BULLETIN Volume 32 - Number 2 / January 13, 1978 **BROOKHAVEN NATIONAL LABORATORY**

Organizers of the solar neutrino conference were (from left) Raymond Davis and Gerhart Friedlander, Chemistry Department; and Kenneth Lande, University of Pennsylvania.

Meeting On Solar Neutrinos 1 - 385-78

Astrophysicists, nuclear physicists, particle physicists, and chemists from many institutions in the U.S. and abroad, came together at an informal conference on the Status and Future of Solar Neutrino Research, held at BNL January 5-7.

Organized by a committee consisting of Raymond Davis (BNL), Gerhart Friedlander (BNL) and Kenneth Lande (University of Pennsylvania), the conference was attended by over 50 participants who came to discuss the implications of the results of Ray Davis' solar neutrino experiment conducted in the Homestake gold mine in Lead, South Dakota. These results have challenged the accepted theories of stellar evolution, and much of the conference was devoted to detailed discussions of the uncertainties in the stellar model calculations and of possible modification in the model that might bring the theory into better agreement with the low neutrino flux observed by Davis.

Also on the agenda were presentations of a number of proposals and ideas for new experimental observations of solar neutrinos. During a round-table discussion on the last day of the conference strong consensus emerged on the necessity for a program of such additional research including, in particular, an observational effort for the detection of the low-energy neutrinos from the proton-proton fusion reaction, since



William A. Fowler (left), California Institute of Technology, chaired a roundtable discussion of the future solar neutrino program and Maurice Goldhaber was chairman of the opening session.

their intensity is practically independent of the details of solar models. The BNL Chemistry Department, in collaboration with several other institutions, is actively planning an experiment for the detection of these low-energy neutrinos which will involve 50 tons of gallium as a detector.

In his summary talk at the close of the conference Professor Martin Schwarzschild of Princeton University paid a ringing tribute to Ray Davis for his remarkable contribution to the field.

Art And Science Do Mix

Proposed over ten years ago by Edward V. Sayre, Chemistry Department, as a method of studying the structure of works of art, neutron activation autoradiography is now the subject of "The Seeing Eye," a new show at the Heckscher Museum in Huntington. On view through February 12, the exhibit presents a number of original paintings side by side with autoradiographs produced at Brookhaven, and includes a step-by-step explanation of the process.

This technique reveals such things as pictures which were painted beneath the now visible paintings, and allows a detailed study of the structure and identity of the many paint applications of which a painting is composed.

For instance, an autoradiograph of an oil on wood panel attributed to the 17th century Flemish painter, Peter Paul Rubens, reveals that the left side of the painting was a later addition, painted with an entirely different palette from that of the right side. Among other paintings examined by this technique, a process shown to the public for the first time, are "Moonlight" attributed to Ralph A. Blakelock and "Portrait of an Officer" attributed to William Merritt Chase.

In neutron activation autoradiography the painting is exposed to a beam of ther-

mal neutrons for varying periods at the Brookhaven Medical Reactor. The radioisotopes, generated by the paint pigments, decay with different half lives, and the radiation emitted from the painting is dominated by radiation from the various elements. At different time intervals, autoradiographs are made by placing a piece of photographic film over the activated painting and reveal the structural distribution of elements in the painting.

In addition to his research at Brookhaven, Sayre was for many years Adjunct Professor of Fine Arts at New York University. Since 1974 he has been a regular commuter to Boston where he is Head of the Research Laboratory at the Museum of Fine Arts.

Also taking an active role in the art world is Garman Harbottle, a colleague of Sayre's in the Chemistry Department. Endorsed by the Long Island Museum Association, he was recently appointed by the Suffolk County Legislature to the board of trustees of the Vanderbilt Museum in Centerport for a term of two years. A nuclear chemist, Harbottle is an expert in archaeological applications of nuclear techniques. The Vanderbilt Museum includes a major planetarium and the Vanderbilt house and furnishings, built during the extravagant "gold coast" era. As a trustee, Harbottle wants to promote this unusual museum as a potentially outstanding educational resource of Long Island.

Between Moscow And New York

"It's easy to speak Russian in New York City," explained Stephen Amoretty, "but more difficult on Long Island. In Manhattan, for instance, there are many older people who get together for conversation. Sometimes when I haven't spoken Russian with anyone here for a while, I find myself calling one of my professors in New York just so I won't let it slip."

Steve came to Brookhaven Laboratory in 1965 as a scientific translator in the Technical Information Division. His responsibilities include abstracting, translating and editing Soviet scientific and technical literature. He is also scientific secretary of the organizing committee on superconducting power transmission cooperation between the U.S. and the Soviet

Encouraged by his mother to study Russian, Steve began studying it formally at his high school, Fordham Prep. His mother's parents were both Russian and she, speaking the language fluently, was eager to have someone to converse with at home. While Steve was completing his degree in physics at Columbia University, he took four years of Russian instead of the required two. Upon graduation from Columbia, Steve embarked on an accelerated program at Fordham University for a master's degree in Russian, which he obtained in one year.

Amoretty recently accompanied John F. O'Leary, Deputy Secretary of the Department of Energy, to Moscow to a meeting of the U.S.-Soviet Joint Committee on Cooperation in the Field of Energy. The purpose of the meeting was to evaluate fifteen programs of scientific cooperation originally authorized by the 1972 Joint Agreement for Cooperation in the Field of Science and Technology, signed by President Nixon and General Secretary Brezhnev. The 1977 agreement, which stressed the need of continuing the cooperation between the two countries in the areas of mutual technical benefit, was signed by John F. O'Leary and P.S. Neporozhny, Minister of Power and Electrification of the U.S.S.R. Amoretty described the reception for O'Leary and his delegation as "truly on



Steve Amoretty returned from his last trip to Russia with the seal for the 1980 Olympic Games which will be held in Moscow.

the grand scale from the moment of arrival until the gala farewell banquet, which was a veritable cornucopia of gastronomic delights."

The second purpose of the trip was to participate in joint U.S.-Soviet experiments in superconducting power transmission. It is in the direct exchange of scientific knowledge that the combined talents of Amoretty are most useful. As demonstrated recently by the unfortunate difficulties encountered by President Carter's interpreter in Poland, translating and interpreting can be trying tasks. This is particularly true where science and technology are involved. Knowledge of the language may not be enough, for often it takes a scientist to interpret correctly what is being discussed. Several times at scientific meetings, Steve recalled that the Russian interpreter could not handle his work because he had little or no technical knowledge of the material under discussion. Amoretty's background in physics gives him a distinct ad-(Continued on page 3)

BERA Board Election

Carol Beckner is an Assistant Librarian in the Technical Information Division. She has been past Vice-President of the Bowling Board and has served on the BERA Special Events, Awards and Nominating Committees. Carol is presently active in bowling, softball, volleyball and tennis.

Marie Brenner is an Office Services Assistant in the Fiscal Division. Her BERA credits include two years as the Chairman of the Bowling Awards Night, and Secretary of the Pink League. In addition to bowling, Marie is an active participant in

the Softball League.



Carol Beckner

Robert Jones

Marie Brenner

Robert Jones is a Technical Associate in the Energy and Environmental Department. He was Chairman of the Softball League for five years, helped organize the Football League, and is serving his second

year as President of the Bowling Board. Gerald Levine is an Electrical Engineer in the Safety and Environmental Protection Division. He has been a member of the BERA Nominating Committee, helped organize the Volleyball League and the Table Tennis Club, and served as an officer of the Volleyball League for many years. He presently participates in softball, football, soccer and badminton.

Voting to elect two of the four candidates to serve on the BERA Executive Board for a three year period will begin on Monday, January 16, during the times and designated areas listed below.

Absentee votes, for employees who will not be on-site during voting week because of business trips or other reasons, will be accepted by sending a signed memo with candidate selections to BERA Board President Ken Batchelor, Building 911. Memos must be received no later than noon on Friday, January 20.

	•			
· Voting Schedule				
Day	Hours	Polling Station		
Mon.	11:30 a.m 1:30 p.m.	Cafeteria		
**	2:00 p.m 4:00 p.m.	AGS - Bldg 911		
Tues.	11:30 a.m 1:30 p.m.	Cafeteria		
11	2:00 p.m 3:00 p.m.	Biology (Small		
	-	Conf. Rm.)		
Wed.	11:30 a.m 1:30 p.m.	Cafeteria		
Thurs.	11:30 a.m 1:00 p.m.	Cafeteria		
11	1:30 p.m 3:00 p.m.	Bank		
н	3:30 p.m 4:30 p.m.	Fiscal Lobby		
Fri.	10:00 a.m 2:00 p.m.	Bank		
8	See you all at the	polls!		

Brookhaven Bulletin



Rehearsing for "After Magritte" are (from left to right) Joe Skelly, Bill Love, Jane Love, Denise Dew-Hughes and Ray Rueger.

Remedy For The January Doldrums

Come and see the Theater Group's production of two mood-lifting one-act comedies: "Public Eye" by Peter Shaffer and "After Magritte" by Tom Stoppard. Performances will be held on January 27 and 28, and February 3 and 4 at 8 p.m. in Berkner Hall.

"Public Eye" is directed by Rita Straub and stars Tony Fainberg (remember Sir Thomas More?), Joe Indusi as a very nutsy Greek detective, and introduces Ruth Pollack, a new member of the Theater Group.

"After Magritte" is directed by David Dew-Hughes and features some of Brookhaven's favorite actors: Jane and Bill Love, Denise Dew-Hughes, Ray Reuger, and Joe Skelly.

Tickets will go on sale starting January 16 in the cafeteria at lunchtime. Tickets are \$3.00 for employees & guests and \$2.00 for 18 years and under or 65 years and older.

For further ticket information please contact Liz Russell, Ext. 3940.



Appearing in "The Public Eye" will be (from left to right) Joe Indusi, Ruth Pollack, Tony Fainberg.

Some Words From The IRS

Some people like changes; others prefer things the way they are. But no matter which side of the fence you're on, one thing is certain: when you fill out your 1977 tax return, you won't be able to avoid the many changes in the tax law brought about through recent legislation.

You have probably heard that the standard deduction has been replaced by a zero bracket amount, which is a flat \$2,200 for singles and \$3,200 for marrieds, filing jointly. And there has been quite a bit of publicity about the new tax tables with the zero bracket amount, personal exemptions, and general tax credit built right in.

These changes affect most taxpayers, but don't require you to plan ahead. Because some of the new provisions however, do relate to pre-planning, it makes sense to start gathering your records together and examining the tax consequences of some of your actions.

For instance, if you own capital assets, such as stock, bonds or real property that you intend to sell this year, are you aware that in order to qualify for long term capital gain or loss treatment, you must have owned that asset for more than nine months? The holding period in prior years was more than six months.

Do you also know that the amount of a capital loss you can use to offset your taxable income has been increased from \$1,000 to \$2,000?

Both of these changes can make a significant difference in your tax bill for 1977. Suppose, for example, that you never heard of the new nine month holding period, and you dispose of a capital asset after seven months, thinking that you will have to pay tax on only one-half of your profit. When you fill out your 1977 tax return you might be surprised at the amount of tax you owe.

If you have moved, or plan a move, in 1977, several changes in the tax law affect you. The distance requirement of 50 miles in order to claim moving expenses has been reduced to 35 miles.

In addition, the maximum deduction for pre-move househunting and temporary living expenses has been increased from \$1,000 to \$1,500. The deduction for expenses re-

lated to buying, selling, or renting a home has been increased by \$500 to \$3,000. Make sure you have records handy to remind you of all the expenses.

Other changes that could mean a difference in your tax liability are in the areas of alimony, child support, and child care expenses.

Alimony, previously an itemized deduction, is now an adjustment to income, which means that an ex-spouse can claim on his or her tax return the amount of alimony he or she paid during the year without having to itemize

If you make child support payments, to a former spouse, you may have to pay more money now in order to claim your children as dependents on your tax return. In prior years, if the tax exemptions were not allocated in the divorce decree, and you were the noncustodial parent, you had to contribute \$1,200 or more for the support of one or more children in order to take the dependency exemptions. That amount has now increased to \$1,200 for each child.

Expenses you pay for work-related child care may now be claimed as a tax credit. The credit is 20% of the amount you pay during the year for child care. The maximum amount of the credit allowed is \$400 for one child and \$800 for two or more children. Again, you should have complete records so you can take full advantage of any breaks coming to you.

Older Americans who sell their homes in 1977 will be glad to learn that there has been a sizable change in the tax break available to them. Previously, anyone age 65 or over who sold his or her home did not have to pay any tax on the gain if the adjusted sales price of the house was \$20,000 or less.

The exclusion amount has now been increased so that you pay no tax on the gain from the sale if the adjusted sales price is \$35,000 or less. If the adjusted sales price is over \$35,000, the tax break is prorated.

The adjusted sales price of your home is the amount you receive after paying selling commissions and certain allowable fixingup expenses, such as painting part of the interior of your home.

For The Marshallese

Donations of summer clothing for adults and children (preferably laundered), games and small toys, are requested for the Marshallese people of Rongelap and Utirik Islands in the Pacific. These donations will be presented as a gift from Brookhaven employees by the BNL Medical Team at the time of the examinations in April. If you have donations please leave them with Mrs. Hull, receptionist at the Medical Department before March 1. Please note used clothing should be laundered.

Physics Course

Beginning January 19, a one hour course in Basic Physics will be offered weekly from 9:30 a.m. to 10:30 a.m. in the YOC classroom in Bldg. 179. This course is part of the Technician Tutorial Program and is designed to prepare employees who intend to take college of technical school courses requiring elementary physics. For information or registration call either Bob D'Angio in Personnel, Ext. 2878 or Roy Jefferson in Bldg. 179, Ext. 2527.

Arrivals & Departures

Arrivals

Samuel H. Aronson	Accelerator
Roy R. D'Alsace	Physics
Donald C. Elliott	Physics
Alberto Filevich	Physics
Ludwig Frey	Central Shops
Walter W. Frey	
John J. Gallagher	Physics
James W. Gordon	Central Shops
John R. Klages	
Hue Anh T. Pham	Accelerator
Albert M. Pinto	Central Shops
Richard J. Smith	Physics
Arthur J. Waligura	Nuclear Energy

Departures

Raymond F. Bergamini	Energy & Env
Robert Bernatzky	Energy & Env
Louis G. Decker	Chemistry
Alicia B. Delgado	Energy & Env.

Gardening

Gardening season is a few months away and we hope that the enthusiasts are looking forward to it. The users of last year's garden plots are requested to return the keys of the tool room to Renu Pande, Apt. 28-B, Ext. 3009. It will help us plan for the spring.

Selected Reading

Atom (London) No. 252, October 1977
The birth of Calder Hall. C. Hinton. 249-53
How safe is nuclear power? N.C. Rasmussen.
257-67 +

J. Chem. Educ. 54, December 1977 Creativity, discovery and science. R.A. Brown.

Nature 270, December 15, 1977 Stalin's scientific deputy addresses dissidents

Stalin's scientific deputy addresses dissidents. V. Rich. 550

My Uncle Eustace-Maker of Rings (1885-1916). D. Bolton. 565-7

New Sci. 76, December 1977

Science in folklore? Folklore in science? A. Dundes, 774-6

When Soho was centre for science. M. Schofield.

The first science fiction writer? K. Smith. 778-9 When studying science was fun. E.N. da C. Andrade. 792-3

Ann. N.Y. Acad. Sci. 301, October 31, 1977
The Marathon: Physiological, medical, epidemiological, and psychological studies. P. Milvy,

Watch Out! It's Friday The 13th



In Remembrance MARTIN LUTHER KING, JR.

BORN: Jan. 15, 1929
ASSASSINATED: April 4, 1968
ACCOMPLISHMENTS:
Baptist Minister
Civil Rights Leader and Activist

Nobel Peace Prize Laureate

A Delicate Balance

... I should like to recall a conversation with Jacob Furth, which illustrates the need for balance in the emphasis within our research program, and above all, the incentive and opportunity for innovative exploration. Furth was reminiscing one day about the experiences that had influenced his career, and he payed tribute to two of his mentors, Eugene Opie and Karl Landsteiner. Opie he admired as a brilliant logician, who alone to his knowledge had the distinction of having delivered three Harvey Lectures in the course of his career, the third when he was in his eighties. In Opie's lab, Furth said, the work was always carefully laid out for days or even weeks in advance. With Landsteiner, on the other hand, the schedule was much less predictable. Not infrequently, the plan would be set aside unexpectedly, in order to test a sudden brainstorm, which usually led nowhere by the end of the week. Occasionally, however, one of Landsteiner's flights of imagination opened up hitherto unglimpsed possibilities. For these flashes of inspiration, of course, and their far-reaching impacts on biomedical science, Landsteiner was ultimately awarded the Nobel prize. In recalling the influence of Opie and Landsteiner, Furth said that he tried to emulate the best qualities of each. With his left hand, he sought to maintain a thoughtful, orderly and predictable line of investigation - one that would sustain his productivity from one day to the next - while with his right hand, he reached for the

from remarks by Arthur C. Upton, M.D., Director, National Cancer Institute, on the occasion of the Institute's 40th anniversary.

Retiring



Joseph A. Hala, Tool & Instrument Maker and Group Leader in Central Shops is retiring today. He came to Brookhaven on October 22, 1958.

Emergency Closings

Here is the list of radio stations that carry news of closing or late opening of the Lab on snowy days:

Station	Area	AM	FM
WALK	Patchogue	1370	97.5
WBAB	Babylon	1440	102.3
WGLI	Babylon	1290	_
WGSM	Huntington	740	
WHLI	Hempstead	1100	98.3
WHRF	Riverhead	1570	_
WLIX	Islip	540	
WLNG	Sag Harbor	1600	_
WRIV	Riverhead	1390	_
wwrj	Southampton	_	95.3
<i>N</i> BLI	Patchogue		106.1
WRCN	Riverhead		103.9

Brookhaven Bulletin

BROOKHAVEN BULLETIN

Published weekly for the employees of

BROOKHAVEN NATIONAL LABORATORY

BERNICE PETERSEN, Editor
DOUG HUMPHREY, Photo-Journalist
CAROL PETRAITIS, Editorial Assistant

40 Brookhaven Ave., Upton, N.Y. 11973 Telephone (516) 345-2345

CARL R. THIEN, Public Relations Officer

Concert Reminders

Sea Cliff Chamber Players

The Sea Cliff Chamber Players will present works by Beethoven, Copland and Richard Strauss featuring violinist Hamao Fujiwara in Berkner Hall on Saturday, January 14 at 8 p.m. Tickets are \$5 general admission and \$3.50 for students under 21.

BERA Concert Series

Flutist Paula Robinson and harpsichordist Kenneth Cooper will present a joint recital at BNL, featuring both duets and solo works by Bach, Handel and Telemann. The concert will be on Wednesday, January 18, at 8:30 p.m. in Berkner Hall. Admission is 34; \$2 for persons over 65 and students with ID; and \$1 for persons under 18.

Amoretty

(Con'd)

vantage when he is called upon to interpret scientific phraseology.

This was Amoretty's third trip to Moscow. The first was in November 1976. The striking difference between then and now, he says, is the level of construction activity in preparation for the 1980 Olympic Games. The Olympic Village, 30 kilometers from Red Square, will be accessible from the city by subway, and the Russians are doubling the size of the airport to accommodate the predicted hordes of tourists.

Modern Hilton-style hotels are springing up around the city. They differ radically from the Hotel Rossia, a massive structure of marble, glass and prefabricated concrete. Contiguous to Red Square and the Kremlin, the hotel is where most visitors are now housed. It is the largest single building in the Soviet Union and Amoretty says, "Its power to subdue by sheer size is only one measure of its scale.' The hotel has 3,076 rooms, 9 restaurants, 20 cafeterias, a concert hall and two cinemas, and the dezhurnie, "the intimidating lady sentries," discipline every floor. Returning to the Rossia late one evening after a long days' work, it took Amoretty and his colleagues 30 minutes to find their rooms after taking a wrong turn in one of the hotel's ten miles of corridors.

To a westerner, a trip to Russia is both fascinating and exasperating says Amoretty. To see the "enchanting domes of the ancient cathedrals, the magnificent Moscow Metro, the fairylike St. Basil's Cathedral, and to watch a superb performance of the ballet at the Palace of Congresses inside the Kremlin" are all sights to remember. On the other hand, many consumer goods taken for granted in the west are rare and often absent in the U.S.S.R. "You can't just wander down to the corner drugstore and get what you need," says Steve. "To avoid this dilemma, it is advisable to take certain essential items with you."

Moscow also has problems which are familiar to New Yorkers. Hotel rates are high and automobile congestion is a problem. Despite the cheap and efficient public transportation which consists of buses, trolleys and the Metro (Moscow's elegant subway system), private automobiles are increasing. For the privilege of owning an automobile, the average Soviet citizen must vait two years and pay almost double the price it costs his American counterpart. Nevertheless, owning a car is highly desirable in the Soviet Union because it is a symbol of success.

Steve expects to return to the U.S.S.R. this fall for a meeting under the superconducting exchange agreement and, who knows, he might also make it to the 1980 Olympic Games.

—Gale Munson



Don David, Mary David and Anthony Graves on top of Slide Mountain, the highest peak in the Catskills.

Mountain Club

A few members of the Mt. Club spent New Years Eve camped out on Slide Mt. in the Catskills with about 25 people from other clubs. The 3 mile hike up on Saturday was over packed snow making it fairly easy. There was about 2 feet of snow on the top, also packed, and the weather was good, the temperature only dropping to 6 degrees F during the windless night. At midnight there was much shouting, singing, and sounds of corks popping outside.

The next regular club meeting will be held on Wednesday evening January 18th at 7:30 p.m. in the North Room of the Center. A caving trip to Allentown, PA. is tentatively set for Saturday, February 4th and

will be discussed at this meeting. The club plans to repeat last years' canoing trip through the Everglades during the last week in February. We'll leave on Friday evening February 17th and return on Sunday evening February 26th. If interested in either of these trips attend the meeting or contact Don David Ext. 4821 or 286-2267.

Also, dues for 1978 are due if you have not paid as yet. It's \$2 single or \$3 couple or family. Send a check to Dick Watson, Bldg. 510B or pay at the meeting. After the meeting Greg Donaldson will show the slides he took last Fall on a climbing trip to Yosemite. Everyone is welcome.

Kayak On Sunday

Lab staff and Lab family members wishing to try kayaking are invited to two get-acquainted sessions, sponsored by the BNL Mountain Club, at the Lab pool from 11 a.m. to 1 p.m. on January 15 and 22. (Please note changes in day from Saturday to Sunday.) Just bring a bathing suit and the pool entrance fee. Lessons will be available under a qualified instructor during February and March. The lessons will be organized at the get-acquainted sessions. Dick Watson, on extension 3788, will be happy to answer any questions.

Camping Club

The Brookhaven Family Camping Club is having its first meeting of 1978 on Thursday, January 19, at 8 p.m. Meetings are held in the Rec Hall, in the apartment area.

The Club is planning a busy summer this year. There will be several trips away from Long Island. Come help us make plans.

The Club would like to welcome new members, and also would like to welcome back old members we have not seen for some time.

Join us on Jan. 19th. A film will be shown, with coffee and cake after the meeting.

Cafeteria Menu Week Ending January 20, 1978

Monday, January 16	
Tomato bouillon	
Franks & beans	1.10
Barbecued fresh ham & 1 veg.	1.35
Hot deli - pastrami	
Tuesday, January 17	
Minestrone	
Saga's homemade lasagna & 1 veg.	1.35
Chopped steak & 1 veg.	1.10
Hot deli - knockwurst	
Wednesday, January 18	
Split pea soup	
Short ribs of beef & 1 veg.	1.30
Beef turnovers & 1 veg.	1.20
Hot deli - Italian sausages & peppers	
Thursday, January 19	
Puree of mongol	
Chicken cacciatore on noodles	1.15
Beef liver, onions & 1 veg.	1.15
Hot deli - steak sandwich	
Friday, January 20	
Clam & celery soup	
Pot roast & 1 veg.	1.30

Seafood cakes & spaghetti

Hot deli - smoked tongue

Exercise Classes

Classes in calisthenics under the direction of Claudia Meyer, a trained physical education instructor, are being held at the Recreation Building on Monday afternoons from 4:00 to 5:00 p.m. for children ages 4 to 6, and on Wednesday nights from 7:00 to 8:00 for adults. A fee of \$1 for each session is charged.

Anyone interested in joining the classes may call Mrs. Meyer at 345-3134.

Theatre Group Meeting

There will be a general meeting of the theatre group on Thursday, January 19, at 8 p.m. in Stage II. All are welcome. If you cannot attend but would like more information, please call Bill Love (Ext. 3996). We hope to see all of you. Happy New Year to all our members and friends.

Chinese Cooking Special

The Cooking Exchange proudly announces a demonstration of Chinese cooking in the Szechuan School by Jackie Newman on Wednesday, January 25. Admission is 75¢ plus 25¢ babysitting charge for each child.

We hope to see all our friends at this memorable event.

Volleyball

EMPLOYEES' LEAGUE STANDINGS

	LLAGOL		MINDIN
Bumps	7	2	.778
Spikers	7	2	.778
Cool Tools	6	3	.667
Phoenix	4	2	.667
Biology	2	4	.333
Easy Aces	1	8	.111
Atom Spiker	s 0	6	.000

On January 4, the Bumps eased out the Atom Spikers; 22-20, 21-9, 22-20; the Cool Tools swept the Easy Aces: 21-5, 21-2, 21-10; the Spikers edged Phoenix: 21-9, 17-21, 21-11.

On December 21, the Cool Tools swept the Atom Spikers: 21-5, 21-11, 21-12; the Spikers beat the Bumps: 21-11, 19-21, 21-10; Biology took the Easy Aces: 21-0 (forfeit), 23-21, 8-21.

On December 14, there were three sweeps: Phoenix over the Cool Tools: 21-6, 21-17, 21-17; Spikers over Biology: 21-10, 21-4, 21-9; Bumps over the Easy Aces: 21-8, 21-9, 21-10.

Moved

The U.S. Mail Box on Center Street has been moved across the street, just in front of the entrance to the Post Office building.

Running Clinic

The BNL Roadrunners are sponsoring a free running clinic on the afternoon of February 25 at Berkner Hall for BNL employees, families and friends. The purpose of the clinic is to provide general information to the growing number of fun or exercise runners on topics such as running shoes, injuries, and general nutrition. The program will include a fun-run, films and guest speakers such as Gary Muhrcke (a worldclass marathoner and shoe expert), and Annette Racaniello (a long distance runner and exercise physiologist). Babysitting will be available and refreshments will be served. All those interested in running, particularly women, are invited. Further details will be announced at a later date. For information contact Ted Landry Ext. 2959.

The progress in the Westinghouse Challenge Run has been hampered by lack of participation. To date, only 12 runners are signed up. They have run a total of 1100 miles, average 6 minutes and 59 seconds per mile. The goal of 3000 miles is still far away and gives all runners a chance to participate. Runners may enter simply by registering your weekly mileage and times with Jim Guppy (Ext. 2698). The goal of the challenge run is participation not speed.

Bowling

Pink League

The Odd Balls are the first half champions, but there were no losers on position night. The Pinsplitters bowled a 710 in the first game and missed the next two games by narrow margins. Out of the eight bowlers on both teams, seven had series of 400 plus.

Speaking of good bowling . . Ellie Adams had a 194, Reni Rosati 191, Carol Beckner 179, Grace Fales 179, Helen Keeley 167/165, Marge Stoeckel 166, Alice Trubisz 162 and Noelwah Netusil 160.

Red League

Starting off position night, the fifth place team still had a shot at the first half, but after the final tally, the third place Anachems won by a three point margin. A great first half in the Red, the closest race in years.

In the match-ups for position night, the Anachems took the Freon Loaders 11-0 to capture the first half. R. Wilson had a 215/637 gross pins and R. Marlow 205/649 gross. The Sandbaggers took 8 from the 76'ers. R. Larsen had a 247 (high game for the year) and R. Meier 556 scratch.

The Cosmos took the Old Timers 8-3. D. Klein had 661 gross and a 220 game. N. Fewell had a 646 gross. For the Old Timers, R. Adams had a 200. In the final match, the Bubble Boys downed the Designers 8-3. W. Kollmer had a 236 and J. Sauls a 640 gross for the Bubble Boys. For the Designers, J. Ferrero bowled a 219 and A. Pinelli came in with a 207.

Purple & White League

At the end of the first half, the Good Guys (Mary & Jere Austin, Ellie & Dick Murgatroyd) took first place, The Jokers were second, and The Sea Gulls took third.

Dick Murgatroyd rolled a 233 and a 613 series. Carolyn Eterno rolled a 193/506 series.

Other high games were Ben Belligan 230, Glen Snape 222, Ken Asselta 209, James Petro 205, Joe Mayeski 204, Nate Carter 214. For the ladies, Pat Manzella 187, Ellie Murgatroyd 179, Jeanne Penoyar 168/168.

Green League

With the first half of the season over, we again would like to congratulate the Blue Jays for being the first half winners. The Blue Jays could only take three points from the Dynomites. For the Dynomites, B. Cahill had a 200. The Got-A-Hit-Ums moved into second place as they took 11 points from the Sparks. The Old Timers II dropped to fourth as they could only take five points and the Trouble Shooters took six. The Pinball Wizards took eleven from the Pickups.

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the bestqualified candidate for an available position, with consideration given to candidates in the following order of priority:(1) present employees within the department, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all nonscientific 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, as indicated below. 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 Personnel Placement Supervisor, Ext. 2874 or

LABORATORY RECRUITMENT: Opportunity for present Laboratory employees.

472. SECRETARY - AAS or equivalent. Requires excellent secretarial skills, including shorthand. Responsible position in departmental administrative area. Physics Department.

473. ARCHITECTURAL OR ENGINEERING TECH-NICIANS (2 positions) - 1 based in NYC and 1 in Boston. Requires familiarity with building materials and methods. Duties include monitoring workmanship, costs, application and materials standards in support of DOE's Weatherization Program for dwellings of low income families. Appointments will be for six months to one year. Department of Energy and En-

OPEN RECRUITMENT: Opportunity for present Laboratory employees and outside applicants.

474. MATHEMATICS ASSOCIATE - Requires mathematics background, MS in scientific discipline or equivalent preferred. Must be able to work with analysts to perform technology and scenario assessments and maintain and update associated data bases. Ability to comprehend and run large-scale computer models necessary. Department of Energy and Environment.

475. SYSTEMS/DP ANALYST - Requires BS in business administration or equivalent, and broad background in systems design, including experience as programmer analyst. Must have extensive experience in administrative data processing. Administrative Systems and Data Processing Division.

476. RESEARCH SERVICES ASSISTANT - To perform a variety of laboratory activities. Requires previous experience in microscopic work. Safety and Environmental Protection Division.

Autos & Auto Supplies

2 SNOW TIRES - W/rims, E70-14, w/w, fits Ply Valiant, \$15 each. Joan, 744-3919 or Jack, Ext. 4447.

2 WHEELS - For Ford Torino. \$8/pr. Bob, Ext. 4033/

63 VW KARMAN GHIA - Good cond, new battery. \$155, 757-0160.

TIRES - New & used tires, rims, snow, reg, radial, Dunlop & Mich, free installation & testing, balance avail. Fred Usack, Ext. 4597 lunch only, 475-4935

75 PONTIAC - Firebird, formula 350, 4 spd, Goodrich lettered radials, am/fm stereo, 35,000 mi, excel. \$3000, 581-0932.

68 PLY FURY WAGON - Auto, ps/ac, block heater, runs well. \$350. Morris, 744-5096.

69 MGB - Convertible, good for parts, engine, trans.

Chris, Ext. 3379, 286-0619 eves. 70 PLY DUSTER - 98,000 mi, 22 mpg, 6 cyl, auto, ps/

pb, new tires. \$650. Yoshi, Ext. 4475.

WHEEL RIMS - From 71 Ford Torino, \$9; VW tuneup

kit, 64-7, \$2. Ext. 3609. 75 CHRYSLER CORDOBA - Excel cond, ac, extras.

\$3300. Ext. 3559, 298-4592. 2 SNOW TIRES - 6.50x13 on Datsun 4-lug rims. \$20.

R. Ince, Ext. 4496, 286-0682.

67 FORD GALAXIE - 2 dr, sedan, ps/automatic trans, r&h, good running cond. 475-4897 after 5.

74 OLDS - Custom cruiser wagon, ac, all power, 9 passenger. \$3500. Ext. 3280, 821-0042.

73 FIAT - Station wagon, recently reblt eng, am/fm

excel operating cond. 653-5267.

VW PARTS - From 65 beetle, almost new tires, much more. Bill, Ext. 2292, 286-0243 eves.

68 CHEVY VAN - Step, 6 cyl, auto. Ext. 2311, 567-5131.

64 PONTIAC - As is, w/service manual. \$125. Walt, Ext. 2907, 698-0576.

75 AUSTIN MARINA GT - 4 spd, am/fm, sb radial snows, rear defrost, 29,500 mi. 298-4089.

73 VOLVO - 6 radials, new fuel injection, new discs, new universals. \$2200. Edward Pultz, Ext. 3284

70 MERC COUGAR - Automatic, vinyl top, ps/pb, excel running cond. \$1050. 286-0336 after 6.

6 AMP CHARGER - For 6 or 12 volt batteries, used twice. \$20. R. Strand, 744-9699 after 6.

72 VW BUS - 64,000 mi, mechanically excel, looks good except for minor blemishes. Asking \$1350. Tony, Ext. 4207/4250.

2 TIRES - 8:25x14 on Ford rims, 800 mi, \$35; 2 15" Ford rims, \$5. Mike Tesla, Ext. 3284.

2 TIRES - F78-14 on Dodge rims, w/w, very low mi. \$60. Kathi, Ext. 2907, 589-8410 eves.

69 FORD GALAXIE - 4 dr, ps/pb/ac, 2 new tires. Asking \$300. Steve, Ext. 3822/929-6527.

71 CADILLAC - Sedan deVille, white, blue leather int, very good cond. \$1250. Claire, 732-6712.

68 BEL AIR CHEVY - Auto, 4 dr, very good cond, stereo radio, 3 spare tires. \$390. Ext. 2060.

66 MUSTANG - V8, new exhaust sys, good batteries & tires, transmission leaks. Best offer. Roger, Ext. 4573, 3449.

75 DATSUN - 280Z, 4 on the floor, ac, snow tires, am/fm radio, cb, orig owner. 878-2880 eves.

73 FIAT - 128 station wagon, 54,000 mi, recent valve job, excel running cond. \$1425. Al, 744-1055.

Miscellaneous

SKI BOOTS - Munari, size 11, buckle, skis, 5' w/ Cubco bindings & poles, \$50. M. Kinney, Ext. 4316 or

BED - Full size incl frame, mattress & boxspring. Joe Ash, Ext. 2983.

SKIS - Wood, cable bindings, \$10; men's boots, leather, size 10, \$3; women's size 7, \$3. Jim, Ext.

WINDOW - Andersen gliding w/out frame, 26"x 6234"; child's car seat belt. Vinny, 473-4471.

ICE SKATES - Sm boy's black, 2 runner, size 11, \$1.50; boy's hockey sizes 13, 2, 3, leather, \$5 each; boy's figure, size 2, leather. \$5/pr. 924-6977.

HO TRAIN SET - 4x8 complete assembly, 3 locos, pass & freight train, 3 transformers. 924-4063, 281-3299.

VACUUM SWEEPER - Electrolux w/attachments, excel cond, newly overhauled. \$100 firm. Virginia Lyons, Ext. 3484.

WORK BOOT - Mason, high, size 7D, brand new, worn 1 hr; 2 pr shoes 6¼D, men's mason 1 bl, 1 br pr.

5 USED DOORS - 6'8"x2'8" (3); panels, 1 6 lights, 1 4 lights. Best offer. Henry, Ext. 3084.

LA SABRE SKI - Step-in Saloman bindings, Austrian boot, size 8, poles, \$25; Stefan buckle boot, 71/2N, \$20. Annamarie, Ext. 2352.

CHINA CLOSET - White metal, kitchen w/glass sliding doors. 653-4647.

BED - Queen size mattress & box spring, \$25; 21" portable b&w tv, \$20. 289-8182 or Ext. 3600.

GUITAR - Ventura acoustic, (1) \$40, (1) \$25; towing hitch for VW, \$20. Ed, Ext. 2501.

SLIDING DOOR - Glass, dbl pane, insul, white alum, screen, new. \$170. 331-2779.

ICE SKATES - White, figure, size 5, \$8; child's desk &

chair, \$5. 289-0413.

FLUTE - Artley w/case, very good cond. \$80. 929-4346.

SNOW SHOES - 56", \$20; trunk ski carrier, \$15. Don,

Ext. 2026.

GENERATOR - Portable, 1250 watts, Wards, 3 hp Briggs & Stratton eng, used less than 2 hrs. \$200. D. Vail, Ext. 2046.

BABY ITEMS - Stroller, high chair, car seat. Ext. 3392, 475-8330.

ELEC SEWING MACHINE - Gimbels brand, 17 yrs old, portable or tbl mounting, excel cond w/attachments, \$15. Pete, Ext. 4326.

SEALY INNER SPRINGS - Fair cond, \$5. 286-8890 af-

2 RUGS - Reasonable prices, good cond. Atma, Ext.

4389, 281-4206. 22" B&W TV - Admiral console, \$40. Ext. 4003, 924-

4373.

8' POOL TABLE - Racks, balls, needs handyman's touch. \$40. Rino, Ext. 2012, 273-2958 eves.

FIREPLACE SCREEN - 38" wide, 31½" high, brass & black, \$20; post hole digger, \$15; storms & screen windows, 2 pair, 31¼"x23¾", \$10/pr; 5 pr 36"x23", \$8/pr. 289-6490.

FIGURE SKATES - Boy's, black, size 4, good cond, \$4; black leather snow-ski boots, size 1, \$2. Watson, 286-

SKI BOOTS - Zenith, men's size 7, asking \$8; skis, 5' beginners, asking \$6. Howie, Ext. 2043.

DINETTE SET - Oval, marble like top w/4 chairs, good cond, \$50; round kitchen set, formica top w/4 chairs, good cond, \$35. 589-0208.

SINGLE BED - New mattress & box spring, \$35; maple colonial chair w/red cushion, \$35; Zenith 21" color tv, \$75. 281-8538. ELEC SLICING MACHINE - Maple rocker; 19" Panasonic b&w tv. 325-1961.

ARTIFICIAL XMAS TREE - 7½' complete w/decorations & lights, \$40. Bill Espensen, Ext. 3992.

TAPE DECK - 8-T, record/play, auto, manual, channel selection, 2 mikes, new, asking \$39.99. Ext. 4798,

POT BELLY STOVE - 31", \$55; fireplace, tools, unused, \$30. Daly, 363-2497.

GE DRYER - Heavy duty, 9 mos old, excel cond. \$125. Bruce, Ext. 3558.

YORKSHIRE TERRIER - Puppy, male, 3 mos old, AKC, vet certificate, delightful temperament. \$225. 475-2627 after 6.

ICE SKATES - Bauer big chief hockey skates, size 8, \$8; women's figure skates, size 6, \$6. Joe, Ext. 3273.

SKI BOOTS - Italian, formula one, excel cond, size 91/2. \$25. Barry Gordon, Ext. 4472 or 4478

BAR - W/back bar, 3 stools, \$50: elec edger, \$10: camper fender mirrors, \$10/pr; spreader, \$5. Kay, Ext. 2529.

12" B&W TV - Good cond, except needs new picture tube. \$10. Ext. 3080.

GAS WALL OVEN - Caloric continuous clean, good cond. \$50. 928-8737 after 6.

SKI BOOTS - Size 8½, plastic, buckle, \$30. L. Burgar,

GARAGE SALE - Sat, Sun, Jan 14 & 15, 126 Fieldstone Ct, Middle Is, Coventry Manor, bricks, books, fabrics, misc. 924-7285.

SEWING TABLE OR VANITY - \$15. 924-7285 eves or Ext. 2248.

KITCHEN CABINET - 8' L-shaped walnut kitchen cabinet, incl s/s sink, GE range top, wall oven, dishwasher, formica top. \$400. AT9-1461, 9 am-9 pm.

Real Estate

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

For Sale

ROCKY POINT - 4 bedrm colonial, eat-in-kitchen, 2½ bath, ac, w/w carp, all appl, garage, wood deck, priv beach. 744-1156.

RIDGE - Cape cod, 75x200, eat in kit, 2 full baths, fp, encl breezeway, 2 oversized garages, h/w heat, s/s, w/w, 5 appl, priv lake. 929-4818.

MASTIC BEACH - 4 yr old house, 6 rms, full basement, fence 80x125, \$28,500. 281-5498.

SHIRLEY - Must sell, fully furn, 3 bedrms, heated finished bsmt, storage bsmts, w/w, storms, hot water heat. \$25,000 will hold mortgage. 281-5328.

S SETAUKET - 5 bedrm Strathmore, 3 baths, ac, w/w carp, many extras. \$55,000. 698-1785 after 5. MILLER PLACE - 4 bedrm colonial, fp, formal dining,

fam rm, $1\frac{1}{2}$ baths, 2-car garage, landscaped, wooded 1/3 acre. \$58,500. 331-1798. MANORVILLE - 4 bedrm cape cod, 2 bath, living rm

w/fp, 3 appl, w/w, s/s, pool, fenced, garage, 2 acres. 878-1895. 4 BEDRM - Heated porch, hdwood floors, nr schools, shops, water, quiet st, very low tax, appl. \$36,000.

Vis, Ext. 3513/3512, 878-4889. SHOREHAM - 4 bedrm colonial, 1 acre, fully fenced

w/w carpeting, 1 yr old. \$56,900. 744-2821. MT SINAI - 4 bedrm ranch, 1/3 acre, bsmt, s&s, fp, landscaped, sod. \$42,990. Tom, Ext. 3297, 928-3205.

For Rent

N SHIRLEY - 2 bedrm apt, priv entrance, full bath, all util, no pets, 5 min from lab. 924-8264 eves.

CENTEREACH - 2 bedrm ranch, 1 acre, fenced, immaculate. \$345 + util, avail immed. 265-8827

RONKONKOMA - 4 bedrm on 1 acre w/barn, immac. \$400 + util, avail Feb 1st. 265-8827.

BROOKHAVEN HAMLET - 3 bedrm, fin bsmt, att garage, screened porch, fp, appl, insulated, nr marina.

YAPHANK - 3 bedrm house, 5 min to lab, fin bsmt, garage, 2 acre wooded lot. \$275/month + util, avail Jan 31. Bieber, Ext. 2924, 924-4551.

BROOKHAVEN HAMLET - New 3 bedrm ranch on S.

Country Rd, unfurn. Ext. 4676.

CALVERTON - 1 bedrm apt w/priv entr, all util. \$185/ mo, security. Jay, Ext. 2022, 727-6582.

PATCHOGUE - 2 bedrm house, living rm, dining, bsmt, fenced yard, quiet st, perfect cond. \$310. 475-

MT SINAI - 3 bedrm ranch, 2-car garage, 5 appl, s&s, fp, 2 yr lease avail. Bill, 929-6442 after 6.

Wanted

LABELS - Please send Campbell & Franco American labels to Bookless, Bldg. 815.

USED 8&W TV - Bhatt, Ext. 2966, 924-3425 after 5. VIOLIN BOW - 1 adult & 1 child's violin & case. 924-

RUG - 9x12 or 10x14 w/pad, trade for 8' sofa. Tony,

Ext. 3283 lunch or eyes.

BABYSITTER - For 2 yr old, 3 days/wk, 8:30-5:00, prefer on site. Nancy, Ext. 2211.

BURNER SERVICER - To clean and adjust burner, etc. Walt, Ext. 2907, 698-0576. APT/HOUSE - 2 bedrm, within 15-20 min of BNL, up

to \$300 + util. Ext. 2343. NEW FAMILIES - For babysitting pool, S Brookhaven area, all parents, no money, meet Jan 17. Details,

286-8195 or 286-9765. WANTED - Person who will provide nice home (hutch) for "Oliver," a black & white dutch rabbit.

REMOTE CONTROL - For airplane, 3-way control preferred. Laurence, 744-5079 after 5.

SKI EQUIP - In good cond for 5 yr old. Marlene, 744-

BABYSITTER - W/light housekeeping. Mon-Fri, 8-5:30, references, reliable, fee negotiable. 878-4864. DEPTH FINDER - Transducer, any size or shape, don't

need recorder but would consider, must be reasonable. Ext. 4058, 286-0436. DEHUMIDIFIER - Good working cond, reasonable.

Betty, Ext. 3141. CAT SITTER - Someone to take care of my cat in your home for 1 or 2 weeks. \$1/day + food. E. Patchogue. 475-1844.

Car Pools

Fred, Ext. 4096.

DRIVER - To complete 5-person car pool from Huntington. Irv, Ext. 4581 or Herb, Ext. 3611.

WADING RIVER - Would like to join or form car pool. Lewin Hills area. Betty, Ext. 3141.

Lost & Found LOST - Small Indian necklace in Physics or Applied

able. 884-9500.

Math dept, Dec 30. Dick Strand, 744-9699. TAX SERVICE - For individuals, in your home, reason-

EXPERIENCED NY DRUMMER - Looking for new students, your home or mine, reasonable rates. 667-6590.

TYPING - Diane, 288-2660.

CB & TV EQUIP - Sell & service. Bob, 698-1487.

FURNITURE STRIPPING - Varnish & paint removed, also chairs caned. 924-8547.

TYPING - Light; sewing; babysitting, Medford area. CHILD CARE - Will care for your daughter (2-4 yrs) in

5. Ads not carried because of space restrictions will be

my home, meals, toys, 2 playmates, excel references. Blue Point. Daly, 363-2497.

Classified Ad Policy

Deadline is 12 noon Monday for publication Friday of the same 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
- 3. Ads for material acquired for resale in association with
- or part-time business cannot be accepted. 4. Firearms offered for sale or trade may not be brought
- held for publication in the next issue.

 6. Ads are run only once and must be resubmitted if they are to be repeated. 7. Ads should be restricted to 20 words or less and typed or printed on the form provided, and must bear the employees signature.

For Sale: Auto & Auto Supplies For Sale: Boats & Marine Supplies For Sale: Miscellaneous

Carpools Lost & Found Services

Check x the heading applying to your ad. Print or type your ad in 20 words or less.

Ads concerning property for sale or rent cannot be accepted on this form. Special Real Estate Ad forms are available at the Office of the Brookhaven Bulletin, Room 111, 40 Brookhaven Avenue.

(Name & Phone No. To Call)

Employee's Signature.. Send to: Brookhaven Bulletin, Building 460, 40 Brookhaven Avenue (Ext. 2345).

Life No.

Ext. ...