

HEPAP Meeting: Is LHC the Future of U.S. High Energy Physics?

Ever conscious of the budget axe that killed the Superconducting Super Collider (SSC) this fiscal year and anticipating no growth in the particle-physics research budget for fiscal year (FY) 1995, the High Energy Physics Advisory Panel (HEPAP) to the U.S. Department of Energy (DOE) did some public hand-wringing over the decline of governmental support of particle physics and soul-searching regarding its priorities, during its meeting at BNL last Friday and Saturday.

The panel, however, did extract a promise from DOE to pursue formally, in writing, the likelihood of U.S. participation in the construction and use of the Large Hadron Collider (LHC), a proton and heavy-ion collider proposed for the European particle-physics laboratory CERN.

In contrast to that good news, the panel heard the bad news that, at least for this fiscal year and the next, no additional funding is forthcoming for LHC research and development. So any money that might go to the LHC must come from the budget for existing research, at least until FY 1996.

"There is more good physics to be done than resources to do it," concluded HEPAP chairman Stanley



Roger Stoutenburgh

At the meeting of the High Energy Physics Advisory Panel (HEPAP) held at Brookhaven, January 28-29, are: (from left) John O'Fallon, Director of the Division of High Energy Physics, U.S. Department of Energy; HEPAP Chairman Stanley Wojcicki, Stanford University; and HEPAP Future Vision Subpanel Chairman Sidney Drell, Stanford Linear Accelerator Center.

Wojcicki, a Stanford University physics professor. As a result, he commented, "We have to examine what new physics to pursue in light of the

opportunities here and abroad."

New U.S. Opportunities

As was discussed during the meeting, new opportunities in the U.S. at the frontier of particle physics are now limited to the energy and scope provided, respectively, by the upgrade of the Tevatron's main injector at Fermi National Accelerator Laboratory (Fermilab) and the construction of what is called a B-particle factory at the Stanford Linear Accelerator Center (SLAC).

As a result, "The future of high energy physics in this country depends upon how we resolve foreign collaboration issues — and we want a win-win outcome," commented Martha

Krebs, the recently sworn-in Director of DOE's Office of Energy Research (OER), which administers the funds for particle-physics research through its Division of High Energy Physics.

Krebs came to the meeting on Saturday "to hear from HEPAP, as representatives of the high energy physics community" what projects should be funded in the future. By the future, she meant beginning with the FY96 budget, since the President's FY95 budget will be submitted to Congress in February, and the FY96 budget wrangling between the departments in the executive branch will begin this fall.

However, she urged the panel to prioritize their recommendations. "The field cannot afford to do all the good things that it wants to do," she stated, "Yes, you will have to forgo some opportunities, since that is where the budget is taking us," she said.

Since the President's FY95 budget for DOE's Division of High Energy Physics will be discussed at HEPAP's March meeting in Washington, the division's Director, John O'Fallon, could only intimate that, as reported in *Science*, it would be approximately the same as this year's \$617.5 million.

That means "we won't have any new money to bring to the table in Switzerland for two years," commented O'Fallon, "and we're all already feeling the pinch."

According to John Peoples, Director of Fermilab, who has been placed in charge of dismantling the SSC, whether any of the \$640 million that Congress set aside for the "orderly termination of the SSC project" can be used in the future to initiate LHC participation remains to be seen.

While Peoples mentioned that Martha Krebs had recently approved (continued on page 2)

HEPAP Heaps Praise on BNL

Established to counsel the Secretary of Energy, the High Energy Physics Advisory Panel (HEPAP) has 16 members, who each serve a three-year term. The present panel includes BNL's Derek Lowenstein, Chairman of the Alternating Gradient Synchrotron (AGS).

HEPAP meets several times a year, either in Washington, D.C., or at one of DOE's laboratories where high energy physics research is carried out. While at a laboratory, the panel is briefed on the particle physics program and toured about the facilities — as happened at Brookhaven on January 28 and 29.

Last Friday, after being welcomed by Laboratory Director Nicholas Samios, the panel first heard about Brookhaven's particle physics program from Mel Schwartz, BNL's Associate Director for High Energy and Nuclear Physics.

While speaking on high energy physics research and its budget at Brookhaven, Schwartz made two points regarding the effectiveness of running the AGS: First, the amount of money needed to increase the number of weeks from the present 12 that the AGS is running with proton beams would not be significant when compared to what is already being spent for those 12 weeks. As Lowenstein reminded the panel, due to earlier budget cuts, the AGS is now being operated with the leanest staff possible, so making further reductions to fund an expanded run is not possible.

And second, once BNL's Relativistic Heavy Ion Collider comes on line by the end of the decade with the AGS serving as its injector, the additional expense that would be incurred if the AGS were allowed to continue offering protons for high energy physics is "miniscule" when compared to the annual operating cost of RHIC, which will be paid for out of nuclear physics funds.

Not only is it cost effective to continue the AGS's proton-physics program, but it is also technically possible: As explained by AGS Accelerator Division Head Bill Weng, the AGS will only be called upon as an injector twice a day to fill the RHIC rings with heavy ions, and the switch-over time between heavy ions and protons in the AGS will be 2-3 minutes.

The panel then heard, among other topics, about the current theory and experimental work at the AGS in search of rare kaon decays, the building of the muon g-2 experiment, the possibilities of spin physics at RHIC and the progress of investigations into future accelerator technology at BNL's Accelerator Test Facility (ATF). After hearing about the AGS and ATF, HEPAP toured both.

In the words of its chairman, Stanley Wojcicki, the panel concluded "BNL's program is broad and diverse, and some parts of the experimental program — particularly the rare K-decay experiments — are unique." Impressed with the quality of the program and the number of students being trained at the AGS, the panel stated, "It is important to provide funds to increase the amount of running time at the AGS."

In addition to praising BNL's particle-physics program at its present high-intensity accelerator, the panel gave a "strong endorsement" of the research and development work on future accelerators and detectors, respectively performed at the ATF and in the Lab's Instrumentation Division.

— Marsha Belford

Benefits Are Her Business

Joining the Personnel Division on January 18, Denise DiMeglio became BNL's new Benefits Manager, in charge of the Lab's programs for employees' health, life and other insurance and pensions. DiMeglio is responsible for this part of the position that was held by Richard Schonberg, who retired as Deputy Manager for Personnel and Labor Relations in October 1993.

Said Robert D'Angio, Personnel and Labor Relations Division Head, "Over the past 25 years Dick Schonberg designed and implemented many of the benefit programs our employees enjoy today. I look forward to working with Denise, whose background and experience in the benefits area should prove extremely valuable to the Laboratory."

At this time of year, contracts are reviewed and different rates are determined — so DiMeglio is already becoming familiar with the many programs designed to meet BNL employees' needs (see sidebar, page 3).

"It's been an interesting two weeks, meeting with Lab staff from other areas and discussing such topics as fiscal, auditing, wellness, employee assistance, injury and safety, and how these interrelate with the benefits programs," said DiMeglio. "And with the extremely knowledgeable help of Muriel Pfeiffer and Joyce Wund in my group, I am very much looking forward to working here."



Roger Stoutenburgh

Denise DiMeglio

DiMeglio comes to BNL from four years as the national manager of payroll and benefits for Linotype-Hell Company located in Hauppauge. There, she was in charge of all medical, dental, life, accidental death and dismemberment, disability, business travel accident, and health insurance programs, as well as spending accounts and retirement programs. She also had responsibility for the company's Canadian benefit programs.

"In reviewing programs, it's a matter of achieving a balance between cost containment and employees' needs. Sometimes, it's possible to get both cost savings and better benefits, (continued on page 3)

It's a PC! It's a Phone Booth! It's Supercopier!

Don't call it a copier.

It does everything but make coffee and sweep the floor, and has more memory than a bunch of personal computers put together. It's the Xerox DocuTech, a one-stop print shop newly installed and now in use at the Copy Service Center, also known as Quick Copy, in the Photography and Graphic Arts Division.

"It's a big step up for us," said Joe Hanson, Quick Copy supervisor. "It's a long way from a conventional copier — it's an electronic publishing machine."

The DocuTech, about the size of two telephone booths laid end-to-end, can do just about anything Brookhaven users would ask for — and do it well.

Its scanner digitizes images, storing them in memory. Then, using laser-image technology, it produces original-quality copies of photos, art and text. The DocuTech's memory capability is especially intriguing — "on demand printing" is now a possibility. That means the Copy Service Center only needs to print copies that are needed now; additional copies can be printed from memory as needed. This feature may be especially useful for forms and manuals.

Other key features are the DocuTech's speed and capacity: It can make double-sided copies on paper up to 11" x 17", lightning quick. A demonstration by day-shift lead operator Kelly Mazzola produced 100 BNL site maps, double-sided, in less than two minutes.

The new machine also makes booklet-printing easier, rotating images to fit two 8 1/2" x 11" pages on one large sheet for folding. If any part of any page needs to be blocked from printing or if pages need to be numbered, then it can do that too. Lastly, the DocuTech can bind the booklet with tape or stitches, or place a staple anywhere on the page.

The new machine will make Quick Copy staffers' jobs more efficient, too, by handling several jobs at once and "remembering" document specifications for recall at a later time. Its control center is a computer with menu icons that can be touched on the screen



Quick Copy lead operators Kelly Mazzola (center) and Jerry Gaeta (foreground left) hear about the myriad features of the Xerox DocuTech "supercopier" from Xerox representative Arlene Garcia. In the background, Quick Copy staff members Tina Walsh (left) and Joe Perry use the DocuTech (yes, it's really that big) to produce and bind copies for the BNL community.

or pointed to using a mouse. And to top it off, when the copies are ready, the DocuTech literally serves them up on a slide-out tray.

Mazzola and night shift lead operator Jerry Gaeta are now receiving training about the DocuTech's features. They in turn will train staff members Philip Allen, Kevin Collins, Joe Perry and Tina Walsh.

Even with the staff prepared to use the machine to its fullest, the most

amazing part may be what's coming. Hanson said that eventually the DocuTech will be linked to a computer network, allowing BNLers from around the site to send their computer files directly to Quick Copy to be printed to their specifications. — Kara Villamil

Equipment Demo

On Friday, February 11, at 1:30 p.m., Hewlett Packard (HP) will present its "Technology Road Map and New Product Introduction," including announcements of low-cost RISC workstations and X-terminals, multimedia-ready workstations, PC/MAC software for HP systems and flat panel displays.

Representatives will discuss new technologies for computational growth, mass storage, graphics and middleware. The seminar will be held in Bldg. 725, meeting room A, second floor. For further details, call Ted Daniels, Ext. 5555.

Arrivals & Departures

Arrivals

Jeffrey J. Aspenleiter RHIC
Craig A. Kelly Chemistry
Dennis J. Wild Medical

Departures

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

Constantino Economos Adv. Tech.
Donald C. Elliot RHIC
Patricia R. Gassaway Dir. Off.
Junichi Iwai Medical
Li Luan Chemistry
Mark A. Oros Comp. & Comm.

ergy," Krebs stated. "She knows that we are not going to move high energy physics forward without international collaboration."

So, to explore the conditions under which U.S. scientists may become major participants in experiments at the LHC, Krebs pledged, "It is time for letters to be exchanged" between DOE and the CERN Council.

In discussing why "engineering that collaboration is the present challenge," she explained, "Before, we were very competitive with Europe and downplayed the importance of the LHC; now, with the demise of the SSC, we have to convince [Congress] otherwise."

CERN's Foreign Policy

CERN, as its Director General, Christopher Llewellyn-Smith commented, also very much wants the foreign collaboration issue resolved, especially before LHC is built.

He pointed out that, while only about 150 Europeans from the 21 member states that fund CERN do their research in the U.S., some 500 Americans work at CERN — though the U.S. does not contribute to the European laboratory's operating budget. Though this has been tolerated to date, "with the demise of the SSC, the mood among member states has changed," reported Llewellyn-Smith.

CERN will continue its "open-door

policy, providing access for physicists from any country," but the Director General unequivocally stated, "Non-member contributions will be required of countries making extensive use of LHC." Specifically from the U.S., the CERN Council is looking for dollars, in addition to in-kind contributions of equipment and expertise.

Luckily for the U.S., given the cost of the LHC and the flat contributions expected from member states due to the European recession, the CERN Council, according to Llewellyn-Smith, will welcome funds from outside its membership, so that LHC construction can be kept on schedule without CERN's having to borrow money.

"If we do not receive outside support, we will have to go slowly," said Llewellyn-Smith. This means, he explained, that the LEP shutdown, now scheduled for two years, would have to be extended to four. So, the Director General pointed out, "Any physicist who comes to CERN from the outside will help us do what we want to do" while helping themselves.

Physics Investment

Speaking after CERN's Director General, the OER Director promised "an investment in CERN will be similar to the long-term investments being made in the national laboratories like Brookhaven and Fermilab" and "we would not view LHC as just a

BWIS Meeting: Conducting Plastics

Batteries, fuel cells, electrodes, microsensors and electrochromic devices are vital to today's world. But that doesn't mean that they are all they can be. Promising new materials could increase their versatility while decreasing their toxicity.

These materials — plastic films that contain dissolved salts — conduct electricity. Understanding this process is a goal of Louise Hanson, a chemist in the Conducting Polymer Group in the Materials Science Division of BNL's Department of Applied Science.

Hanson will be the guest speaker at the next Brookhaven Women in Science (BWIS) meeting, on Thursday, February 10, at noon, in Room B, Berkner Hall. In her talk on "Making Plastics Electrically Conducting," she will describe how spectroscopic techniques can be used to probe ion dissociation in these plastic films.

Hanson received her Ph.D. in chemistry from the University of Washington. She came to BNL in 1977 and joined her present group in 1991.

All are invited; bring your lunch.

Survey Seeks Info On Computer Use

The Personal Computing Resource Center (PCRC) User Council is conducting a survey of all BNL computer users to determine software status on site. The results of this survey should help the PCRC in the Computing & Communications Division to establish which items to support and provide training for.

For this effort to be successful, it is important to get as complete a representation as possible of all BNL users. Survey forms are now being distributed around site. If you are a computer user, but you do not receive this survey by February 14, call your PCRC Council member, whose name can be obtained from Linda Dombrowsky, Ext. 4109.

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

HEPAP

(cont'd)

the use of \$14.6 million of SSC-close-out money to finish detector and accelerator research and development already in progress, whether or not she will consider using other SSC funds to transfer that work to the LHC is unknown.

Letters to Be Exchanged

In the post-SSC era, it was agreed during the meeting, the greatest opportunity abroad for particle physicists will be provided by the LHC, which is expected to be approved in June by the CERN Council. Twelve countries established CERN by a treaty signed in 1954, and, to date, 19 member states, all European countries, are party to this treaty.

Scheduled to come on line in 2003, LHC would accelerate protons to 14 trillion electron volts (TeV), while the SSC would have gone to 20 TeV. With no SSC with which to compete, however, LHC will be the world's highest energy proton accelerator and, according to a statement released at the meeting by the International Committee for Future Accelerators, "the only realistic opportunity to study multi-TeV hadron collisions" in the hope of finding the origin of mass and answering other fundamental questions.

American participation in LHC is a "high priority for the Secretary of En-

construction project — we want to build a physics program there, not just a machine."

Despite the SSC failure and tightening budgets, Krebs stated that DOE continues to regard "basic science as a national investment." She did add the caveat that "basic science must contribute more effectively in the future."

Since "DOE cannot decide where to make that investment in the future without HEPAP," Krebs is looking for the advice to be embodied in a report due in spring from HEPAP's newly organized "future vision" subpanel, which is chaired by SLAC Deputy Director Sidney Drell and is mostly made up of relatively young members.

After HEPAP chairman Wojcicki reminded his members that physicists that age are the field's future, he endorsed Drell's efforts to date and asked that, in looking into the future of physics over the next decade, the panel prioritize its wish list of projects, so tough decisions can be made if no new funds are forthcoming.

In encouraging HEPAP to "work through" its disappointment, "as this is an appropriate time for self-reflection and criticism," Krebs commented, "The Drell subpanel is going to provide the input for giving the Secretary and me the sense of vision that we have to carry forward to our disappointed supporters and open-minded critics." — Marsha Belford

HMO Enrollment Now Open

Until February 25, eligible BNL employees can either join a Health Maintenance Organization (HMO), change to the AUI Group Medical Insurance Plan administered by Connecticut General Life Insurance Company, choose another HMO, or opt to keep their present coverage.

Effective March 1, BNL employees working 20 or more hours a week will be able to choose their next year's coverage from either the AUI Plan or one of four HMOs: ChoiceCare, Empire Blue Cross Blue Shield (BCBS) Healthnet, Health Insurance Plan of Greater New York (HIP), or US Healthcare.

Under the AUI Plan, employees may choose any physician or health-care facility, and fees for services are reimbursed according to plan policies. For reimbursement, an employee must submit a claim form.

In comparison, an HMO provides a number of health services to enrolled members for a prepaid premium with no claim forms required. So, instead of charging a fee for each service provided, the HMO collects the premium fee from members' employers in advance.

That fee entitles the member to most health-care services, such as physician visits, surgical costs, x-rays, hospitalization charges and diagnostic tests. Some HMO services require a small copayment from the member, but most services are covered by the prepaid fee. Please note that, under the ChoiceCare plan, the \$2,000 yearly maximum on prescription drugs has been eliminated, effective March 1.

Associated Universities, Inc. (AUI) will only subsidize the cost of an HMO plan by paying up to the cost AUI currently pays for the AUI Medical Insurance plans. Since the BCBS Healthnet premium rates, effective March 1, 1994, exceed the cost for the AUI plan, an employee premium will be required for Healthnet HMO coverage, as of March 1, as follows:

	Hired before 1/1/92		Hired after 1/1/92	
	monthly	weekly	monthly	weekly
Individual	\$19.48	\$4.50	\$33.19	\$7.66
2-person	29.22	6.74	49.79	11.49
Family	86.85	20.04	126.81	29.26

Membership in the other HMO plans — ChoiceCare, HIP and US Healthcare — will not require an additional employee premium. Employees who were hired on or after January 1, 1992, and who enroll in an HMO or the AUI Medical Insurance plan will continue to pay their required medical insurance contribution.

Representatives of the various HMOs will be at Berkner Hall on three consecutive Wednesdays — February 9, 16 and 23 — between 11 a.m. and 1:30 p.m. to answer any questions. Plan literature, including lists of participating physicians and application forms, is available from the HMO representative or from Personnel Services, Bldg. 185, Ext. 2877.

To change coverage, employees must obtain forms from Personnel Services. The deadline for medical coverage changes is Friday, February 25, with coverage effective May 1, 1994, through February 28, 1995.

Benefits Manager (cont'd)

which is very rewarding," said DiMeglio.

Prior to being at Linotype-Hell, DiMeglio, who has a B.A. in business administration from Hofstra University, was an actuarial and benefits consultant with three New York City firms: Coopers and Lybrand, William Mercer, and Martin Segal.

"Already, I can appreciate that BNL offers excellent benefits, which compare favorably with those offered by many other institutions," said DiMeglio. "There are five health insurance packages to choose from each year. In fact, one of my first jobs is to remind everyone that right now is the time to choose, and that the relevant information is in the HMO enrollment article in the Bulletin this week!" — Liz Seubert

AUI's Benefit Programs

Listed below are the benefit programs offered to BNL employees by Associated Universities, Inc (AUI). They are first explained to new employees by staff in the Personnel Division, who also provide each newcomer with the Employees' Handbook, containing a summary of the same information. However, employees who need more information or wish to revise their choices — which can be done, but often at specific times for different programs — should call Personnel Services, Ext. 2877 or Ext. 7516.

- **Medical Insurance** — Five plans are available to choose from annually, see article on HMO Enrollment, on left.
- **Dental Assistance Plan** — Optional; provides for preventative, diagnostic, restorative and orthodontic services. Another option is a dental care plan using participating dentists.
- **Life Insurance** — Basic life insurance is provided by AUI at no cost to employees. In addition, two supplemental options allow employees to choose a total coverage of approximately three times their base annual salary by paying a premium.
- **Long-Term Disability Insurance** — Provides protection against complete loss of income during a long absence due to disabling illness or injury. Works in conjunction with Workers' Compensation and Social Security to provide a maximum monthly income of half the employee's base salary after six months of continuous total disability.
- **Accidental Death and Dismemberment Insurance** — Is provided by AUI at no cost to the employee and is in addition to regular life insurance.
- **Travel Accident Insurance** — Provides employees with 24-hour accident coverage while traveling on AUI business.
- **Flexible Spending Accounts** — These optional plans allow employees to pay for a variety of health-care expenses not covered by their health insurance policies and also dependent day-care expenses — on a "before-tax" basis, which reduces gross earnings for tax purposes.
- **Long-Term Care** — Optional program that provides a way to pay for the costs of a prolonged, disabling illness.
- **Retirement Plans** — AUI contributes 10 percent of the employee's base salary to the retirement plan. The employee can allocate this between any of 18 different retirement funds. In addition, the voluntary tax-deferred retirement program offers options that allow employees to supplement basic retirement benefits. — L.S.

Ten Tickets Left For Romantic Bash

A block of ten tickets were turned in for the Heart to Heart Dinner-Dance, to be held at the Brookhaven Center on Friday, February 11, and sponsored by the BNL Dance Club. At \$20 each, these tickets may be purchased, first-come, first-served, by calling Brenda Riddle, Ext. 4524.

Trump This!

The BNL Bridge Club will meet on Tuesdays, February 8 and 22, at 7:30 p.m., in the Brookhaven Center. All bridge players are invited. For more information or, if you would like to play but don't have a partner, call club president Willem van Asselt, Ext. 7778 or 924-6129.

Correction to LINK.bnl

In the Software Store article in the February 1994 issue of LINK.bnl, the wrong name is given for the sales representative for Mathsoft. The sales representative is Shelly Moran; call her at (800) 628-4223.

Music for Valentines — The Baltimore Consort

In early celebration of Valentine's Day, the Baltimore Consort will give a special performance called "Cupid's Cabinet," as part of the BERA Concert Series, on Wednesday, February 9, at 8 p.m., in Berkner Hall.

The critically acclaimed ensemble was formed in 1980 to perform Elizabethan music for lute, viol, Renaissance flute, cittern and bandora. The group's familiarity with English music led to its interest in broadside ballads and Scottish music, which it first performed in 1983.

In 1985, a virginalist was incorporated into the ensemble to begin a program called *The Ballad Monger*, which explores the boundaries between "folk" and "art" in the music of England. Since then, the group has concentrated on British, French and Italian music of the 16th and 17th centuries.

The Baltimore Consort has held residencies at the Walters Art Gallery, the Peabody Conservatory and the Piccolo Spoleto Early Music Festival. The ensemble has produced five popular CDs on the Dorian label.

The concert will feature French, Scottish and English "popular music of olden times" for Valentine's Day. The



The Baltimore Consort

ballads that the ensemble will perform range from Pierre Attaingnani's *Prelude* (1529) to "Geordie" from *Scot's Musical Museum IV* (Edinburgh, 1792).

Purchase tickets at the door for \$14, general admission; \$9 students and people over 65; and \$5, youths under 18.

BERA Names Nominating Committee

A Nominating Committee made up of activity chairpersons and active BERA participants has been appointed by the BERA Executive Board. The committee will select a slate of four candidates who will run for the 1994 BERA Board elections, scheduled for the last week in March. The Nominating Committee members are:

Name	Activity	Dept.	Bldg.	Ext.
Enrique Abola	Soccer	Chem.	555	4383
Ripp Bowman	Camera	RHIC	911B	4672
Rich Casella	Mtn. & Canoe	RHIC	911C	7975
Dave Dale	Exer. & Body Bldg	DCP	355	3199
Alfredo Luccio	Concert Comm.	RHIC	911B	7699
Bob Marascia	Racquetball	RHIC	911B	4672
Irving Montanez	Microcomputer	RHIC	911A	2540
Ken Sutter	Antiq. & Clas.Mot.	DAS	480	4514
Ed Taylor	Softball	CCD	515	7589
Doris Terry	Social Club	DAT	197C	7610
Andy Warkentien	Bowling	NSLS	725A	2765

Any employee who wishes to propose a nominee is encouraged to contact one of the Nominating Committee members before Thursday, February 17. Please make certain that the person being proposed will agree to accept the nomination if selected by the committee.

Cooking Exchange

The BERA Cooking Exchange will hold its next monthly meeting on Thursday, February 10, at 11:45 a.m. in the Recreation Building. All are welcome to attend to sample a variety of tasty dishes and meet new friends.

A donation of \$2 per adult is requested, and baby-sitting will be provided for \$1 per child. For information, call Megumi Akiba, 341-1061.

Gospel Galore!

Tomorrow, the Afro-American Culture Club will present its 13th Gospel Extravaganza, at 7 p.m., in Berkner Hall. For more information, call April Donegain, Ext. 2459; Bruce Penn, Ext. 7213; Vanessa Crump, Ext. 2903; Frances Ligon, Ext. 3709; or Pauline Dixon, Ext. 2164.

BROOKHAVEN BULLETIN

Published weekly by the Public Affairs Office for the employees of BROOKHAVEN NATIONAL LABORATORY

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Rifle & Pistol Club

Rifle & Pistol Club meetings are held on the second Wednesday of each month, so the next meeting is February 9, in Bldg. 911, Room 202, at noon.

Anyone interested in club activities may call club president Otto Jacobi, Ext. 3471.

Volleyball

Standings as of January 26

Open League		League 1	
GTEAM	30-12	Rude Dogs	37-8
Me and the Boys	27-15	Upfagrab	28-14
The Roofing Co.	28-17	Network News	20-22
Far Side	18-27	Underdogs	15-30
Penetrating Veggies	5-37	Fornossing	8-34
League 2		League 3	
Safe Sets	32-4	Jolly Veggies	25-11
Nuts & Bolts	26-10	Silver Bullets	25-11
Net Wits	24-12	Take Five	21-15
Mon. Nite Live	22-14	Slow Hands	18-18
Fossils	20-16	High Volley'em	13-23
Night Court	10-26	Upton Ups	6-30
Spiked Punch	8-28		
NTTP	2-34		

Basketball

Games of January 27

Magic 84		Deep Six 44	
Troy Mayo	23	B. Hopson	17
Raymond Jackson	18	Tracy Fountaine	16
Mitchell Williams	17	Ed Taylor	6
Terrence Buck	15	Tony McGill	3
Patrick Browne	4	Dwayne Eleazer	2
Neil Donahue	3		
James Garrison	2		
James Rank	2		

Three-point shots: Williams (3), Mayo (2), Hopson.

Runaways 82		Scram 60	
Pete Ratzke	21	Victor Cassella	20
Wayne Cummings	13	Steve Nappi	12
Jerry Gaeta	13	John Duggan	9
James Desmond	11	Tim Powers	7
Ed Meier	11	Joe Barkwill	4
Chris Saxen	5	Paul Bergh	4
Charlie Edwards	4	Alan Jones	2
Bob Wells	4	John Skonieczny	2

Three-point shots: Cassella (4), Nappi (2), Cummings, Desmond, Meier, Powers, Saxen.

Bowling

Purple League, Week of 1/31

Ray Raynis bowled a 243/221/625 scratch series, Andy Warkentien 227, Ed Sperry IV 224, George Munoz 220, Sam Logan 216/201, Manny Dador 200, Kurt Jellet 200, John Addessi 187, MaryAnn Reynolds 183/173, Denise Monteleone 172. Clearwater won the first half.

Red/Green League

R. Wiseman bowled a 268/211/626 scratch series, K. Koebel 266/222/656 scratch, R. Mulderig 258/226/203/687 scratch, R. Raynis 245, A. Warkentien 242/221/204/667 scratch, R. Mulderig Jr. 237/234, E. Larsen 221, J. Goode 208, K. Riker 208, H. Arnesen 207, F. Griswold 204, E. Sperry IV 203/200.

Purple League, Week of 1/24

MaryAnn Reynolds had 226/173, Ben Belligan 221, Ray Raynis 210, Norm Fewell 201, Linda Farmer 190, Maria Yanez 182, Debbie Keating 173, Denise Monteleone 171.

Cafeteria Menu

Monday, February 7

Soup: Chicken noodle	.80/1.10
A la Carte: Chicken fajitas	3.45
Fitness: Pasta w/marinara sauce	3.20
Deli: Pastrami sandwich	2.95
Grill: Reuben platter	2.95
Salad: Pineapple boat	

Tuesday, February 8

Soup: Cream of mushroom	.80/1.10
A la Carte: Spaghetti w/meatballs	3.45
Fitness: Baked fish w/lemon & tomato	3.55
Deli: Roast beef sandwich au jus	2.95
Grill: Western omelet w/fries	2.35
Salad: Chef's seafood	

Wednesday, February 9

Soup: Bavarian lentil	.80/1.10
A la Carte: Knockwurst w/sauerkraut	3.55
Fitness: Tomato & broccoli casserole	3.25
Deli: Virginia ham sandwich	2.95
Grill: Italian cheese steak w/fries	2.95
Salad: Fresh fruit	

Thursday, February 10

Soup: Cream of spinach	.80/1.10
A la Carte: Italian steak pizziola	3.75
Fitness: Tarragon-lime chicken	3.50
Deli: Corned beef sandwich	2.95
Grill Ham & broccoli cheese-melt	2.75
Salad: Cantaloupe bowl	

Friday, February 11

Soup: New England clam chowder	.80/1.10
A la Carte: Cajun catfish	3.65
Fitness: Exhibition cooking of special entree	
Deli: Roast turkey sandwich w/gravy	2.95
Grill: Fried shrimp boat	3.25
Salad: Chef's salad	

Deli, Burger and other specials daily.

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.

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

PHYSICIST or MATERIALS SCIENTIST - With experience in ultrahigh vacuum techniques and photoemission spectroscopy, to join a research program involving angle-resolved spin-polarized VUV/soft x-ray photoemission spectroscopy of magnetic materials, thin films, multilayers, and interfaces. Contact: Jerome Hastings, National Synchrotron Light Source Department.

POSTDOCTORAL RESEARCH ASSOCIATE - Trained in experimental condensed-matter physics, to do synchrotron-based x-ray scattering studies of the structural, magnetic and electronic properties of condensed-matter systems. Contact: Doon Gibbs, Physics Department.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

NS 2744. ENGINEERING POSITION - Requires a BS degree in safety, environmental engineering or related engineering field, and approximately five years' experience developing and implementing ES&H programs. A thorough understanding of training concepts and quality programs is required; strong management skills and excellent communication skills are necessary. Professional certification desirable. Will be responsible for developing, prioritizing, implementing and tracking of ES&H, training and quality programs within Division. Plant Engineering Division.

NS 6443. ACCOUNTING POSITION - Requires a bachelor's degree in accounting or a related field (advanced degree a plus), a minimum of three to five years' accounting experience, knowledge of Generally Accepted Accounting Principles and experience with PC accounting-analyses and spreadsheet programs. Will be responsible for preparation of financial statements, journal entries, account analyses, and the review of vouchers, computer reports and control records. Fiscal Division.

NS 8197. ENGINEERING POSITION - (term appointment) Requires bachelor's degree in science or nuclear engineering and extensive experience as a professional health physicist, including work with transuranics. Certification in health physics by the American Board of Health Physics is required. Familiarization with BNL Radiological Control Manual and DOE requirements for radiation protection is required. Responsibilities include assisting in the development of guidance concerning implementation of RadCon Manual and implementation of 10CFR835, as well as providing guidance in safe handling of alpha emitters in the workplace. Safety & Environmental Protection Division.

LS 0198. REFRIGERATION AND A/C ENGINEER - Requires substantial experience troubleshooting, repairing, installing and operating commercial/industrial air-conditioning and refrigeration equipment, including steam-absorption, centrifugal and helical-screw refrigeration machines. Successful completion of Refrigeration and A/C apprenticeship program or related course work is highly desirable. Must be able to work shifts as required. Plant Engineering Division.

LS 2910. SCIENTIFIC ASSOCIATE POSITION - (term appointment) Requires a BS in physics or equivalent with a minimum of five years' experience with synchrotron radiation instrumentation. Responsibilities include the construction, commissioning and maintenance of the U7A high-resolution soft x-ray spectroscopy beam line. National Synchrotron Light Source Department.

LS 8198. ENGINEERING POSITION - Requires a BS in chemical sciences or engineering with a minimum of two years' experience implementing QA/QC in a process industry. A strong math/statistics background as well as good oral and written skills are required. Experience in environmental, health or safety fields as well as ASQC, QEIT or SQE are desirable. Responsibilities include conducting audits, writing and reviewing procedures, and performing statistical process control. Safety & Environmental Protection Division.

Motor Vehicles & Supplies

- 91 GEO METRO - blue, 2-dr., 5-spd., 37k mi., 50+ mpg, \$3,995. Joe, Ext. 2898.
- 91 PONTIAC GRAND AM LE - gray, quad-4, sports pkg., mint cond., must see, best offer. 471-3324.
- 89 CHEVY BARETTA GTU - fully loaded, alarm, must sell, \$4,500 neg. 369-0971.
- 88 FORD F250 PICKUP - a/t, V-8, dual tanks, ac, runs well, Florida truck, no rust, 78k mi. John, Ext. 4660.
- 87 MAZDA RX7 - loaded, like new, low mileage. Ron, Ext. 5905 or 298-5625.
- 85 OLDSMOBILE CALAIS - blue, \$1,000. Ext. 1229.

The Brookhaven Bulletin is printed on paper containing at least 50 percent recycled materials, with 10 percent post-consumer waste.



84 OLDS CUTLASS CIERA - ac, a/t, white, blue int., looks good, runs well, needs some work, \$450. Phil, 286-1348.

83 FORD 150 PICKUP - 4-spd., 48k mi., p/lift, no rust, am/fm cass., excel. cond., \$3,500, Sharon, Ext. 5919 or 722-3010.

81 CADILLAC SEDAN DE VILLE - many new parts, runs well, must sell, \$1,050. 475-8242.

79 PONTIAC GRAND PRIX - 6-cyl., Rally Sport rims, tires good, gray w/red int., \$300. Ernie, Ext. 5092.

78 FORD F250 4X4 PICKUP - 400 CID V-8, class III grill guard, snow tires, floating axles, extras, \$3,500 neg. Tom, Ext. 7511.

64 CADILLAC COUPE - conv., red & black, rebuilt eng., 95% restored, beautiful cond. in & out, must see. 732-8067 or 732-9118.

CAR STEREO - Clarion, am/fm cass. digital, \$30. 286-3377 after 6 p.m.

RIMS - Corvette Rally rims & center caps, two 15"x7", two 15"x8", mint cond. Joe, 345-5806.

RIMS - Ford pickup, alum., '69 Mustang rear seat, like new, truck & Mustang parts, cheap. Wayne, Ext. 7238.

SNOWFLOW - Meyers p/angle, 7"6" blade, lights, frame, all hardware, mint, \$850 neg. 399-6507.

WHEELS & TIRES - two, P175/85/R13 for Chrysler e.g. K-car, \$40. Bill, Ext. 3698.

Boats & Marine Supplies

SEA DOO XP 650 - wet bike, low hrs., like new, graphics, w/trailer, \$3,300. Mike, 289-1522, leave message.

Furnishings & Appliances

CHAIRS - matching pair, Queen Anne, Lane wingback recliners, light blue w/shell motif, \$150/ea. Dave, Ext. 7277 or 736-8010.

DINING ROOM - trestle-type table, 8 padded chairs, 18 mo. old, like new, \$700 firm. Howard, 878-8294.

ENTERTAINMENT CENTER - pine, glass, stereo door, sliding tray, cabinets, fits large TV, accordian doors, excel. cond., \$150. Tom, Ext. 5265.

FREEZER - GE, upright, \$200; large ac, \$50. 286-3377.

BED - adjustable, single, mechanical, w/almost new mattress, \$60 firm. Howard, 878-8294.

RANGE/OVEN - GE, 30", electric, harvest gold, 15 yrs. old, excel. cond., \$150; Nutone range, exhaust hood, 2-spd. light, \$25. Mike, Ext. 7941.

REFRIGERATOR - side-by-side, 20 cu. ft., white, excel. cond., \$170. 286-1832.

SOFA BED - \$75; coffee & 2 end tables, \$25/ea. Bob, Ext. 2309 or 821-3306 eves.

TABLE - dining room, dark pine, beautiful finish, 62"x40", 2 leaves, extends to 86", 4 chairs, excel. cond., \$400. Cathy, Ext. 2541.

Tools, House & Garden

COMPRESSOR - 40-gal., old, but still works, \$75. Chas, Ext. 2021.

GRILL - Tefal, indoor, elec., w/broiler, pan & skewers, mint cond., \$50 firm. Bob, Ext. 4551 or 475-3612.

HUMIDIFIER - 5-gallon, console style, \$15. Judy, Ext. 2590.

HOT WATER HEATER - electric, 25-gal., works very well, \$65. Jeff, 821-6867.

STOVE - De Dietrich, coal or wood, automatic hopper, \$200. 286-3377 after 6 p.m.

STOVE - wood, single log, stand up, black, \$75. T. Nolan, Ext. 5265.

SWING SET - 4 swings, glider, CCA wood, \$150, delivered. Don, Ext. 7237 or 744-2921 after 5:30 p.m.

Sports, Hobbies & Pets

BIRD CAGE - w/stand, cover, seed catcher, \$20. 286-3377 after 6 p.m.

FLUTE - Yamaha, silver tip, w/open hole keys & case. Judy, 929-5781.

GOLF CLUBS - Ping Eye, 2 woods, 1-3-5-7 woods, \$260; Ping Zing driver, \$80; tires, 4, P44-175/70X13, \$120. Don, Ext. 2943.

LACROSSE STICK - STX Dominator, 1 yr. old, hardly used, great cond., asking \$60. Alex, 929-5945.

LENSES - Chinar, 28mm, Yashica 50mm, auto telesor 135mm, \$10/ea. Yan, Ext. 2930.

RC SPEEDBOAT - B&C, ob; 4wd car, TX, elec. start, many access., good cond., \$400/all. Ryan, 878-1178.

SOLAFLEX - like new, complete, asking \$600. Bernie, 331-2298 after 6 p.m.

SKI BOOTS - men's, size 9 1/2, \$20. Sue, Ext. 3492.

SKIER/ROWER - X-C, Lifestyler, almost new, orig. \$150, sell for \$50. Mike, Ext. 7941.

Audio, Video & Computer

CAMCORDER - Hitachi S-VHS, many features, like new, orig. \$1,200, sell for \$675. L. Arnold, Ext. 5462.

COMPUTER - 486DX, 33MHz, Dell, 230MB HD, internal modem, fax, 8mb RAM, sound card, 1 yr. old, \$2,200. Sharon, Ext. 5919 or 722-3010.

COMPUTER - Mac, 40mb HD, good cond., \$375; printer, Apple LaserWriter, good cond., \$425. Ted, Ext. 7992 or 331-4820.

KEYBOARD - Yamaha PS20, portable, \$100; trumpet, Elkhart, \$50. Bill, 924-6724.

KEYBOARD - Casio RZ composer, programmable, \$200 firm; keyboard, Roland R8, drum composer, midi, card input, \$490. Neil, Ext. 4289.

TV - Panasonic, 19" color, remote, excel. cond., \$90. 929-8409.

TV - RCA, 25", color, cable ready, \$75. Al, Ext. 5128.

VIDEO GAMES - Super Nintendo, \$30/ea., \$55/two. Ext. 7505.

Miscellaneous

CAR SEAT - Kantwet, toddler-size, brand-new, \$20. Phil, Ext. 5669.

JACKET - white mink w/fox collar, brand-new, small, best offer; figurine, Lladro Over the Threshold, bride & groom, \$200 neg. Cynthia, 286-6305.

RING - diamond engagement, 3/4 carat, pear shaped, high twist setting, 5 diamond eternity ring, .33 carats, \$1,500. Cathy, Ext. 2541.

ROCKER - child's high back, \$30; corn popper, \$10; vacuum, \$50; 2 Persian-style rugs, \$20; queen headboard, \$20. Kathy, 744-2203.

TICKETS - 2, *Dialogues of the Carmelites*, 3/19, Met Opera, \$22/ea. Stas, Ext. 7849.

Car Pools

BOHEMIA-E.ISLIP-OAKDALE - looking for 1 or 2 drivers for existing car pool. Frank, Ext. 2314.

Wanted

BABY-SITTER - mature woman, in my E. Patchogue home, 6 yr. & 1 yr. old, must drive, nonsmoker. 758-4770 after 5 p.m.

CAMPER - small to medium-sized slide-in for pickup truck. Carl, Ext. 4986 or 929-5781.

CAR SEAT - twin-baby car seat. Thomas, Ext. 2225.

COMPUTER - for grade-school classroom. Tom, Ext. 5275.

FISH TANK STAND - 15 gal. tank, 24"x12 1/2". Pam, Ext. 5752 or 286-8380.

PEOPLE TO PARTICIPATE - in Great Decisions discussion, 8 weeks. Margaret, 473-9129 eves.

SKIERS - to ski Hunter, 2/9, Windham, 2/23, \$43 for bus and lift, send payment to Augie Hoffman, Bldg. 510C.

TABLE - 42-28" diameter, butcher block or oak on center pedestal. John, Ext. 7671.

TICKETS - Billy Joel, for March 6, Nassau Coliseum. Pam, Ext. 4082 or 732-6280 eves.

TRAINS - Lionel & American Flyer, priv. collection, pays top \$. Ext. 7100 or 924-4097.

UNICYCLE - 24" in good condition. Don, 821-3320.

Services

Services are listed in the first Bulletin of every month as a courtesy to BNL employees. They are neither screened nor recommended by the Bulletin. Services forms are available in the Bulletin lobby, Bldg. 134.

ANIMAL-SITTER - animal loving 10-yr.-old will treat pets like my own while you're away. Kate, 929-5945.

BABY-SITTING - in my Wading River home by experienced mom, my 2-yr.-old as playmate. Lorraine, 929-3910.

BABY-SITTER/NURSE - will watch your child, 18 mos. or older, my home. Michelle, 736-8553.

BRICKWORK - masonry, patios, walks, swimming pools, retaining walls, 25-yrs. experience, Lab. disc. Tony, 698-9274.

CESSPOOL SERVICE - emptying and installations. Jim, 321-6720.

CHILD CARE - 24-yr.-old, exp., responsible and nurturing wife and college student, afternoon, evening hours. 289-8105.

CHILD CARE - Shirley area, responsible mother will care for your child, flexible hours. Missy, 395-5748.

CHIMNEY CAPS - custom-made, fireplaces, wood, coal and oil flues, made from copper or stainless steel, lifetime warranty. Mike, 821-5526.

COUNSELING - experienced, licensed CSW will help w/individ., marital or family problems, confidentiality guaranteed, insurance reimbursable. Linda, 929-5860.

DJ/MC - party & dance music from 40s-90s, all occasions, music & entertainment personalized for your affair, BNL refs. Lou, 698-8210.

DRAFTING - professional, architectural drafting, house plans, alterations, commercial, residential, consultant-construct. project manager. RJ, 929-8514.

ELECTRICIAN - wiring for switches, outlets, lighting, service upgrades and repairs, additional circuits installed, licensed. Steve, 758-7002.

HOME IMPROVEMENT - carpentry, drywall, spackling, painting, plumbing, ceramic tile, sheds, free est., Lab discount. Don, 744-2921 after 5:30 p.m.

HOME IMPROVEMENTS - painting, wallpapering, carpentry, plumbing, ceramic tile, baths, RR ties, welding, fencing, 15% Lab disc. Eddie, 399-570