BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

New RHIC Division Formed; New RHIC Magnet Arrives

Peter Horton

Standing by the first commercially made Relativistic Heavy Ion Collider (RHIC) magnet are the managers of the RHIC project: (from left) Senior Physicist Erich Willen, Accelerator Development Department (ADD); Senior Mechanical Engineer Carl Goodzeit, ADD; ADD Chairman and Acting Head of the RHIC Division Eric Forsyth; Senior Physicist Harald Hahn, ADD; Physicist Arthur Greene, ADD; and RHIC Task Force Chairman Thomas Ludlam, Physics.

The arrival of the first of three commercially produced magnets for the Relativistic Heavy Ion Collider (RHIC) coincided with the announcement by Laboratory Director Nicholas Samios of the formation of a RHIC Division within the Accelerator Development Department (ADD).

The magnet is one of four full-length prototypes of the superconducting, main guide magnets that will transport protons and heavy ions around the RHIC accelerator proposed for BNL. The 9.7-meter-long, commercial prototype was delivered to Bldg. 902 on Tuesday via air freight from Mannheim, West Germany, where it had been assembled by Brown, Boverie & Cie. The remaining two magnets being built in Mannheim will arrive by ship in March.

The very first of the four prototypes was assembled at BNL by ADD's Magnet Division. It is being readied for testing, to be conducted within the next two to three weeks, after which measurements of the magnet from Germany will be performed. Tests of all of the magnets will determine what are their maxium field strengths and field uniformities and if these values agree with the predicted ones. It is expected that these assessments will be finished by summer.

"The magnet development program typifies the increased activity devoted to RHIC," says ADD Chairman Eric Forsyth, who is also serving as Acting Head of the newly formed RHIC Division. He explains that, for the first time, the Department of Energy has directly funded RHIC research and development for the current fiscal year. The newly formed RHIC Division of ADD will coordinate the technical and financial tasks involved in the RHIC program. Forsyth anticipates that, if approved, construction of the collider will begin in fiscal year 1989. — Marsha Belford

World's Largest Monopole Detector —

Sifting Through Cosmic Rays for Magnetic Monopoles

Where were you at 10^{-35} seconds after the Big Bang?

If you are in hot pursuit of magnetic monopoles, as is Albert Prodell, Accelerator Development Department, and his five collaborators from the IBM Thomas J. Watson Research Center, Yorktown Heights, you wish you and your monopole detector had been there. At that very hot moment in the new universe, magnetic monopoles are theorized to have come into being, as the unified force split into the strong and electroweak forces.

Monopoles were first postulated in 1931 by the late Nobel laureate Paul Dirac. These isolated magnetic charges are thought to be the source of magnetic fields, in the same way that electric charges produce electric fields.

If a magnetic monopole is found, it will be a confirmation of the grand unification theories. The reward is so great that over 30 laboratories around the world are building or have commissioned detectors to search for monopoles in cosmic rays.

Built in collaboration with Stuart Bermon, John Chi, Chang Tsuei, James Rozen and Peveen Chaudhari of IBM's Division of Physical Sciences, the monopole detector at BNL is the largest now operating in the world. Having an effective area of roughly one square meter, the detector has been operating in a cryostat at a temperature of 4.5 kelvins (K) since October 1986 — ready and waiting patiently, with six plotter pens poised to record the moment when a chance monopole passes through.

The IBM-BNL monopole detector sits in a shield house in Bldg. 945, which is behind Bldg. 902. Once a day, its cryostat reservoir is filled with liquid helium to maintain the very low temperature. "Haven't seen a monopole yet," Prodell reports.

Bigger than a bread box but smaller than a football field, the present 13-foot-long by one-foot-wide detector is what Prodell calls a "pre-prototype." A four-square-meter prototype is under construction, and plans have been discussed for an array of such prototypes that will have an effective area of one hundred square meters.

Estimates from calculations based on astrophysical observations indicate that several monopoles per year might pass through a detector with the area of a football field. Unlike at their moment of creation, monopoles seem to be rare and elusive. One theory suggests that most monopoles escaped into our expanding universe after the Big Bang, and another that they united with anti-monopoles and annihilated.

The IBM-BNL detector is a rectangular box made up of circuit boards overlaid with copper. Deposited on the copper are 0.75-millimeter-thick lines of superconducting lead-tin solder, which form a planar array of coils. These coils of solder are arranged in an elaborate grid pattern called a planar gradiometer. Such an arrangement makes them insensitive to external magnetic field fluctuations, but leaves them able to detect a monopole passing through.

Detection of monopoles is based on a simple principle called Faraday induction: A magnetic charge passing through a coil will generate a current in that wire.

If a monopole were to enter the detector, it would pass through one of the gradiometer coils and generate a current in the coil, thereby producing a characteristic signal. As the detector is a rectangular box, a monopole would exit through one coil on another side of the detector, thereby producing a corresponding signal.

Any other changes in the magnetic field surrounding the detector, however, would create opposing currents in the gradiometer coils, and these non-monopole signals would cancel out each other.

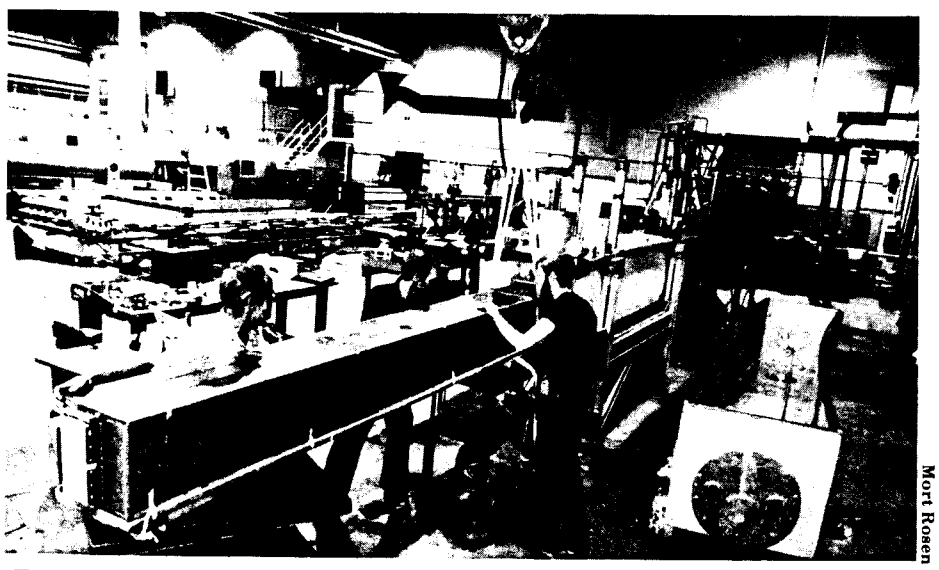
The four sides and two ends of the detector are each hooked up to a very sensitive instrument to measure the flow of electric current through the superconducting loops. Called Superconducting Quantum Interference Devices (SQUIDs), the six super-sensitive ammeters are located at one end of the detector, and each SQUID is connected to its own plotter.

The detector itself is surrounded by a superconducting shield, protecting it from external magnetic field fluctuations. The detector with its superconducting shield and the six SQUIDs sit in the 4.5 K helium vessel. Around the helium vessel is a copper shield, cooled with helium gas to reduce the heat leaking into the detector. All this is contained in a vacuum vessel that once had been used to test superconducting magnets intended for the Alternating Gradient Synchrotron.

Wound around the detector's shield house are current-carrying coils, to minimize the magnetic field the detector system experiences. "We have been able to reduce the field inside the house to an order of a few thousandths of a gauss along the axes," explains Prodell. This is two orders of magnitude less than the Earth's magnetic field.

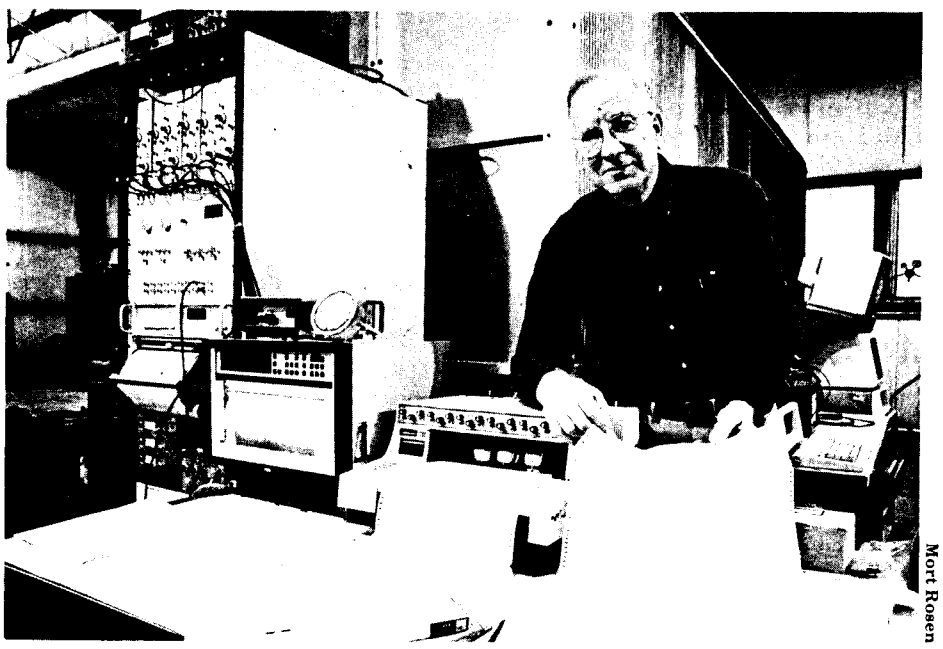
Attached to the detector are various gauges to measure such disturbances as changes in magnetic field, temperature and mechanical vibrations. All tracings made by the plotter are correlated with the recorded background disturbances. IBM computers, of course, are used to maintain the data.

(Continued on page 2)



Mort Rosen

(From left) Technical Supervisor Herbert Hildebrand, Accelerator Development Department; Stuart Bermon, IBM; and James Rozen, IBM, are seen last July loading the IBM-BNL monopole detector, which is covered by its superconducting shield, into the helium vessel of the cryostat. The vacuum vessel sits to the right.



Mort Rosen

Al Prodell with the IBM-BNL monopole detector in its shield house within Bldg. 945.

New Police Officers Graduate

Roger Stoutenburgh

The most recent class of BNL police recruits was graduated on Friday, January 16. The ten new officers are: (top, from left) Richard Thorp, Gregory Jones, Steven McCune, (middle, from left) Gerald Griffin, Joanne Palumbo, Peter Bronti, (bottom, from left) Lawrence Witt, Wayne Brush, Gary Rooks and James Hench. With the class are Police Training Specialist, Lieutenant Kathleen Walker (center, front) and John Barry, Plant Engineering, who played the bagpipes to begin and end the ceremony.

Monopoles (Cont'd)

The next detector, the prototype, will be shaped like an octagon instead of a rectangle, so as to increase the effective detection area in a cylindrical cryostat. That cryostat is on order, and when the prototype is assembled, which Prodell anticipates will take place in mid-1987, it will fit into the present detector's house.

"The step planned after that will be to build an array using 16 units similar to the prototype, but longer," explains Prodell. "The belief is that if we run such a large array for three years or so, we will probably see a monopole if the flux is several monopoles per football field per year."

— Marsha Belford

Hospitality News

Rosemary Florio, a teacher of home crafts, will be the guest speaker at the next Hospitality Committee get-together on Tuesday, February 3, at 9:30 a.m., in the Brookhaven Center. Spouses of Laboratory employees and guests are welcome. Coffee, tea and danish will be served.

The topic of Florio's presentation will be "Working with Bread Dough." She will demonstrate how to make a decorative basket from dough. To participate in the program, bring a small mixing bowl or loaf pan, a rolling pin and a cookie sheet.

Please come and enjoy the morning with us. Bring the children; babysitting will be provided free of charge.

Coming Up

The Concord String quartet will return to BNL on Friday, February 13, to play the second in a series of all-Beethoven concerts at the Lab. The concert will begin at 8:30 p.m. in Berkner Hall. Tickets will be sold at the door: $9 for general admission, $6 for students and those over 65, and $5 for those under 18.

Arrivals & Departures

Arrivals

Denis P. Joyce ..... Plant Eng.
Wu-Tsung W. Weng ..... Accel. Dev.

Departures

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

James R. Braun ..... Sfgrds. & Sec.
Anne E. Butler ..... Medical
Joseph A. Paolini ..... Plant Eng.
DeMing Shu ..... NSLS

Service Awards

The following employees received service awards during the month of January:

Thirty-five Years

Martin F. Montag ..... Sfgrds & Sec.
Rudolph M. Sternheimer ..... Physics

Thirty Years

Charles Bachsmith ... Applied Science
James P. Clint ..... AGS
Joseph R. Cuccia ..... Accel. Dev.
Stephen Gracia ..... Central Shops
William A. James .. Plant Engineering
Richard Lingg ..... AGS
Henry F. Peters ..... Reactor
Dmitri Stephani ..... Instrumentation

Twenty-five Years

Elliot H. Auerbach ..... AGS
Neal R. Carciello ..... Applied Science
James R. Curto ..... AGS
Robert T. Diem ..... AGS
Bayard C. Fenner .. Supply & Materiel
Frank P. Foster ..... Light Source
George W. Harris ..... Plant Eng.
James A. Pontieri ..... Plant Eng.
Joseph F. Radich ..... Plant Eng.
William J. Schneider ..... AGS
Thomas A. White ..... Light Source
Sue M. Wikan ..... DCP

Twenty Years

Thomas H. Albertina .. Applied Math
John J. Bland ..... MIS
Matthew V. Conforte ..... Plant Eng.

Ten Years

John W. Andrews .... Applied Science
David R. Cattaneo ..... Accel. Dev.
Kris S. Dahms ..... Sfgrds & Security
Robert D'Angio Jr. ..... Personnel
Willem DeJong ..... Accel. Dev.
Doris M. Gainsford ..... Plant Eng.
Jerome B. Hastings .... Light Source
Barbara N. Lade ..... Biology
Sandra G. Lane ..... Nuclear Energy
Henry Lewis ..... Plant Eng.
James J. Licari ..... Accel. Dev.
James Makoulis ..... AGS
Florence F. Mignano ..... Plant Eng.
Gene E. Rohde ..... Plant Eng.
Mona S. Rowe ..... Public Relations
Joan P. Smith ..... MIS
William J. Strelecki ..... S&EP
Malry L. Tardd Jr. ..... AGS
Michael Todosow ..... Nuclear Energy
Ronald J. Zapasek ..... AGS

Government Vehicles

Standard Practice Instruction (SPI) 5-05, GOVERNMENT VEHICLES, has recently been revised and reissued. If you drive government vehicles, even occasionally, and/or supervise those who do, the whole SPI is of interest to you. Article III sets forth specific responsibilities of supervisors and drivers.

In addition, page 19 of the Employee Guide contains information regarding possession of licences, as well as traffic rules and regulations for both private and Government vehicles operated on site.

BNL's Fabulous Forty

Shorter than an Olympic-size 50-meter pool, yet longer than a standard 25-yard indoor pool, the Lab's pool was not built with lap swimming in mind. Constructed along with the gymnasium in 1945 as a facility of the Physical Reconditioning Department of the Camp Upton Convalesant Hospital, the 40-foot-wide by 100-foot-long BNL pool was put in the ground to give "wonderful opportunity for exercise and fun for patients and duty personnel alike."

Over the past forty years, instead of Army "duty personnel," BERA members have continued to make good use of the pool, taking their exercise and having fun in the water all year round.

The first mention of use of the pool by Lab employees came in the September 1947 issue of Isotopics, with the headline "SWIMMERS RACE AGAINST TIME: Many Classes Entered." The story went on to report the names and times of swimmers who competed in the first Lab swim meet, including Senior Physicist Ernest Courant, who held the record for 100-yard breaststroke — 1:46. "I could probably swim that distance in twice the time nowadays," contends Courant, who was unable to attend the second BNL swim meet, held last Saturday (see swim meet results).

A "BNL Individual Swimming Championship Time Board" was put up to list the times for such events as the 50-, 100-, 220- and 880-yard and one-mile freestyle, and 50- and 100-yard breaststroke and backstroke. With the exception of the 100-yard races, the distances are no longer swum in competition and are odd for the pool, considering that one length or lap is 33.3-yards. "I believe we marked off the distance for the final lap and took the time as the swimmer went by," says Courant.

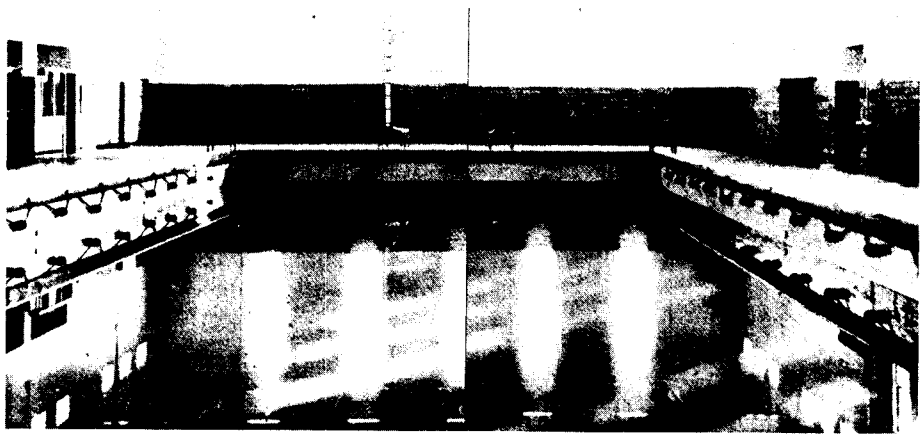
Most of the records fell in October 1948 to a Yale graduate student and former Yale swim team member, who was doing doctoral research in the Chemistry Department. However, while The Bulletin Board noted the distances, it did not report his times, and as the time board is long gone, they remain unknown.

The next use of the pool noted in Isotopics came in its October-November 1947 issue: MUSIC AVAILABLE FOR WATER SPRITES.

The Nuclear Reactor Project had held a swimming party that November 1, using the pool's portable record player and amplifying system. Pool parties, with dancing in the gym, continued to be held through the 50's and 60's.

Swimming pool passes were first issued in May 1949 to immediate family members "for the purpose of making entry into and exit from the Site more convenient," and fees for the pool were instituted in July 1950, as "the cost of its operation must be borne by the employees and guests using it." At that time, the daily fees were 20¢ for employees, 30¢ for family members, 50¢ for guests, and a season pass cost $10 for employees and their family members.

In 1957, the pool was made available to employees who wished to check their scuba gear. The Divers Club was formed soon after, and offered scuba diving classes at the pool through the 60's. According to The Bulletin Board of February 12, 1958, "several employees expressed a desire to organize an Aquatic Club at BNL." However, the Swim Club was not formed until November 1984. — Marsha Belford



Over the years, the pool was transformed from "what resembled a tank in a pickle factory to an attractive and modern swimming pool," in the words of a former recreation supervisor. Among the changes: In 1967, iron ladders were replaced with alumninum ones, concrete steps were constructed in the shallow end and colored plastic panels replaced the wood frame windows. In 1968, the pace clock was installed, and poolside decor then featured palm trees and large ferns. Lines were painted on the pool bottom for lap swimming in 1981, and in 1985, the pool building, which had been built as a temporary structure by the Army, was insulated.

Red Cross swimming classes, first for employees' children and later for employees, were first offered as a BERA activity in the summer of 1949. In 1959, The Bulletin Board noted that 100 boys and girls celebrated the end of the summer's swim lessons at a pool party. It featured the awarding of Red Cross Beginner, Intermediate and Swimmer cards, and such events as penny fetching, block retrieving, funny diving and inner tube racing. Such weekly special events continue today during the summer, as part of the children's recreation program. This picture was taken in August 1969.

Swim Meet Results

At the first BNL swim meet held for adult BERA members since 1947, old records were shattered and new pool and age-group records were set. Lap swimmers joined Swim Club members on Saturday, January 24, to establish 13 pool records and 37 age-group records in 13 individual events.

66.6-yard Freestyle

Peter Heotis	39.58	1st men 35-39#*
Jose Pirez	45.47	1st men 30-34*
Paul Michael	47.00	1st men 55-59*
Greg Van Tuyle	49.01	2nd men 30-34
Marsha Belford	51.60	1st women 30-34#*
Dave Alburger	56.07	1st men 65-69*
Pat Morris	1:06.00	1st women 25-29*

100-yard Freestyle
[1947 record - 1:34]

Peter Heotis	59.31	1st men 35-39#*
Wlodek Guryn	1:00.44	2nd men 35-39
Roger Klaffky	1:05.66	1st men 40-44*
Jose Pires	1:15.41	1st men 30-34*
Paul Michael	1:17.31	1st men 55-59*
Marsha Belford	1:18.66	1st women 30-34#*
Hugh Isaacs	1:29.04	1st men 50-54*
Dave Alburger	1:34.30	1st men 65-69*

200-yard Freestyle

Roger Klaffky	2:43.00	1st men 40-44#*
Dick Rothe	2:55.03	1st men 50-54*
Hugh Isaacs	3:43.44	2nd men 50-54

66.6-yard Butterfly

Peter Heotis	41.10	1st men 35-39#*
Wlodek Guryn	44.27	2nd men 35-39
Pavel Rehak	59.32	1st men 40-44*
Marsha Belford	1:01.10	1st women 30-34#*

100-yard Butterfly

Peter Heotis	1:07.07	1st men 35-39#*
Wlodek Guryn	1:27.22	2nd men 35-39
Marsha Belford	1:40.40	1st women 30-34#*

200-yard Butterfly

Marsha Belford	3:27.32	1st women 30-34#*

66.6-yard Backstroke

Wlodek Guryn	51.25	1st men 35-39#*
Greg Van Tuyle	53.23	1st men 30-34*

100-yard Backstroke

Greg Van Tuyle	1:22.56	1st men 30-34#*
Roger Klaffky	1:24.90	1st men 40-44*

200-yard Backstroke

Greg Van Tuyle	3:08.00	1st men 30-34#*
Roger Klaffky	3:19.68	1st men 40-44*

66.6-yard Breaststroke

Wlodek Guryn	52.97	1st men 35-39#*
Pavel Rehak	53.06	1st men 40-44*
Marsha Belford	1:06.78	1st women 30-34#*
Sheila Isaacs	1:09.10	1st women 45-49*

100-yard Breaststroke
[1947 record - 1:46]

Pavel Rehak	1:23.46	1st men 40-44#*
Roger Klaffky	1:28.45	2nd men 40-44
Marsha Belford	1:39.50	1st women 30-34#*
Sheila Isaacs	1:47.10	1st women 45-49*

200-yard Breaststroke

Pavel Rehak	3:05.20	1st men 40-44#*
Sheila Isaacs	3:51.85	1st women 45-49#*

133.3-yard Individual Medley

Wlodek Guryn	1:43.00	1st men 35-39#*
Peter Heotis	1:45.00	2nd men 35-39
Marsha Belford	2:03.96	1st women 30-34#*

# indicates men's/women's pool record
* indicates men's/women's age-group record

The Swim Club invites all BNL swimmers to challenge these records and to set records for age-groups not yet represented. A record attempt or challenge may be undertaken during any Thursday evening Swim Club meeting, so long as the record holder has been invited to meet the challenge, at least one officer of the club is present and two watches are used to time each swimmer. In the spring, a second BNL swim meet will be held, featuring shorter and longer distances and relays.

All film badges will be changed tomorrow. Please place your badge in its assigned rack space before leaving work today.

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Swim Club

When one, two or four laps each of butterfly, backstroke, breaststroke and freestyle are swum in this order, the event is called an individual medley (IM), and it challenges the swimmer to be proficient in all four strokes.

If you wish to learn how to put all four strokes together into an IM and how to turn going from one stroke to the next, come to the next meeting of the Swim Club. Swim Team Captain Peter Heotis and Wlodek Guryn, BNL men's record holder for the 133.3-yard IM, will coach the session on Thursday, February 5, at 5:15 p.m. at the pool.

Quilting Club

Members of the Quilting Club, who call themselves the Hands All Around Quilters, will be displaying their works at the South Country Library, 29 Bellport Lane, Bellport, on Friday and Saturday, February 6-7. Library hours are from 9 a.m. to 9 p.m. on Friday, and from 10 a.m. to 5 p.m. on Saturday, at which time quilters will be on hand to demonstrate their art. For more information, call Adrienne Usher, 286-3211.

6th Gospel Extravaganza

In celebration of Black History Month, the Afro-American Culture Club will present its Sixth Annual Gospel Extravaganza on Saturday, February 7, at 7 p.m., in Berkner Hall.

This year's extravaganza will feature four choirs, including the Voices of Unity from New Paltz University. This group has participated in the Black National Collegiate Choir Competition in the past four years and, in March 1986, took first place in the competition.

The other groups on the program are the William Paterson Gospel Choir, from William Paterson College in New Jersey; City College Gospel Choir, from the City College of New York; and the Voices of Hope, from the Hope Missionary Baptist Church of Central Islip.

Adult admission to the Gospel Extravaganza is $6 when purchased ahead, $8 at the door; for children, tickets are $4 in advance, $6 at the door. For more information and/or advance tickets, contact:

	Ext.	Bldg.		Ext.	Bldg.
Bruce Penn	7213	197C	Frances Ligon	3709	185
April Donegain	4425	703M	Robert Mosley	2350	599
Barbara Simpson	7009	355	Public Relations	2345	134

Bowling

Red/Green League
E. Sperry IV rolled a 248, J. Medaris 221/204/612 scratch, R. D'Alsace 220, E. Carter 217, T. Prach 213, J. Morris 205, J. Connelly 204, C. Bohnenblusch 203, T. Holmquist 203, K. Asselta 200.

Volleyball

Week of January 19

League I	
Upfagrabs	23-4
Dinkers	22-5
Xrayted	15-12
Phoubars	10-17
Net Results	6-21
Bumpers	5-22
League II	
Nuts & Bolts	20-4
Cannonballs	17-7
Fossils	17-7
TNT	15-6
Chunga's Revenge	8-16
Upton Ups	3-18
Misfits	1-23
League III	
Floaters	20-7
Printouts	18-9
Foul Ups	16-8
Screwballs	11-13
Sourcerers	10-14
Not Yets	9-18
Odd Couples	6-18
Open League	
Phoenix	27-3
Dakota	26-4
Odds & Sods	16-14
Rowdy Radicals	15-15
Court Jesters	14-16
Target	13-17
Duituits	5-25
Out of Control	4-26

An Evening of Murderous Love

Next Valentine's night, you can steep yourself in "Crimes of Passion," a selection of chilling tales of hot-blooded murder presented by crime historian E.J.Wagner. Wagner, shown at work here with a research assistant, has been described by The New York Times as "a compendium of what is lethal and why." Her dramatic program of folk tales and factual stories of murders committed for love follows up on her enthusiastically received "Murder in the Laboratory" lecture held at BNL in 1985. The February 14 presentation starts at 8 p.m. at Berkner Hall. The $5 admission is a tax-deductible contribution to the Renate W. Chasman Scholarship Fund, sponsored by Brookhaven Women in Science. Advance tickets can be bought from:

Name	Bldg.	Ext.	Name	Bldg.	Ext.
Pat Aud	120	7560	Harriet Martin	477A	3487
Penny Baggett	902B	5154		911C	4853
MaryAnn Castrogivanni	535A	3898	Flo O'Brien	475	4953
Alyce Daly	197D	5203	Mary Phillips	801	3289
Eena-Mai Franz	703	7103	Sharon Spark	515	4111
Rae Greenberg	510A	3743	Jean Stafford	185A	3336
Louise Hanson	815	7709	Pat Webster	911A	4628
Pat Harlin	725B	4828	Bonnie Wesolowski	555A	4301
Maggie Marsch	426	3275			

Cafeteria Menu

Week of February 2

Monday, February 2

French onion soup	(cup)	.75
	(bowl)	.95
Braised short ribs w/1 veg.		2.75
Veal Parmesan w/1 veg.		2.75
Hot vegetable plate (lite-weight)		2.25
Hot Deli: Fresh ham	(bread)	2.40
	(roll)	2.55
	(hero)	2.65

Tuesday, February 3

Southern bean soup	(cup)	.75
	(bowl)	.95
Southern fried chicken w/1 veg.		2.75
Pork loin w/stuffing and 1 veg.		2.75
Turkey salad w/croissant tips (lite-weight)		2.25
Hot Deli: Catalina club		2.45

Wednesday, February 4

Chicken gumbo	(cup)	.75
	(bowl)	.95
Spinach soufflé w/1 veg. (lite-weight)		2.65
Chicken & dumplings		2.60
Hot Deli: Grilled Reuben		2.55

Thursday, February 5

Tomato beef vegetable soup	(cup)	.75
	(bowl)	.95
Chicken stir-fry w/snow peas		2.75
Ham hocks w/1 veg.		2.65
Broccoli & cheese quiche (lite-weight)		2.65
Hot Deli: Boneless pork rib	(bread)	2.45
	(roll)	2.60
	(hero)	2.75

Friday, February 6

Seafood gumbo	(cup)	.75
	(bowl)	.95
Chili rellenos casserole w/1 veg.		2.55
Broiled fish w/1 veg. (lite-weight)		2.85
Hot Deli: Pastrami	(bread)	2.45
	(roll)	2.65
	(hero)	2.75

In celebration of Black History Month, the Cafeteria will be serving a variety of Black ethnic dishes throughout February.

Equipment Demo

Plessey Peripheral Systems will present their latest computer hardware products on Monday, February 2, from 11 a.m. until 2 p.m., in Berkner Hall. These products include removable Winchester technology, graphics terminals and systems.

In Stormy Weather

The following radio stations have agreed to carry announcements regarding emergency closings and delayed openings at BNL:

Station	Area	AM	FM
WALK	Patchogue	1370	97.5
WBAB	Babylon	1440	102.3
WBLI	Patchogue		106.1
WCTO/ WGSM	Smithtown	74	94.3
WHLI	Hempstead	1100	98.3
WLIM	Patchogue	1580	
WLIX	Islip	540	
WLNG	Sag Harbor	1600	92.1
WRCN	Riverhead	1570	103.9
WRIV	Riverhead	1390	
WSBH	Southampton		95.3

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position, with consideration given to candidates in the following order of priority: (1) present employees within the department and/or appropriate bargaining unit, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants. In keeping with the Affirmative Action plan, selection decisions are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all non-scientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment.

Except when operational needs require otherwise, positions will remain open for one week following publication date.

For further information regarding a placement listing, contact the Employment Manager, Ext. 2882.

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.

2532. MASON - Performs wide variety of cement and concrete work. Lays bricks and blocks, and does grouting and finishing as required. Plant Engineering Division.

2533. ELECTRICIAN, GROUP LEADER - Plant Engineering Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2534. SCIENTIFIC ASSOCIATE POSITION - Requires BS in chemistry, biochemistry or physics. Knowledge of electronic hardware, experience in basic chemical and biochemical laboratory work, and a background in computers is required. Will assist in the construction and maintenance of a scattering spectrometer at the X12B beam line at the National Synchrotron Light Source Department. Biology Department.

2535. ENGINEERING POSITION - Requires BS in mechanical, marine or civil engineering, and a minimum of three years' experience in plant or liaison engineering. Assignment involves project evaluation and the coordination of a variety of technical functions associated with water and electrical power distribution systems, electro-magnets, radiation shielding and other equipment used in supporting the experimental program. Alternating Gradient Synchrotron Department.

2536. CARPENTER (2 regular/2 temporary to 10/2/87) - Under minimum supervision lays out, constructs, modifies and maintains buildings and component parts from construction drawings, rough sketches or verbal instructions. Work with wood substitutes, and combination materials and flooring, roofing and wall materials. Plant Engineering Division.

Autos & Auto Supplies

86 CAMARO Z28 - metallic red, deluxe black interior, loaded, T-tops, 5k mi., $16,300. Rich, 727-1429 eves.

85½ HONDA PRELUDE SI - mint cond., a/c, cruise, power roof, all options, 27k mi., $11,500. Larry, Ext. 4797 or 929-4798 eves.

79 PINTO - htchbck., stick shift, runs but needs work, $350. 924-0277.

78 CUTLASS - clean, a/c, p/s, p/b, low mil., $1,000. Ext. 3930 or 286-2854.

SUNLINE TRUCK CAMPER - 9½', sleeps 5, has everything, excel. cond., $750. Dick, Ext. 3499 or 589-9103.

78 COUGAR XR-7 - 351, excel. cond., blue, am/fm cass., a/c, new tires, $2,300. Bert, Ext. 2050.

80 TOYOTA COROLLA - 4 dr., a/t, 4 cyl., good cond., asking $800. Tim, 281-7873 or Ext. 3496 eves.

78 COUGAR XR-7 - 351, excel. cond., blue, am/fm cass., a/c, new tires, $2,300. Bert, Ext. 2050.

72 MUSTANG - fast-back, a/t, 302 cu. in., runs well, needs front-end work (frame), $500. Janice, Ext. 3711 or 589-4153.

79 T-BIRD - very good cond., must see, $2,200. Jerry, Ext. 7427, Jerry or Keith 475-5591 after 5 p.m.

76 DODGE ASPEN - station wagon, a/c, p/b, p/s, runs well, new tires, orig. owner, $500. 286-2265.

80 DATSUN 510 - htchbck., runs well. Ext. 4615 or 928-8522.

81 CHEVY CHEVETTE - am/fm cass., new muffler, brakes, w/p, t/b, sun roof, very good cond., 60k mi. 758-5592 after 6 p.m.

78 DATSUN 280Z - 5 spd., reg. gas, blue, $2,500. Dave, Ext. 4088 or 298-9571.

81 OLDS DELTA - 88 sedan, diesel, 2 dr. Dave, Ext. 7921.

72 PLYMOUTH - full-size station wagon, reliable, best offer. Ann, Ext. 2022 or 744-8386.

71 PONTIAC - good tires, new battery, any offer. Jim, Ext. 3617.

76 BMW R75/6 - Krausers, low bars, $1,700; 73 Yamaha RD350, low mil., $450. Bob, Ext. 2502.

TIRES - (4), Firestone 721, white letters, radial 705-70-14". Ext. 2902.

79 FORD FAIRMONT - 4 cyl., 73k mi., new tires & exhaust, good cond. 654-8438.

79 PLYMOUTH VOLARE - p/t, p/s, p/b, good cond., asking $1,000 neg. Kumar, Ext. 3945.

71 CHEVY MALIBU - good running cond., orig. owner, $550. Gordon, Ext. 3216.

75 PEUGEOT STATION WAGON - a/c, am/fm, a/t, 18-20 mpg, runs well, $750. Ed, Ext. 2007 or 751-1474.

TIRES - (3), 175/SR/14, Michelin XZX, good cond., $10./ea. Ext. 4498.

79 OLDS CUTLASS - 6 cyl., 4 dr., a/t, a/c, p/s, p/b, cruise, $1,050. Chong-Sa, Ext. 3748/3030.

84 HONDA ATC 200 - red, shaft drive, reverse, electric start, excel. cond. $875. 874-3796.

77 DATSUN B210 - 4 spd., 2 dr., 4 cyl., 60k mi., medium blue, like new inside/out, $1,300. neg. 757-3712 or 698-0576.

75 CAMARO - 6 cyl., rebuilt eng., stereo, 4 wire wheels w/raised lettered tires. $2,500. Ext. 2529.

82 ESCORT WAGON - body good, broken timing chain, $500. Ext. 4354.

80 TURBO TRANS AM - p/s, p/b, p/w, p/l, a/c, a/t, 59k mi., T-tops, needs tires, $4,695. 585-4038.

79 CUTLASS SUPREME - 39k mi., clean inside/out, $3,200. 821-9094.

84 HONDA CIVIC - 4 dr., 1.5L 5 spd., 4 speaker stereo cass., 40 mpg, 37k mi., mint cond., $5,850. 666-7954.

FULL LINER - for light pick-up, 6' bed. Peter, 475-0831.

81 MAZDA 626 - 2 dr., 5 spd., 66k mi., orig. owner, am/fm stereo, good cond., $2,500. 673-5079 after 4 p.m.

69 MUSTANG - good running cond. 878-6074.

75 CAMARO - perfect running cond., dependable, many new parts, $500. 878-8302 after 5 p.m.

85 KX80 DIRT BIKE - excel. cond., new plastic, $575. Lois, Ext. 4904 or 929-4753 after 5 p.m.

81 OLDS DIESEL - 2 dr. sedan, good cond. Dave, Ext. 7921.

75 TRIUMPH SPITFIRE - convertible, good cond., 32k mi., 2 tops, $2,000. 744-2169.

76 PONTIAC VENTURA - 4 dr. sedan, a/c, p/s, p/b, a/t, high mileage, asking $375. Ext. 4532.

76 OLDS - 350, 4 dr., a/c, runs very well, $800. Kevin, 563-1189.

75 VOLVO 164 - 6 cyl., very good cond., must see, $2,300. Leroy, Ext. 5105 or 286-1615.

86 MOTOR SCOOTER - Honda Spree, special edition, 1k mi., excel. cond; Ford rim & HR 78 X15 truck tire, good for spare. Jack, Ext. 7869.

79 CHEVY LUV - 4 WD, fiberglass cap, excel. cond., mech. good, body fair, $1,800. 475-5849.

77 CHEVY CAMARO - blue, 8 cyl., a/t, a/c, am/fm cass., excel. tires, new paint, $2,500. Melanie, Ext. 2456.

83 YAMAHA VIRAGO - 750, black, $2,000; 80 Honda CX500, 10k mi., $1,000. both mint cond., extras. Charles, Ext. 7749 or 789-1744.

86 HONDA SPREE - low mileage, new cond., reasonable. Walt, 298-8601.

Boats & Marine Supplies

21' BAYLINER CIERRA - 1986, sleeps 5, 135 h.p. Volvo I/O, full canvas, excel., $19,000. 878-0480, eves.

28' OWENS - 1963, wood, tight hull, engine needs work, $500, forced to sell. Bert, Ext. 2050.

22' SEARAY - 1977, cuddy, 198 Merc. I/O, VHF, CB, dual batteries, trim tabs, depth finder, refrig., more, excel. cond., $7,000. firm. 286-1358.

21' FIBERFORM - 1981, large cuddy cabin, 115 Mercury, trailer, loaded, excel. cond., $9,250. Dick, Ext. 3499 or 589-9103.

O'DAY 222 - 1986, racer/cruiser, immac., electronics, full sail inventory, multi-weight spinnaker & gear, many extras. 286-4840 after 6 p.m.

Miscellaneous

STEREO - Pioneer receiver, cassette player, w/two 3-way speakers, 1 yr. old. Ext. 4797.

EZ PAINT ROLLER - automatic, w/3 ft. handle, never used, $10. Joe, Ext. 4212.

COAL BIN - 3-ton, $10. Ext. 5400 or 874-3447.

CANARIES - rings, shells, etc. Whitey, Ext. 3913 or 928-3088.

FURNITURE - maple chest, $75; student desk, $60; chair, $15; night table, $25., excel. cond., $150. takes all. 286-2265.

HUMIDIFIER - Sears console, like new. $20. Ext. 2902.

CITRUS FRUIT SALE - Baffa annual, pink grapefruit, valencia oranges. Maryanne Kelley, Ext. 4230.

MICROWAVE - Sears, large capacity, excel. cond., 3-stage cooking & defrosting, shelf & probe, $250. 654-8438.

TICKETS - (2) round-trip airline to Los Angeles, depart 2/17, return 2/24, $235. for both. Ext. 4525.

SEWING MACHINE - Singer, $20; baby stroller, $15, Ext. 5036.

PLAYPEN - like new, $30; gate, $2. Ady, Ext. 4531 or 331-3785.

BOY SCOUT JACKETS - wool, (3) red, (1) green, men's sizes 38, 40, 42, excel., $20./ea. Ext. 2529.

BAND SAW - Dayton, metal cutting, 4x6" (less motor), like new, $150; (4) old sturdy chairs, $50. 878-6637.

BASSINET - lrg., white wicker; changing table, brown wicker, $15 ea.; boys' clothing, size 8-10, good cond., cheap. Judy, 698-4882 after 5 p.m.

SOFA - and love seat, excel. cond., contemporary, $275. 754-8053.

SNOW PLOW - Meyer, 4 angle hydraulic w/lights, $300. Mike, Ext. 4061 or 475-8406.

TRESTLE TABLE - formica top, 6 chairs, 2 leaves, pine; bicycles, 1 BMX, 1 small child's; 2 bed frames, more. Gary, Ext. 2350 or 567-9617.

WOOD STOVE - Danish, $45. 286-0384.

STEREO - digital tuner, 45 watt, 1 yr. old, MCS brand, very clean w/speakers, $300. Scott, Ext. 7578.

SNOWBLOWERS - (2) 3 h.p. 20 in., direct chute, gas powered, never used, $265 ea. 472-1283 between noon & 3 p.m.

KITCHEN TABLE - 31"x43", butcher block, formica top, w/four cane chairs, excel. cond., $125. 473-7667.

ADT ALARM SYSTEM - panel smoke detectors, burglary panic battery backup, extras, $150. neg. 821-1525.

SECTIONAL SOFA - 2 piece "L" shaped, approx. 10'x5.5', excel. cond., $350. Ext. 2365 or 475-4787 after 6 p.m.

GOLF CLUBS - 2 sets w/golf bag, $50. Frank, Ext. 2377 or 325-9584 after 6 p.m.

LAMPS - brand-new, assorted desk & bedside, $5.-$9. Jerry, 475-8440.

BREADS & CAKES - made to order, cheesecake a specialty. Beth, 286-3782.

COUCH - very good cond., comfortable, must see, $125. 475-8440 or 286-1875.

ARRANGEMENTS - floral and pinecone for Valentine's Day, Easter, or special occasions. Madeline, 878-0026.

SOFA BED - queen, w/tables, fair cond., make offer. Craig, Ext. 2760 or 395-1084.

CRIB MATTRESS - good cond., Sears humidifier. 751-4539.

TRAINS - standard gauge brass loco, $400; standard gauge rail bus, $150. Jack, Ext. 7869.

WOODSTOVE/FIREPLACE INSERT - 28.5"W x 25"H, w/damper, $200. Gerd, Ext. 4119 or 7516342.

UHF ANTENNA - brand-new, w/28 elements, 14 to 87 chanels, orig. $69., sell for $42. 924-0960 after 6 p.m.

SKIS - Hart 150, w/Solomon binding, women's size 8 Munari boots, carrier, poles; GE washer & dryer, $200; GE toaster oven, $25. Paul, Ext. 3372.

ASBESTOS SIDING - light gray, half price; septic tank pump w/enclosures & 2-4" PVC pipes, 20' long, $35. Steve, Ext. 3988 or 286-2151.

MENS' SKIS - 205 cm, 200 cm, boot size 10 med; women's skis, Harts, 185 cm, boot size 7, 8; Farberware convection oven; dinnette set. 475-0509.

CONN ORGAN - double keyboard w/foot pedals, like new cond., $600. Ext. 4428 or 467-8297 eves and wknds.

Free

VAPORIZER - Devilbiss, steam, hardly used. Sandy, Ext. 3369.

MEDICINE CHEST - 12'; electric baseboard heater. Doug, Ext. 4237.

TRAIN TABLE - 4'x8' for model railroad. Craig, Ext. 2760 or 395-1084.

PUPPIES - adorable, (3) male, (3) female, thoroughbred Siberian Husky mother, Shepherd-mix father. Mitzi, Ext. 2956.

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

CATSKILLS - Chalet, 3 bdrm., sleeping loft, fully furn., great for skiing, near Hunter & Windham Mts. Judy or Kay, Ext. 3595 or Bea, Ext. 3642.

HILTON HEAD, SC - 2 bdrm. condo, sleeps six, beach, golf, tennis, many extras, great weather, $300/wk. 585-9149.

HOLBROOK - brand-new 3½ rooms, extra storage closets, pvt. ent., quiet residential area, walking distance to stores, $575 inc. util. Ext. 2529 or 588-7989 eves.

MIDDLE ISLAND - Artist Lake condo, 1 bdrm., l/r, kit., full bath, a/c, new w/w, dishwasher, redecorated, pool, heat incl., 5 min to Lab., avail. immed., $650. Ext. 3144 or 698-5046 eves.

CENTER MORICHES - beautiful bayfront home, 3 bdrm., large l/r, family room, on 1/3 acre. Ext. 5277 or 549-5802.

PORT JEFFERSON STA. - off Canal Rd., 2 bdrm., full bath, l/r, eik, bsmt., garage, workshop, on 1½ acres, $850. plus util., avail. 2/1. 473-6432 eves.

SHIRLEY - 2 bdrm., l/r, eik, full bath, w/w, walk to beach, working couple, ref., sec., $675. incl. all. 744-2821.

YAPHANK - 1 bdrm., l/r, eik, 5 closets, full bath, separate entrance, spacious, avail. 3/1, no pets, $500./mo. incl. util. 924-5130 after 6 p.m.

For Sale

PORT JEFFERSON - Three Village School district, 4 bdrm., 2½ baths, den, bsmt., 1/3 acre wooded lot, $210,000. 928-0281.

PORT JEFFERSON - 4 bdrm. Colonial, 2½ baths, l/r, dining room, eik, partly finished bsmt., deck. Ext. 4674 or 473-5331.

Wanted

PEOPLE FOR REUNION - U.S.S. Abner, read DD-526, Nov. 1987, New Orleans. Contact A. Gill, 18 Pia Blvd. Smithtown 11787 or 724-4514.

SHOP MANUALS - 1978 AMC, 1977 Ford Maverick, 1972 Chevrolet Van, reasonable prices. 727-3608 after 5 p.m.

HOUSE TO SIT - going away on vacation or business, I will stay with your house. Ext. 3671 or 736-2131, eves.

SUMMER DOCKAGE - Southold/Cutchogue area, 22' sailboat. Ext. 5384.

ROOMMATE - to share large 2 bdrm. apt., walk to beach, Rocky Point, $290./mo. plus util. Bob, 744-1049 eves.

BABYSITTER - for 5-yr.-old girl, 2 eves. a week, 4 hrs. a night, Holbrook Sunvet Mall area, must have own transportation. 567-7752 after 6 p.m.

GENERATOR - Generac 4 kW, from BERA sale, preferably in orig. box, unused. George, Ext. 2296 or 928-5053.

LEATHER TOOLS OR MACHINES - Bob, 281-2875.

ROOMMATE - to share 2 bdrm. house, female preferred. Ext. 4298.

HOUSE TO RENT - Shoreham/Wading River School district. Ext. 4490

CONSOLE PIANO - good cond., reasonable. 722-3947 after 5 p.m.

Classified Ad Policy

Deadline is 4:30 p.m. Friday for publication Friday of the following week.

1. The Brookhaven Bulletin's classified section may be used only by active and retired Laboratory employees.
2. All items for sale or rent must be the advertiser's property.
3. Ads for material acquired for resale in association with a full or part-time business cannot be accepted.
4. Ads for the sale or trade of firearms will not be accepted.
5. Ads not carried because of space restrictions will be held for publication in the next issue.
6. Ads are run only once and must be resubmitted if they are to be repeated. One ad per person per week.
7. **Property for sale and rent cannot be accepted on this form. Special Real Estate Ad Forms are available at the office of the Brookhaven Bulletin, Building 134.**

☐ For Sale: Autos & Auto Supplies ☐ For Sale: Miscellaneous ☐ Lost & Found ☐ Free
☐ For Sale: Boats & Marine Supplies ☐ Car Pools ☐ Wanted ☐ _____

Please print your ad below in 15 words or less using one word per block. Include name and phone number to call.

Note: The following must be completed for your ad to appear.

NAME (Please Print) .....

Employee's Signature ..... Life No. ..... Ext. .....

Send to: Brookhaven Bulletin, Building 134 (Ext. 2345).