10
Carvery: Hot Black Forest ham sandwich	2.85
Grill: Grilled cheese quartet w/fries	2.85
SPICE: Mexican fling	
Thursday, May 30	
Soup: Cream of broccoli	.75/.95
Entree: Southern-fried chicken w/1 veg.	3.10
Fitness: Stir-fried beef & broccoli over fine noodles	3.10
Carvery: Hot corned beef sandwich	2.85
Grill: Cheese steak sub w/lettuce, tomato & onions	2.85
SPICE: Mexican fiesta — Margarita's Fajitas	3.10
Friday, May 31	
Soup: Minestrone	.75/.95
Entree: Sweet & sour pork over rice	3.10
Entree: Chef's choice	3.10
Fitness: Lemon-baked fish w/1 veg.	3.10
Carvery: Hot turkey sandwich	2.85
Grill: Tuna melt w/fries	2.85

Runners' Corner — Race Results

On Sunday, May 5, seven members of the BNL Roadrunners Club joined some 900 finishers in this year's Long Island Marathon (26.2 miles). Another 22 of the 6,200 finishers in the Half Marathon (13.1 miles) were BNL Roadrunners. As always, the club fielded a team composed of both fun and competitive runners.

Four Roadrunners placed first and two placed third in their age groups.

John Brodowski, first in the 50-54 marathon group, entered the marathon by accident only after missing the turnoff for runners intending to run only the half marathon. Also placing in the marathon were Mel Cowgill, third in the 50-54 group, and Jerry Hastings, third in the 40-44 age group.

In the half marathon, Marilyn McKeown broke the tape in the 65-69 women's group, and Sharon Gill, daughter of Ed Gill, won the 24-29 women's group.

Upcoming team races include the Manufacturer's Hanover Corporate Cup on July 30, and the Cross Island Relay Race on September 22. Also, the club is again taking orders for BNL racing uniforms. A minimum order is required, so place orders now.

To sign up for races and uniforms, contact Skip Medeiros, Bldg. 318, Ext. 3806, or Mel Cowgill, Bldg. 830, Ext. 2082, as soon as possible.

Full Marathon Results	Sharon Gill	1:31:26	Ed Gill	1:48:30	
Jerry Hastings	2:57:15	Matt Harrington	1:31:58	Danny Wilkins	1:48:30
John Brodowski	3:03:58	Charlie Edwards	1:32:33	John Pagano	1:52:29
Mel Cowgill	3:09:40	Mike Brennan	1:34:23	Joan Congemi	1:54:51
Ed Meier	3:10:14	Dennis Nordstrom	1:34:45	Ken Baumeister	1:59:03
Ed Gallagher	3:16:08	Bill Thomlinson	1:35:01	Larry Kleinman	2:20:13
Peter Lane	3:36:13	George Meinken	1:35:51	Cindy Pohlig	2:41:41
Mike Seidman	3:54:58*	Helmut Thiel	1:36:50	Marilyn McKeown	2:46:28
Half Marathon Results	Rich Thorp	1:37:00	Sharon Spark	2:54:06	
Don Mackay	1:17:33	Tom Clifford	1:39:36		
Paul Geiger	1:21:58	Sharon Zuhoski	1:46:01		

*Indicates personal record



Season's Opening!

Wednesday, May 29,
11:30 a.m.-1:30 p.m.
in the parking lot
opposite Berkner Hall,
between the tennis courts
and the SEC construction.

Art Society News

The BERA Art Society wishes to announce:

• A one-man exhibition of oil paintings by BERA Art Society member Valerio Cugia will be held at the well-known Pindar Gallery, 127 Greene Street, New York City, from May 28 to June 16. Hours are 11:30 a.m. to 6 p.m. Tuesdays through Saturdays, with an opening reception Friday, May 31, 6 to 8 p.m.

• The next show of art work by employees and their families will be held late this fall, so start drawing, painting and sculpting now. Details will be published in a future Bulletin.

It's Blatantly Unofficial!

These Blatantly Unofficial BNL Records were all set some time ago, but as far as we know they still stand:

Most people in the one group to have the same first and last initial. In November 1989, the AGS Controls Group boasted five people whose first and last names started with the same letter: Agnes Abola, Douglas Dittrich, Heather Hartmann, Karl Kohler and Philip Pape.

— Phil Pape, Alternating Gradient Synchrotron Department

Most bowlers on one team with the same middle initial. On BNL's Pink Bowling League, for the 1989-90 season, eight out of 16 bowlers had the middle initial "A."

— Donna-Ree Fernandez, Computing & Communications Division

Building with most first-time blood donors. In the June 1990 blood drive, Bldg. 130 had seven first-time blood donors.

— Cheryl Conrad, Department of Nuclear Energy

Most babies born to wives of employees in one building during one year. During 1990, these twelve employees who work in the Accelerator Development Department's (ADD) Magnet Division in Bldg. 902 became fathers: Mike Anerella, Roger Davis, Sonny Dimaiuta, Dwayne Eleazer, Mike Hickey, Ted Heuer, Piyush Joshi, Rick Kurz, Alan Morgillo, Mitch Perrier, John Skaritka and Dan Wilson.

— Cynthia Murphy, ADD Magnet Division

Most sets of twins born to BNL grandfathers in one week. On February 16, David Alburger, Physics, and his wife Mary became the proud grandparents of twin girls, Jenna and Chelsea, the daughters of their son Andrew and his wife Karen. Four days later, on February 20, a boy and a girl, Alexander and Rachel, made grandparents of Les Lawrence, Computing & Communications, and his wife Joan. The twins are the children of the Lawrences' son Lee and his wife Florence.

— Ernest Warburton, Physics Department

If you think you can top one of these records, or if you have another record to report, submit your entry to the Brookhaven Bulletin, Bldg. 134. While all entries must have some relation to the Lab, the categories and superlatives are limited only by your imagination and experience — and whether the claim can be corroborated by someone else. A copy of the Blatantly Unofficial Record Book is available for inspection in the Public Affairs Office, Bldg. 134.

Entry for "Blatantly Unofficial BNL Records"

(Please print) Name

Department Ext

Corroborator's name

Department

Proposed record

.....

.....

Date proposed record was

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position. Consideration is given to candidates 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, handicap or veteran status.

Each week, the Personnel Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Personnel, and, second, for general recruiting under 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, or call the JOBLINE, Ext. 7744 (282-7744), for a complete listing of all openings.

The vacancies listed below have been exempted by the Director's Office from the current freeze on open requisitions.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.

DD 5069 OFFICE SERVICES POSITION - Receptionist and initial contact point for all visitors to the NSLS facility. Requires excellent communication and typing skills. Responsibilities will include issuing radiation badges to new employees, visitors and users; doing all IPAP and JCARS data entry for the department; facilitating safety indoctrination; issuing vehicle reports. Knowledge of WordPerfect 5.1 desirable. Also will provide general typing services for the NSLS. National Synchrotron Light Source Department.

DD 8247 OFFICE SERVICES POSITION (term position) - Requires excellent clerical skills and demonstrated organizational abilities. Responsibilities include detail work in record keeping within the Personnel Records area. Personnel Division.

DD 5068 OFFICE SERVICES POSITION - (Reposting of DD5068 5/17/91) Requires AAS in secretarial science, business or equivalent, and a knowledge of word-processing and database systems such as Lotus 1-2-3 and Informix. Responsible in the User Administration Office of the NSLS for issuing and maintaining guest appointments and coordinating major user meetings. National Synchrotron Light Source Department.

OPEN RECRUITMENT - Opportunities for laboratory employees and outside applicants.

NS 8555 QUALITY ASSURANCE ENGINEER - Requires BS in engineering or a related field, 5-7 years' QA experience and supervisory background. Working knowledge of ANSI/ASME NQA-1 or MIL-Q-9858, proficiency in problem analysis and solution techniques, and familiarity with TQM concepts required. Design, construction, operation and maintenance of facilities experience necessary. Will develop and implement QA programs, conduct audits, track deficiencies and provide training. Plant Engineering Division.

NS 8559 ENGINEERING POSITION - Requires BS in safety engineering or a related field, and 3-5 years' professional safety experience. In-depth knowledge of OSHA, ANSI, NFPA and NIOSH necessary; CSP designation a plus. Will provide safety engineering and technical support; investigate accidents, events or conditions; perform statistical analysis of ES&H data; and develop procedures. Plant Engineering Division.

Motor Vehicles & Supplies

90 LEXUS LS400 - 26k mi., dark walnut, loaded, mint cond., \$33,000 neg. Ron, 239-6391.

89 HONDA PRELUDE 2.0SI - 4-wheel steering, white, alarm, phone kit, 7/70 warr., loaded, 36k mi., excel. cond., \$13,800 neg. Larry, 929-4798.

89 CAVALIER - 14k mi., ac, a/t, stereo cass., excel. cond., \$6,850. 563-6596.

89 NISSAN PATHFINDER SE - 2-dr., 5-spd., 4wd, ac, radio cass., black, 30k mi., \$14,000. 286-0037.

88 HONDA CIVIC DX - 2-dr. h/b, a/t, ac, am/fm stereo cass., 4.8k mi., \$6,000. Aoki 632-7977 or 689-5415.

88 HONDA ACCORD DX - white, 4-dr., 5-spd., ac, 45k mi., ext. warr., new tires, \$8,700. Ext. 3428 or 878-6007.

87 ISUZU TROOPER 4x4 - ac, luggage rack, running board, great looking, excel. cond. Jim, 399-4897 after 6 p.m.

86 FORD TRUCK - 4wd, extra cab, 74k mi., w/cap, ask. \$8,200; '87 Toyota 4wd truck, w/cap, 62k mi., ask. \$6,800. Tim, Ext. 2350 or 474-4672.

86 CAMARO - red, V-6, a/t, T-top, fully loaded, Ext. 5873 or 821-0019 after 6 p.m.

86 BLAZER S-10 4x4 - custom rims, new trans. & tires, 85k mi., good cond., \$5,900 neg. 567-4423 or 567-6564.

86 FORD TEMPO - blue, p/s, p/b, am/fm, ac, p/l, 4-cyl., fuel inject., 46k mi., mint cond., \$3,800. Jim, Ext. 4696.

85 DODGE RAMCHARGER 4x4 - loaded, running boards, am/fm cass., alarm, excel. cond., must see, \$7,000. Chris, Ext. 2326.

85 CHEVROLET CELEBRITY - 4-dr., ac, p/b, p/s, gray, excel. cond. Betty, 821-4564.

84 CHEVY CAPRICE - s/w, new alternator, exhaust system, radiator, battery, 8-pass., p/b, p/s, a/t, p/l, \$3,200. Norman, Ext. 4446.

82 BUICK CENTURY - good for parts, \$350. 878-1178.

82 PONTIAC J2000 - 4-cyl., high mi., a/t, ac, good body/int., runs OK, \$600. John, Ext. 3302 or 924-0651.

82 PONTIAC 2000 LE - 4-dr., ac, p/b, p/s, 61k mi., silver, \$950. Willi, 585-6466.

81 HONDA CIVIC WAGON - orig. owner, ac, am/fm radio, roof rack, excel. cond., \$900. Chris, Ext. 4989 or 474-4525.

81 DATSUN 510 WAGON - 130l mi., excel. running cond., new Michelins. Rich, Ext. 3386.

80 HONDA EXPRESS MOPED - 350 mi., good running cond. \$150 or best offer. Leo, 728-0992 after 5 p.m.

80 TOYOTA CELICA - ac, new tires, liftback, 2-dr., good cond., \$1,000. Ext. 4397.

80 CORVETTE - white, tan leather int., 25k orig. mi., mint cond., best offer. R. Diaz, Ext. 5866 or 718-225-5783.

79 CHEVY C20 PICKUP - 350, V-8, 4-spd., p/w, p/b, \$1,200 neg. Joe, Ext. 5213.

78 TOYOTA COROLLA - 119k mi., 2-dr. h/b, new trans., brakes & battery, am/fm, runs well, \$500. Yannis, Ext. 5323 or 3182 after 7 p.m.

78 TOYOTA CELICA - 5-spd., m/t, ac, am/fm cass., 130k mi., runs well, \$550. Nelson, Ext. 3861.

77 MERCEDES 300D - 4-dr., midnight blue, sunroof, am/fm, a/t, ac, Pirelli tires, new battery, alternator, starter, must see, \$6,500. 475-8268.

72 VW - new brakes, battery, clutch, etc., good running cond. \$400. Jan, Ext. 3403.

72 INTERNATIONAL TRUCK - 1-ton flatbed, 4-spd., toolboxes, new 9' bed w/sides, new tires, brakes, V-8, \$1,500. Tom, Ext. 4507 or 878-1060.

69 CAMARO RALLY SPORT - classic car, \$3,500. Jim, Ext. 3372 or 821-0250.

65 BMW R50/2 - Earles Fork, all orig., runs well, excel. cond., \$3,500. Ken, Ext. 2012.

CARBURETORS - Holley, one 2 bbl., new; one 4 bbl., rebuilt, \$25 & \$40 ea. Bob, Ext. 3457 or 737-1786.

CAR RADIO - fm only, good cond., \$15; calculators, \$3 ea. Susan, Ext. 7716.

GO-KART - Emmrick, 100cc Yamaha, \$1,200; engine, Yamaha, 100cc, KT100S, w/mounting bracket, clutch, \$600. 878-6007.

PARTS - '82 Dodge Aries, \$150; '82 Ford Grenada, \$50. 862-6259 after 6 p.m.

TIRE - 175/70SR13, \$15. Bill, Ext. 4000.

TIRES & RIMS - various sizes, asking \$10 ea. Betty, 821-4564.

Boats & Marine Supplies

27' IMP - 1986, sleeps 4, galley, head, 260-h.p. Merc., excel. cond., orig. owner, price neg. Rob, Ext. 5259.

26' SEAWAY - cabin cruiser, down-east hull, electronics, stereo, sleeps 4, alcohol stove, full canvas. Ext. 5993.

22' GLASTRON AVENTURA 225 - 1981, 185-h.p. Merc. i/o, FWC, low hrs., VHF, DF, swim platform, fully equipped, \$6,500. Ed, Ext. 7943.

22' CATALINA SAILBOAT - 6-h.p. Johnson, new mainsail & tiller, trailer, \$4,250. 929-8912.

22' RHODES CONTINENTAL SAILBOAT - great family cruiser, many extras, new 6-h.p. ob., must sell, \$4,000 (\$16,500 new). 758-4237.

22' SPORTCRAFT - 1987, w/cuddy, 225-h.p. Evin., low hrs., loaded w/options, full canvas, '88 E-Z loader trailer w/brakes. 744-7549 after 4 p.m.

20 CHRIS CRAFT 205 LTD BOWRIDER - 1988, 6-cyl., i/o, 8' beam, am/fm radio, shore trailer, many extras. Bill, 732-8793.

20' BAYLINER - 1975, cuddly cabin, porta-potty, sink, 130-h.p. Volvo, Penta electronics, c/g pkg., \$2,500. 447-0827.

17' CHRIS CRAFT - 1967, 60-h.p. Evinrude, Gator tilt trailer, CB radio, power winch, v.g. cond., \$1,800. Bill, Ext. 3859 or 286-1712.

16' CHECKMATE SKI BOAT - 1978, 70-h.p. Merc. ob., w/trailer, extras, \$4,500; 22' Sedan cruiser, 1978, new eng., \$7,800. Beeper, 0641 or 878-2452.

16' BOWRIDER - 65-h.p. Evinrude, tilt trailer, p/winch, \$2,000. Jim, Ext. 3372 or 821-0250.

15' BOWRIDER - 65-h.p. Evinrude, galv. trailer, \$900. Al, Ext. 5128 or 298-8537.

14' HOBIE CATAMARAN - jib, trailer, excel. cond., \$1,100. 878-1178.

14' HOBIE CATAMARAN - roller reefing jib, trailer, v.g. cond., \$1,600 or best offer. Ext. 7657 or 298-9560.

14' ALUMINUM BOAT - w/trailer, motor & equipment, excel. cond., 289-5134.

Furnishings & Appliances

BEDROOM - 5 pieces, headboard, end table, desk, hutch, dresser, dark pine, good cond., \$250. Ext. 3334 or 744-2404.

BEDROOM - girl's, dresser w/hutch, daybed, yellow painted wood, excel. cond., priced to sell. 981-1749.

DESK - almost new, \$50; coffee table, \$25. Georgia, Ext. 3182.

DINETTE - table w/leaf, 6 chairs, black wrought iron w/red seats & back, swivel end chairs, excel. cond., \$300. Sue, 281-0612.

DINING ROOM - dark pine, large hutch, oval table w/2 leaves, corner hutch, 6 ladderback chairs, excel., \$500. 878-4336.

MEDICINE CABINET - 30", mirrored, 3-door, brand-new, make offer. Ext. 2345.

COUCHES - coffee table; entertainment center; kitchen table; 6 wooden chairs; double bed, dining room hutch, more. Lisa, Ext. 5867 or 757-5962.

SEWING MACHINE - Singer, \$10; typewriter, \$15. Ext. 4485 or 3230 eves.

TYPEWRITER - Silver-Reed, electric, portable, \$170. 473-0963.

WASHER - heavy-duty, \$250; queen bed, \$180; twin bed, \$130; large desk, \$90; drawers, \$20; Aoki, 632-7977 or 689-5415.

WASHER - Maytag, 18 yrs. old, still works, vibrates w/heavy load. 473-6546.

Tools, House & Garden

BURNER - American Standard, model DH-5, series T-1P, \$25. Tony, Ext. 4605.

EXTERIOR DOOR - 6-panel, pre-hung, insulated, 36", new, \$85; storm door, cross-buck, 30", new, \$65. Tony, 269-9510.

LADDER - alum., 20' extension, good cond. 325-0447 after 6 p.m.

OUTDOOR FURNITURE - redwood, chaise, 2 chairs, cushions & covers, \$100; sewing machine maple cabinet, \$50. Kelly, 744-3069.

POOL - 15x30, a/g, deck, 5' stockade fence w/gate, \$750/all. Ext. 5993.

SCREEN/STORM DOOR - 32", alum., white, heavy-duty, top quality, \$35. 473-6546.

TABLE SAW - Shopsmith Mark V, drill press, lathe, disc sander, excel. cond., other acces. Tom, Ext. 5350.

SHRUBS - pyramidal yews, *taxus cuspidata capitata*, 3-4', field grown, transplants, you dig, \$10/ea. 589-4363 after 6 p.m.

SINKS - Kohler, 2, vanity, 18", faucets, light blue, like new, \$75/ea., \$125/both. Ext. 3659.

TOPSOIL - fine screened, 3 yard min. delivered. 696-6011.

WELL PUMP - Omnijet, 1/2 h.p., 3,450 rpm, cold-water storage tank, glass lined, 3 yrs. old, \$100/both. Rich, 475-0373.

Sports, Hobbies & Pets

CLARINET - Signet, wood, excel. tone, \$250; Prince tennis racket, wide body, CTS Approach 90, like new, \$120. Jim, Ext. 3372 or 821-0250.

CROSS-COUNTRY SKIS - poles, size 9 1/2 boots, \$50; downhill skis, size 9 1/2 boots, \$20. Richard, Ext. 4245.

LIGHT TABLE - 36"x48"x5", 4 fluorescent tubes, 40 watt, 1/4" plate glass, tilt base, excel., \$95. Henry, Ext. 5110 or 399-6947.

TOTAL GYM - West Bend, complete body workout, excel. cond., orig. \$350, sell for \$100. Carol, Ext. 3325 or 3312.

VIBRA HARP - working motor, \$500 or best offer. Janet, Ext. 2345.

Audio, Video & Computer

COMPUTER - IBM PC, 2 disk drives, monitor, keyboard, math coprocessor, \$300. Bob, Ext. 5010 or 289-2986.

COMPUTER - IBM compat. ITT, 2 5 1/4" drives, 20 MB hard disk, modem, color & monochrome monitor, 640 kb, \$900 neg. Diane, 821-1675.

COMPUTER - Apple PC, w/NEC printer, 512k mem., 800k floppy disk drive, external disk drive, ideal as word processor, \$500. Andy, 751-0453.

COMPUTER DESK - w/hutch & mobile printer cart, oak finish, \$50 firm. 654-4661 eves.

MASTER SYSTEM - Sega, w/5 games, like new, \$125; Neo Geo gold system, 1 game, Magician Lord, orig. \$698, asking \$498. Betty, 821-4564.

SPEAKERS - JBL Century L100, 2, 3-way, in walnut cabinets, mint cond., must sell. 737-5338.

SPEAKERS - Hartke 210, bass, \$250; GK 410B w/wheels, \$325; 2 Electro-voice 12" monitors, 150W, \$300/both. Henry, Ext. 5110 or 399-6947.

VCR - Teac, 2-head, 3 mo. old, \$150. Aoki, 632-7877 or 689-5415.

Miscellaneous

BARREL - old, \$100; antique metal patio table, \$20; steam iron, \$10; movie screen, \$20; musical bunny, \$35. Kathy, 744-2203.

CINDER BLOCKS - sixty-seven 8" blocks, you pick up, 50¢/block. Paula, Ext. 4619.

MOVING SALE - car, washer, VCR, beds, dining table, desk, rug, TV cart, BBQ grill, drawers, more. Aoki, 632-7977 or 689-5415.

SHOES - woman's sizes 8 1/2-9, varied styles, colors, widths, excel. cond., \$5-\$10. Ext. 4538 or 924-2012, leave message.

TICKETS - 2, Hall & Oates, Jones Beach, July 16, orchestra seats, \$45/both. Chris, Ext. 2326.

Free

CAT - orange, 18-mo.-old, neutered, playful. Ext. 7022.

OUTBOARD MOTOR - 100 hp, does not work. Sam, Ext. 2018.

SLEEPER SOFA - brown plaid, good cond. Kathi, Ext. 7661.

VW TYPE I PARTS - blocks, door, fender, wheels, etc., Color TV, working cond. extra PC bds; you haul all. Fred, Ext. 7947 or 588-2268.

Yard & Garage Sale

PATCHOGUE - Sat., May 25, 8:30 a.m.-3 p.m., 45 Lee Ave.

Car Pools

BROOKHAVEN/BELLPORT AREA - need someone to carpool with, now until Aug. 15. Christy, 286-9708.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed, sex or national origin of the applicant.

For Rent

BAYSIDE - 1-bdrm. co-op, breakfast nook, mod. kit., bath, California closet, tennis, pool, beautiful area, first-class shops, rent/lease/option buy. Julia, 718-468-8097.

BELLPORT VILLAGE - 4-bdrm. house, 2 baths, large l/r, new kit., d/r, 2-car gar., oil heat, fp, all appl., furn., nonsmoker, no pets, Sept.-Jan. \$1,000/mo. Ext. 4332 or 286-2114.

CENTER MORICHES - 2-bdrm. apt., new appl., w/w, lg. rms., excel. cond., \$650/mo. + util. 878-1178.

CORAM - single room in house, \$350; or huge master bdrm. w/priv. bath, \$550. Ext. 7897 or 331-0807.

EAST MORICHES - 2-bdrm. apt., ground floor of Victorian house, bath, kitchen, d/r, l/r, large yard, 3 blocks to bay, shops, school, \$680/mo. plus util. Mona, Ext. 5056 or 878-9384 eves.

EAST SETAUKET - 1-bdrm. apt., kit./l-r combo, ground floor, 7 min. from SUSB, priv. ent., cable, w/d, no pets, \$600/mo. incl. util., single preferred. Valerie, 751-6091.

HOLBROOK - 3-bdrm. ranch, large eik, den, solar-assisted heating, all appl., 1/3 acre, underground utilities, Sachem 5 SD, \$975/mo. + util. Ext. 2679 or 472-0392/6922.

ISLIP TERRACE - 1-bdrm. apt., bath, fully carpeted, screened-in terrace, sep. ent., 2nd floor, priv. home, \$575/mo. incl. all. 581-8317.

MANHATTAN - studio apt., Kips Bay area, 1 flight up, secure bldg., avail. June-Aug., furn., phone, full kit. John, Ext. 7671 or 516-765-1299.

MIDDLE ISLAND - 1-bdrm. condo, l/r/dr combo, w/w, wd, pool, tennis, clubhouse, \$600/mo. + util. Mike or Barbra, 286-8820 eves.

MONTAUK - walk to ocean, 3 bdrm., 2 baths, fp, deck, laundry, fin. bsmt., furn., minimum or longer rental avail. Jim, Ext. 4150 or Ruth, 563-8374.

RIDGE - large 1-bdrm. apt., almost new, priv. ent., 5 min. to Lab., for couple/single, \$700/all, 1 mo. sec., no pets, avail. 6/8. Ext. 5076 or 744-4615.

RIDGE - 3-rm. cottage, 3 mi. to Lab., no pets, \$500/mo. Casper, Ext. 3469.

SHIRLEY - 2-3 bdrm. house, fin. bsmt., near shopping, \$750/mo. + util. 15 min. to Lab. Maureen, 360-3803 after 5 p.m.

SHIRLEY - quiet, 2 1/2-rm. apt., employed mature person, nonsmoker pref., 10 min. from Lab., \$450/mo. all. 281-6263.

SHIRLEY - 1-bdrm. apt., like new, l/r, eik, full bath, single only, 15 min. to Lab., \$575/mo. incl. util., avail. immed. 281-1840 after 4 p.m.

YAPHANK - 4-bdrm. restored Victorian, lg. treed prop., patio, 5 mi., from Lab., recently remodeled, avail. now. 924-5219, 924-4872 or 924-3066.

PROVINCETOWN, CAPE COD, MA - 2-bdrm. waterfront condo, spectacular view, pool, furn., walk to town, weekly rental, May, \$450/wk., June-Sept., \$625/wk. 399-6507.

For Sale

BELLE TERRE - 1-acre bldg. lot, English Tudor section, Village 24-hr. police, beach, children's programs, golf, tennis, \$245,000, terms. 928-1020.

CORAM - Strathmore East, 4-bdrm. ranch, 2 baths, cathedral l/r, 2-car gar., gas heat, fenced corner lot, \$120,000. Ext. 3791 or 928-7154.

CORAM - N. of Rt. 83, 4-bdrm. contemp. Colonial, l/r, d/r, fam. rm., fp, fin. bsmt. w/nightclub, 1/3 acre, \$139,900. Ext. 7897 or 331-0807.

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

MIDDLE ISLAND - Coventry Manor, 3-bdrm. townhouse, 2 baths, kit., l/r, d/r, laun. rm., cac, 5 appl., patio, new carpet, more, ask. \$102,000. Rosalie, Ext. 3160 or 289-5704 after 5 p.m.

MIDDLE ISLAND - 3-4 bdrm. farm ranch, d/r, fp, l/r, deck, shed, all appl., 1 acre, \$125,000.

PORT JEFF. STA. - 4-bdrm. L-shape ranch, 3 baths, 2 kit., l/r, d/r, fam. rm. fp, ac, part. fin. bsmt., 1/3+ acre, M/D potential, \$149,990. 474-2149.

RIDGE - 3-4 bdrm. ranch, l/r, d/r, eik, fam. rm., oak floors, skylight, Andersens, full bsmt., sliding doors, 24'x