BROOKHAVEN BULLETIN

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BROOKHAVEN NATIONAL LABORATORY

18th Pegram Lecture Series

Sir Denys Wilkinson Explores Man's Universes

Sir Denys Wilkinson, well-known nuclear physicist and long-time guest researcher at BNL, will deliver three talks next week, for the 18th George B. Pegram Lecture Series (see story below). From a philosophical perspective, he will discuss various scientific topics, under the overall theme of "Man's Universes." All the lectures begin at 8 p.m. in Berkner Hall. They are free, and the public is invited.

As a series, Wilkinson's lectures will discuss the importance of analyzing the nature of man's thought and of questioning the degree to which his mental processes, and the concepts they permit, can help him understand submicroscopic and cosmic phenomena.

Sir Denys Wilkinson

Individually, the lectures will explore the following ideas:

- **Tuesday, February 21, "Man's Ways of Thought"** — The speaker will examine such topics as the nature of perception and man's essential isolation, our obsession with numbers and thoughts that we cannot express.
- **Wednesday, February 22, "The Quantum and Gravity"** — Wilkinson will deal with man as part of the universe. Black holes, consciousness, quantum mechanics and a possible apocalypse will be covered.
- **Thursday, February 23, "The Cosmos and Man"** — The lecturer will talk about the Big Bang, delving into the astonishing fact of man's existence. The conflict of quantum mechanics and general relativity, the inflationary paradigm and the cosmological constant will also be discussed.

The observations that Wilkinson will share as the 18th Pegram lecturer grow out of more than 40 years in nuclear physics, in which he has made significant contributions as both a theorist and an experimenter. In recent years, his research has concentrated on fundamental questions of physics, such as the origin of the universe and other, partly philosophical, matters.

Denys Wilkinson's well-honored career began at Cambridge University, where he earned his Ph.D. in 1947 and his Sc.D. in 1961. He also was a Fellow of Jesus College at Cambridge from 1944-59, and a demonstrator, lecturer and reader in the Cavendish Laboratory, from 1947-57.

Wilkinson spent the years from 1957-76 at Oxford University, first as Professor of nuclear physics, then as Professor of experimental physics. From 1962-76, he also headed Oxford's Department of Nuclear Physics.

In 1976, Wilkinson became Vice-Chancellor of the University of Sussex. When he retired in September 1987, a three-day conference on "Interactions and Structure in Nuclei" was held at Sussex in his honor.

Since 1954, Wilkinson has been a guest researcher at BNL, conducting highly original experimental Van de Graaff research. His help in preparing the successful 1962 proposal for the Tandem Van de Graaff accelerator has had a far-reaching effect: After 15 years of highly productive nuclear physics research, the Tandem has now become the key to BNL's proposed Relativistic Heavy Ion Collider.

In addition, Wilkinson has served on many important British and international committees that have determined the course of scientific programs both in England and Europe.

Six honorary degrees and many prizes, medals and other awards have been conferred upon Wilkinson. Chief among his honors was being knighted by Queen Elizabeth II in 1974.

Roger Stoutenburgh

To learn more about the HYDOCARB process, retired General Richard Lawson (second from right), President of the National Coal Association, recently visited the Department of Applied Science (DAS). With him, before a working model of the two-step process in Bldg. 526, are (from left) Edward Grohse; DAS Chairman Bernard Manowitz; Seymour Baron, BNL Associate Director for Applied Programs; and Meyer Steinberg.

HYDROCARB Process Transforms Coal Into Clean Carbon and Hydrogen Fuels

The United States is rich in coal, and, for most of its history, has used the products of its mines without hesitation. Over the past dozen years, however, that has changed — with the recognition that the emissions from coal combustion are contributing to the formation of acid rain and the greenhouse effect.

About four years ago, Meyer Steinberg and Edward Grohse began to address this problem. With Steinberg contributing the concept and Grohse offering the engineering, they developed a process that begins with coal and produces, as its major product, a pure, clean carbon fuel called carbon black, and, secondarily, a clean, hydrogen-rich fuel.

Steinberg, who heads the Process Sciences Division of the Department of Applied Science, and Grohse, a chemical engineering consultant to BNL, call their patent-pending process HYDROCARB. Some funding for HYDROCARB's development has come from the Lab's Exploratory Research Program and from the Department of Energy's Office of Fossil Energy.

Not only does HYDROCARB produce clean fuels, but the process also appears to be very cost efficient. Compared to other coal gasification and liquidation plants, Steinberg says that the unit capital cost of a HYDROCARB processing plant would be considerably less.

"The technology exists," says Steinberg, "and we think we can make it as economical to produce a clean carbon fuel and a hydrogen-rich fuel from coal as it is to use oil and gas today."

There is one problem, however. Although carbon black emits no acid rain contributors, one by-product is carbon dioxide (CO_2). There are many reasons to believe that the Earth may be warming up because an excess of CO_2 is trapping radiation from the sun in the atmosphere — a greenhouse effect.

"If the greenhouse effect is a con-

(Continued on page 2)

30 Years of Pegram Lectures

In September 1959 — two years before the first manned space flights and ten years before men walked on the moon — Physicist Lee DuBridge gave "An Introduction to Space" as the first lecturer in the new George B. Pegram Lecture Series.

In the 30 years that have followed, 17 other distinguished speakers have donned the mantle of Pegram Lecturer. Like next week's speaker Sir Denys Wilkinson (see story), each gave a series of about three lectures during a period of a week or so. Also, as Wilkinson plans to do, several lecturers had their series published by Columbia University Press.

Proposed in 1957 by R. Christian Anderson, who retired from the Director's Office in 1983, the Pegram Lecture Series was approved by the Executive Committee of the Board of Trustees of Associated Universities, Inc., (AUI) in July 1958.

The series was named in honor of George Braxton Pegram. As Dean of the Graduate School at Columbia

George B. Pegram

University in March 1946, Pegram headed the Initiatory University Group (IUG), which proposed that a

(Continued on page 3)

Engineering Award to James Powell

James Powell, Department of Nuclear Energy (DNE), has received a 1989 Engineering Recognition Award. The award is given annually by the Long Island Engineers Week Joint Committee for National Engineers Week, which this year is February 19-25.

The Joint Committee is an organization of 16 engineering societies and engineering education institutions in the metropolitan area. The purpose of the award is to recognize individuals who have made specific outstanding contributions to the engineering profession and to society as a whole.

Along with three other winners of this year's award, Powell will be honored at a dinner in Melville next Tuesday, February 21. There, he will receive a certificate inscribed with the theme: "Engineers: Turning Ideas into Reality."

A senior nuclear engineer and head of the Reactor Systems Division within DNE, Powell first joined the Laboratory's scientific staff in 1956. His 32-year career at BNL has been marked by innovative contributions in a variety of applied research areas.

In the early 1960's, Powell and Gordon Danby, Alternating Gradient Synchrotron Department, began collaborating on the use of superconducting magnets to levitate high speed trains. They were later granted the first patent on magnetic levitation transportation systems, a technology that is now ready for commercial development in Japan. (Powell and Danby will give a Physics Colloquium on "Magnetically Levitated Trains" next Tuesday, February 21, at 3:30 p.m. in the Seminar Room of Physics, Bldg. 510.)

At present, Powell is actively working with a number of commercial firms in the development of nuclear power systems for electric power and vehicle propulsion in space. His specialty is the conceptualization and design of advanced fission reactors.

In addition, Powell has been involved in plasma physics research, energy conversion, large cryogenic magnetic technology and low temperature electric transmission.

BSP + SERS = 18 Student Collaborators

Peter Horton

For the first time this semester, the 21-year-old Brookhaven Semester Program (BSP) and the two-year-old Science and Engineering Research Semester Program (SERS) have joined forces so the students can share courses, lectures and discussions. Though both programs give the student collaborators opportunities to complete research projects, train on major research instruments and enrich their general scientific backgrounds, BSP also aims to help students from predominantly black colleges explore a career in science. The Office of Educational Programs (OEP) administers SERS, which has 14 students this semester. With BSP, which has four students, OEP is assisted by the Affirmative Action Office.

As in the past, the students in both programs work on individual research topics with BNL advisors, whose names appear here in parentheses: (seated, from left) Robert Tatum, BSP, Alcorn State University (ASU) (Hugh Isaacs, DAS); Juanita McDavid, BSP, ASU (James Brower, S&EP); William Herzog, SERS, College of William & Mary (John Axe, Phys.); Michelle Shannon, SERS, Washington State University (David Weber, Med.); (standing, from left) Ravindranath Reddy, SERS, Albion College (Farrokh Dilmanian, Med.); Peter Dull, SERS, Valparaiso University (Kelvin Lynn, Phys./DAS); Joel Atkins, SERS, Rose-Hulman Institute of Technology (Pranab Samanta, DNE); Susan Morton, SERS, Bucknell University (Jerome Barancik, DAS); Brenda Fredericken, SERS, Brigham Young University (Jane Setlow, Bio.); Michael McDonald, BSP, Hampton University (Ralph Fairchild, Med.); Brian Busse, SERS, Virginia Polytechnic Institute (Howard Gordon, Phys.); Mark Chutter, SERS, University of Vermont (Myron Strongin, Phys.); Katrina Lackey, BSP, Jackson State University (Leonard Hamilton, DAS); Khanh Tran, SERS, University of Oklahoma (Darrel Joel, Med.); Brett Kraabel, SERS, University of Washington (Paul Vincent, Phys.); Jon Haas, SERS, University of Arizona (Lawrence Kleinman, DAS); and Michael Boyd, SERS, Oakland University (John Warren, Instr.). Not pictured: Michael Courtney, SERS, Louisiana State University (Louis DiMauro, Chem.).

HYDROCARB (cont'd)

cern," says Steinberg, "only the hydrogen-rich fuel need be used, and all or part of the carbon black can be stored back in a mine until such time as technologies are developed to deal with CO_2 in the atmosphere, or the threat of a greenhouse effect is past. The cost of the hydrogen-rich gas will increase as less carbon is used. However, if the environment is being protected, the cost would be worth it."

Steinberg describes HYDROCARB as "an advanced process for completely converting coal of every rank." In its first step, coal is reacted with hydrogen. This takes place in a moving-bed reactor, at a temperature of about 800°C and a pressure of about 50 atmospheres, and it results in a high yield of methane.

In a second moving-bed reactor, the methane-rich gas is heated even further — to about 1100°C, at the same pressure. This causes the methane to decompose into elemental carbon and hydrogen. As much as needed of the hydrogen-rich gas is recycled to continue the process, with the excess available as fuel. Alternatively, a methane-rich gas, or even liquid methanol, can also be produced, with some reduction in the yield of carbon black. The product mix depends on the makeup of the coal used to feed the process.

Further, the carbon black can be blended with water, methanol or oil, to produce liquified fuels Steinberg calls "carbolines." These fuels can be used in diesel engines and turbines, to generate electricity and to operate heavy trucks, ships and railroads.

Reporter's Notebook:
Eat Your Heart Out, Esther Williams!

"On your mark!" . . . As the starting whistle shrilled, the Greek frieze of tensed bodies at poolside flew over my head, plunging in the suddenly boiling water. A non-diver, I tore my grip from the rail and thrashed after them. My first swim meet had begun.

Eyeballs bulging almost through my goggles, I gasped, floundered and didn't sink, through five muscle-searing events. I made it through all of them, thanks largely to the supportive yells of the other competitors. They, already finished, were probably wondering if our après-swim celebration pizza lunch had better become a dinner.

The celebration marked the occasion of the second BNL Swim Club Meet, held last Saturday from 11 a.m. to 1 p.m. — my debut in competitive swimming. At 11 a.m. precisely, I'd somehow gathered courage to emerge, towel-shrouded, from the shower room. Overcoming onslaughts of hydrophobia, paralysis and emphysema, I joined the group of swimsuited people at the point of no return — the entry desk, where I signed in.

So — I came. I crawled. And the terror was worth it, because I conquered. By the end of the meet, bursting with delight, I held the record for five events for women aged 45-49. Best of all, I was the women's all-time, all-age BNL pool record holder for two lengths' backstroke.

Given how badly I swim, how did this situation arise? The answer lies not in ourselves, but in our stars. That day, injuries and prior commitments had eliminated all my competition. Also, in the 41-year-old history of the Lab, no other woman had swum the 66.6-yard backstroke event in an official BNL competition.

Attaining my athletic peak had required a long, devoted training. Ten years ago, a vague hope of improving my muscle tone had led me to the pool, but at first I was intimidated. Everyone swam so well, and all I could do was dog-paddle. Freestyle, with its dog-paddle-like leg movements, seemed easiest to learn, so that's how I started.

I was helped by the Lab's one-person, one-lane system, where, as other swimmers surged by, I could absorb their technique, as well as their wake, without delaying anyone behind me. I ploughed back and forth, trying vainly to synchronize arms, legs and breathing.

One day, tired of counting 1, 2, 3; 1, 2, 3; I started (mentally) humming "The Blue Danube." This was a breakthrough. Plodding swims under flickering fluorescent lights became dreamy waltzes under candle-filled chandeliers in an 1815 Austrian ballroom during the Congress of Vienna, or maybe in Brussels prior to Waterloo. I swirled along in a long gauzy dress and arm-length white gloves. At times I swam up the real Danube, or took a tributary to gaze at castles on the Rhine — still with the Strauss chords surging melodiously though my head, and timing my arms, feet and breath: *1*, 2, 3, *1*, 2, 3.

Liz Seubert

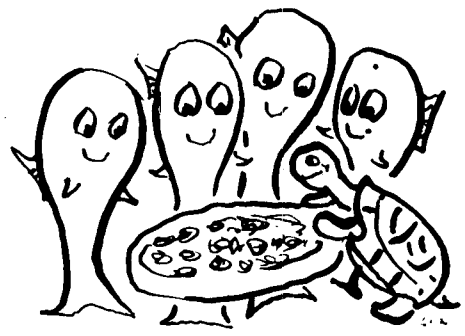
Once I could swim several lengths, the problem was to keep count. My goal of a mile was 54 lengths, or 27 laps, two lengths making up a lap. I think of it as 27 when I am swimming, and 54 when I boast about it afterwards. One way to distract yourself from the agony is to subtract each finished length from the distance that's left, dividing up the remainder to show how little you have left to do.

For example — and always remembering to count 1, 2, 3, in the background — seven laps are done, so there are 20 left. Divide 20 by the five windows at each end of the pool, and the remaining swim becomes four times up and down, that's just four quarters, five times. . . O.K. now eight laps are done, that leaves three quarters, four times, plus three-quarters of one quarter . . . but in the end I lose count, and that day's mile is missed.

Such mental torments possibly affected my speed, but after five years, I could swim a mile. About two years later, I did two miles in one weekend. I was beginning to feel ready for a greater challenge, when I learned that the Lab swim meet welcomed newcomers.

The rest is history. . . until some less tortoise-like woman beats my records at the next swim meet. Maybe I'll beat them myself.

— Liz Seubert



Swim Club Meet Results

Dave Kirby, Liz Seubert and Sue Studier set two pool and six age-group records in BNL's 33.3-yard pool, when they joined BNL swim team regulars at the second swim meet to be held at the Lab pool since 1947. On Saturday, February 11, a total of 16 pool and 34 age-group records were established.

66.6-yard Freestyle

Peter Heotis	37.40#*	1st men 35-39
Peter Cameron	39.69*	1st men 40-44
Maryanne Kmit	44.42#*	1st women 20-24
Paul Michael	48.78*	1st men 60-64
Liz Seubert	1:40.00*	1st women 45-49

100-yard Freestyle

Peter Heotis	58.11#*	1st men 35-39
Wlodek Guryn	1:01.41	2nd men 35-39
Peter Cameron	1:02.36*	1st men 40-44
Maryanne Kmit	1:11.00#*	1st women 20-24
Ron Wittlock	1:13.11*	1st men 50-54
Paul Michael	1:21.50*	1st men 60-64
Sue Studier	1:51.00*	1st women 50-54
Dave Kirby	1:51.07	2nd men 40-44
Liz Seubert	2:35.07*	1st women 45-49

200-yard Freestyle

Peter Heotis	2:17.89#*	1st men 35-39
Peter Cameron	2:26.23*	1st men 40-44
Maryanne Kmit	2:44.06#*	1st women 20-24
Ron Wittlock	2:54.58*	1st men 50-54
Dave Kirby	4:42.67	2nd men 40-44
Liz Seubert	6:15.00*	1st women 45-49

66.6-yard Breaststroke

Wlodek Guryn	50.15#*	1st men 35-39

100-yard Breaststroke

Wlodek Guryn	1:20.21#*	1st men 35-39
Peter Cameron	1:28.53	1st men 40-44
Maryanne Kmit	1:34.53#*	1st women 20-24
Ron Wittlock	1:38.59*	1st men 50-54
Paul Michael	1:53.07*	1st men 60-64

133.3-yard Individual Medley

Peter Heotis	1:36.96#*	1st men 35-39
Wlodek Guryn	1:42.08	2nd men 35-39
Peter Cameron	1:49.90*	1st men 40-44
Maryanne Kmit	1:52.32#*	1st women 20-24
Ron Wittlock	1:58.73*	1st men 50-54
Paul Michael	2:29.17*	1st men 60-64

66.6-yard Backstroke

Ron Wittlock	48.07#*	1st men 50-54
Dave Kirby	1:49.39*	1st men 40-44
Liz Seubert	1:51.18#*	1st women 45-49

100-yard Backstroke

Ron Wittlock	1:17.59#*	1st men 50-54
Sue Studier	2:04.82#*	1st women 50-54
Liz Seubert	3:03.15*	1st women 45-49

200-yard Backstroke

Ron Wittlock	2:48.93#*	1st men 50-54

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

BNL 66.6-yard Pool Records

66.6-yard Freestyle

Peter Heotis	37.40	February 11, 1989
Maryanne Kmit	44.42	February 11, 1989

100-yard Freestyle

Peter Heotis	58.11	February 11, 1989
Maryanne Kmit	1:11.00	February 11, 1989

200-yard Freestyle

Peter Heotis	2:17.89	February 11, 1989
Maryanne Kmit	2:44.06	February 11, 1989

66.6-yard Butterfly

Peter Heotis	41.10	January 24, 1987
Marsha Belford	1:01.10	January 24, 1987

100-yard Butterfly

Peter Heotis	1:07.07	January 24, 1987
Marsha Belford	1:40.40	January 24, 1987

200-yard Butterfly

Marsha Belford	3:27.32	January 24, 1987

66.6-yard Backstroke

Ron Wittlock	48.07	February 11, 1989
Liz Seubert	1:51.18	February 11, 1989

100-yard Backstroke

Ron Wittlock	1:17.59	February 11, 1989
Sue Studier	2:04.82	February 11, 1989

200-yard Backstroke

Ron Wittlock	2:48.93	February 11, 1989

66.6-yard Breaststroke

Wlodek Guryn	50.15	February 11, 1989
Marsha Belford	1:06.78	January 24, 1987

100-yard Breaststroke

Wlodek Guryn	1:20.21	February 11, 1989
Maryanne Kmit	1:34.53	February 11, 1989

200-yard Breaststroke

Pavel Rehak	3:05.20	January 24, 1987
Sheila Isaacs	3:51.85	January 24, 1987

133.3-yard Individual Medley

Peter Heotis	1:36.96	February 11, 1989
Maryanne Kmit	1:52.32	February 11, 1989

Pegram Lectures (cont'd)

regional center for research in the nuclear sciences be established in the New York area. By July 1946, IUG had evolved into AUI and was well along in the business of founding the new Brookhaven National Laboratory, which became a reality in March 1947.

In the summer of 1958, when Pegram consented to the use of his name for the new lecture series, he was already gravely ill. He died before year's end, but, when the series began the next year, it was a fitting memorial to a man who had devoted his life to physics, teaching and the conviction that the results of science can be made to serve the needs and hopes of humankind.

The Pegram Lecture Series is administered by same committee that oversees the AUI Distinguished Lecture Series. Betsy Sutherland, Biology, is the present chair of the AUI/Pegram Lecture Committee.

Public Sale Of Motor Vehicles

Twenty vehicles, located at Warehouse T-87, are being made available for public sale. They can be inspected Wednesday, Thursday and Friday, March 8-10, from 9 a.m. to 4:30 p.m. This will be an informal, competitive bidding, and the bid opening will be Wednesday, March 22. For further details, call Ext. 2302.

Coming Up

Pianist Jean-Yves Thibaudet will give a concert in Berkner Hall on Wednesday, March 1, beginning at 8:30 p.m. In this next performance in the BERA Concert Series, the critically acclaimed Thibaudet will perform the entire set of Debussy's Preludes, Book I, as well as Chopin's 24 Preludes, Opus 28. Tickets can be purchased at the door for $9, general admission; $6, students and those over 65; and $5, those under 18.

Arrivals & Departures

Arrivals

Charles L. Knight ..... Plant Eng.
Charles Lotridge ..... Comp. & Comm.
Corinne Messana ..... DAS
Marco R. Plumley ..... DNE

Departures

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

D. Gerd Dimmler .... Instrumentation
Joy A. Monaco ..... P&GA
Martine E. O'Connor ..... DAS

Inside Info

Rich Savoy, Central Shops Division, reports that the proposed Superconductnng Super Collider (SSC) has hit prime time TV: While watching *Dallas* on Friday, February 10, Savoy observed wheeler-dealer Cliff Barnes trying to sell surplus Ewing land to a Washington, D.C. politician, to be used for support equipment for the SSC. Stay tuned for further developments!

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Tomorrow: African Influence

Anthony Browder, who chronicles facts and information relating to the positive portrayal of the African experience, will give a slide-illustrated talk about "The African Influence on Western Culture and Civilization," tomorrow evening at Berkner Hall.

Sponsored by the Afro-American Culture Club, this Black History Month event begins at 7 p.m. on Saturday, February 18, in Berkner Hall. Admission is free.

Tennis Party

Paid reservations are now being accepted in the BERA Sales Office for the tennis party to be held at Miller Place Racquet Club from 8 to 11 p.m. on Saturday, March 4. The cost of $18 per person includes snacks, drinks and tennis balls. For details, call Steve Shapiro, Ext. 3822, or Carol Roberts, Ext. 3315.

On Site

Construction for the Central Chilled Water Facility will continue next week with backfilling and restoration of the grounds along Pennsylvania Street. Cornell Avenue may be reopened near the end of the week, followed by the closing of Rochester Street, near Brookhaven Avenue. There will be vehicular access to Bldg. 318, but traffic will be detoured to Technology and Center Streets.

The parking lot between Bldgs. 185 and 355 is open now, and parking along Pennsylvania Street should return next week. As warmer weather approaches, these parking areas may be closed again temporarily for final paving and restoration.

Pick A Student

Applications for three summer student programs run by the Office of Educational Programs (OEP) will be available for review between February 21 and March 1, from 9 a.m. to 4:30 p.m., in the Solarium, Bldg. 490, Medical. Use the Clinical Research Center entrance and follow the signs.

The three programs are:

- **Summer Students** — The 38-year-old, traditional summer program in which junior and senior-level undergraduates receive ten-week summer research appointments, June 12 to August 18. OEP pays the individual stipends of $200 per week and round-trip transportation. The sponsoring department pays for the student's housing at $72 per week.
- **Summer Interns** — This is similar to the Summer Student program, except that appointments are offered to students who participated in a prior High School Honors Program conducted by the Department of Energy (DOE) at several DOE labs. Generally, these students are finishing their freshman year of college, but a few may be recent high school graduates. OEP pays all costs associated with these students — stipend, travel, and housing.
- **Teacher Research Associates** — This newly funded DOE program provides an eight-week summer research appointment, June 26 to August 18, to secondary-level teachers of science, mathematics or technology. All applicants have been nominated by their school systems; some were recruited from Nassau and Suffolk Counties, while others have been drawn from a national pool. OEP pays all costs associated with these individuals — stipend, travel and housing.

For more information, call OEP, Ext. 3054.

Black History Month Event

Youth and Talent Take Center Stage

Eight-year-old Shavonna Durham, a tap dancer from East Patchogue, is one of this year's entrants in the Youth Talent Show.

There's no business like junior show business. Last year, the Afro-American Culture Club's (AACC) Youth Talent Show was packed. Everyone was enthusiastic — those who watched, and those who sang, danced, acted, or played musical instruments to give the audience a great evening.

This year, on Saturday, February 25, the AACC will host the second Youth Talent Show. This year's last Black History Month event will begin at 7 p.m. in Berkner Hall.

Young competitors from six to 18 years old will come from all over Nassau and Suffolk Counties and be eligible for trophies to be awarded to winners in several categories. On show also will be the talent of students gifted in other fields, in an arts and crafts exhibition to be held during intermission.

Tickets are $3, and they can be bought at the door or from Mary Durham, Ext. 7143; George Grigg, Ext. 5185; Frances Ligon, Ext. 3709; and Bruce Penn, Ext. 7213.

Daffodils On Sale

Spring and the BERA-sponsored Daffodil Sale are on their way! To make sure everyone is accommodated this year, paid orders will be taken beginning today at the BERA Sales Office in Berkner Hall, from 9 a.m. to 2 p.m. Daffodils are $4 per bunch of 10 and will be available the week of March 20. Sign up early and help the American Cancer Society.

A grand total of 145 Valentine bouquets of carnations were sold to benefit the American Heart Association. Thanks to all for your generosity.

Camera Club

The next Camera Club meeting will feature a portrait lighting seminar and a studio lighting demonstration, using the Speedotron professional strobe system. It will be held on Thursday, February 23, at 5:30 p.m., in the Recreation Building.

Members and nonmembers are invited to attend and use the lighting set up for portraits. Bring your 35mm camera with sync connection, some VPS 160 daylight film and a friend to photograph.

For more information, contact Lew Jacobson, Ext. 5193, or Ripp Bowman, Ext. 4672.

BERA Constitution Changes Approved

On Monday, February 6, the members of the BERA Executive Board and the Recreation Supervisor officially counted employees' votes on a proposal to change the number of Executive Board Members from six to eight and to change their terms from three to four years.

Changes to the BERA constitution require a two-thirds majority of votes for approval, and the official tally was: 927, yes; 129, no.

The BERA Board and the Recreation Department thank employees for taking the time to vote.

If you have suggestions or recommendations regarding BERA, contact Recreation Supervisor, M. Kay Dellimore, Ext. 2873, or any of the Executive Board Members: Skelly Frei, Ext. 4417; Larry Musso, Ext. 2238; Jean Ramirez, Ext. 2119; Rosalie Piccione, Ext. 3160; Sharon Smith, Ext. 3995; and Doris Terry, Ext. 7610.

Cooking Exchange

"Festive Breads for any Holiday" will be demonstrated by Sandy Weber, at the next meeting of the International Cooking Exchange, to be held on Wednesday, February 22, from 12:30 to 2:30 p.m., in the Recreation Building in the apartment area. In addition to the demonstration, Weber will give special hints for successful bread making.

All BERA members and their families are invited to Cooking Exchange meetings. A fee of $2 is charged to pay for the ingredients, and everyone may sample the dishes prepared. New members are needed, and your favorite recipes are welcome. Babysitting is provided at 50¢ per child.

Volleyball

Standings — Week of February 6

League I		League II	
Upfagrabs	36-6	Fossils	33-9
Dinkers	30-12	Set Ups	32-10
Xrayted	25-17	Krush	28-14
Cannonballs	21-21	Nuts & Bolts	26-16
Phoubars	11-31	Ziegfield Vollies	17-25
Netminders	3-39	Slammers	12-30
		Chunga's Revenge	10-32
		Upton-Ups	10-32

League III		Open League	
Frazzled	40-5	Meriem's Team	33-6
MISfits	28-17	Dig Your Lips	32-10
High Volley'em	26-19	Phoenix	31-8
Sourcerers	25-20	Tom's Mutants	26-16
Printouts	24-21	Magnum	20-19
Spikes	17-28	Vollies	15-27
Good Timers	10-35	Rowdy Radicals	12-30
Renegades	10-35	Pi Chu	11-28
		Constables	0-36

Bowling

White League

Ken Riker had a 209/202, Andy Warkentien 204, Sharon Smith 203, Sharon Jones 191, Gerry Riker 191.

Purple League

Dick Adams rolled a 200, Marsha Kipperman 195/188.

Pink League

Maryann Reynolds bowled a 189/175, Renie Rosati 187, Maria Apelskog 177.

Red/Green League

R. Jones had a 233/601 scratch, J. Ferrante 225, J. Connelly 224/220/621 scratch, T. Prach 215, R. Mulderig 212/206/206/624 scratch, J. Mayeski 211, N. Parrinello 203, D. Jesaitis 202, M. Guacci 202, J. Morris 202, K. Riker 201.

Note to Employees:

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

team safety

February is solidly here but January still casts a long shadow. On January 28, the Third Platoon Team of the Safeguards & Security Division (S&SD) lost a player to another knee injury. The team was scheduled for the dining hall on February 9 but is now in the showers until April 10.

All other teams are moving toward their goals, and we have another two-time winner and two first-time winners. The first-timers are the First and Second Platoons of S&SD. Word is that Barney's looking for a bash location. Plant Engineering's Electric Shop Team won for the second time on February 9. Good show all!

The Commissioner is pleased to report that all rumors about the gourmet food at the Firehouse are true — however, they send out for it.

After the rocky January, the word in the locker room is, "Easy does it! Let's be careful out there."

Note to Diners

The following schedule changes are the result of the Lab's closing on Presidents' Day, Monday, February 20:

- Brookhaven Center — Will be closed Sunday, February 19 and will reopen on Monday evening, February 20, at 5 p.m.
- Cafeteria — Will be open from 9 a.m. until 2 p.m. on Saturday, Sunday and Monday, February 18, 19 and 20.
- Vended Food Service, Bldg. 912 — Will be in operation continuously.

Cafeteria Menu

Week of February 20

Luncheons

Monday, February 20 — Presidents' Day
Snack bar service — 9 a.m. to 2 p.m.

Tuesday, February 21

Soup: Garden vegetable	(cup)	.75
	(bowl)	.95
Apricot Cornish hen half w/stuffing & veg.		3.10
Fried liver & onions w/veg.		3.00
Lite-line: Broiled hen half w/veg.		3.00
Hot deli: Knockwurst on roll		2.85

Wednesday, February 22

Soup: French onion	(cup)	.75
	(bowl)	.95
Yankee pot roast w/veg.		3.10
Broccoli cheddar quiche & veg.		3.00
Lite-line: Pot roast au jus w/veg.		3.10
Hot deli: Pastrami		2.85

Thursday, February 23

Soup: Beef barley	(cup)	.75
	(bowl)	.95
Chicken curry over rice		3.10
Grilled ham steak & veg.		3.10
Lite-line: Broiled chicken & veg.		3.00
Hot deli: French bread pizza		2.85

Friday, February 24

Soup: New England clam chowder	(cup)	.75
	(bowl)	.95
Fried calamari w/spaghetti & garlic bread		3.10
Spaghetti w/meatballs & garlic bread		3.10
Lite-line: Broiled fish & veg.		3.00
Hot deli: Turkey		2.85

Breakfast specials

Tuesday:	Sausage & egg on roll	1.50
Wednesday:	French toast & bacon	1.00
Thursday:	Western omelet & toast	1.45
Friday:	Two pancakes & syrup	.70

Classified Advertisements

Placement Notices

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

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

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

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

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

3082. TECHNICAL POSITION - Requires AAS degree in electronic technology or equivalent experience and background in complex electronic and electromechanical equipment, including vacuum systems. Will construct, repair, modify and operate equipment and facilities at the Tandem Van de Graaff Accelerator. Must be willing to work shifts. Physics Department.

3083. TECHNICAL POSITION - Requires AAS in electronic technology or the equivalent, with three to five years' experience repairing Motorola portable, mobile and base-repeater units. Work will involve audio reinforcing and recording during and after normal working hours. Will also maintain MATV systems, intercom systems and paging systems throughout the Laboratory site. Must be able to obtain and maintain a security clearance. Instrumentation Division.

3084. SCIENTIFIC ASSOCIATE POSITION - Requires a BS in chemistry, physics, nuclear engineering or mechanical engineering, or the equivalent. Ability to use calculating techniques involved in radioactive half-life, radiation shielding, self absorbtion and gamma-ray spectroscopy is required. Good oral and written communication and interpersonal skills are necessary. Knowledge in computer usage and programming (BASIC, FORTRAN, HPL) is desirable. Must be able to obtain and maintain a security clearance. Safeguards & Security Division.

3085. SCIENTIFIC POSITION (term appointment) - Requires BS in physics or materials science and programming experience. Familiarity with electronic instruments and computer interfacing desirable. Will be involved in the development of programs for optimizing neutron optics using multilayer monochromators and super mirrors. Biology Department.

3086. ENGINEERING POSITION - Requires a BS in nuclear engineering, physics or a related field. Responsible for the planning and scheduling of irradiations at the High Flux Beam Reactor and the Medical Research Reactor. Will review the safety of irradiations and experiments at these reactors, especially with regard to potential adverse effects on the reactors. Will coordinate scheduling of experiments with reactor operations requirements. Must be able to obtain and maintain a security clearance. (Reposting of Job #2979.) Safety & Environmental Protection Division.

3087. ENGINEERING POSITION - Requires BS/MS in electrical engineering with a minimum of five years' design experience in one or more of the following areas: instrumentation design and development and small-signal analog microprocessor systems (hardware and software); VMEbus experience also desirable. (Reposting of Job #2898.) Alternating Gradient Synchrotron Department.

3088. OFFICE SERVICES POSITION (temporary) - Requires AAS in secretarial science or equivalent experience. Responsibilities will include preparation of mathematical manuscripts using TeX. Experience with TeX, PCs and mathematical equations helpful. TeX training will be provided. Additional responsibilities include routine clerical duties for group. Department of Applied Science.

Motor Vehicles & Supplies

88 KX-125cc DIRT BIKE - excel. cond., professionally maintained, must see and ride, $1,700. Brett, 929-4753 or Lois, Ext. 4904.

87 CHEVY CAMARO - red/red int, am/fm, a/c, p/s, p/b, 17k orig. mi., mint cond., $8,500, firm. John, Ext. 3277 or 585-5198.

87 SUZUKI SAMURAI - convertible, full lifetime warranty, well-maintained, many extras. 689-9234.

87 CHEVY MONTE CARLO SS - 15k mi., tinted windows, every option except T-top, silver w/gray int., mint, $12,500. 395-1588

86 CAMARO - black w/gray int., am/fm, p/s, p/b, 5-spd., T-top, mint, $5,800. Ext. 2957.

86 HONDA CIVIC SI - h/b, 5-spd., 50k mi., sunroof, am/fm cass., new tires, muffler, clean in and out, asking $5,995. Chris, Ext. 2022.

86 HONDA SPREE - $300. 732-1913 after 5 p.m.

86 NISSAN 200SX - h/b, white, a/t, a/c, am/fm, stereo cass., buckets, excel., $6,500. 718-797-1043.

86 RENAULT ENCORE - sporty, 17k mi., 4-spd., stripes, sunroof, am/fm cass., 4 speakers, mint cond., $3,750. 689-7259.

85 BUICK REGAL - V-6, like new, 38k mi., p/s, p/b, p/w, a/c, am/fm cass., velour int., $5,900. 744-9802.

84 BMW - 318i, 5-spd., all options, garaged, excel. cond., 76k mi., $8,500. Arnie, Ext. 4161.

82 HONDA ACCORD - 4-dr., a/t, a/c, am/fm stereo, tape deck, clean, one owner, garaged, 89k mi. Carol, Ext. 4398.

82 YAMAHA MAXIM MOTORCYCLE - 1100cc, 32k mi., custom paint, good cond., clean, $1,100. Fred, Ext. 4407/4435 or 499-1214 after 6 p.m.

82 CADILLAC COUPE DE VILLE - burgundy, 82k mi., full power, excel. in/out, $4,800. Fred, Ext. 4407/4435 or 499-1214 after 6 p.m.

82 BUICK CENTURY LIMITED — 4-dr., V-6, a/t, a/c, all power, new brakes, exhaust, complete front end, $3,100. 269-9510 after 7 p.m.

82 CHEVY CHEVETTE - 4-spd., 4-dr., 4-cyl., good transportation and gas mileage, asking $800. Tom, Ext. 2372 or 281-2669.

82 MUSTANG GT - sunroof, new brakes, tires and more, excel. cond. in and out, must see, $4,700. Ed, Ext. 4188.

81 FORD MUSTANG - 4-cyl, 4-spd., new clutch, gauge pkg., v/g cond., 71k mi., $600. 744-9812 after 5 p.m.

80 TOYOTA TERCEL - 5-spd., a/c, 2-dr., h/b, good cond., $900 or best offer. Eric, Ext. 5715 or 212-949-5925.

80 TOYOTA COROLLA WAGON - 51k, 5-spd., m/t, am/fm, excel. cond., $3,300; 80 VW Rabbit diesel, 4-spd., 2-dr., no rot, $400. Bill, Ext. 4907.

80 JEEP J/10 PICK-UP - 5-cyl., 4x4, exel. cond., asking $3,000. 878-0516.

79 HONDA CIVIC - h/b, 92k mi., am/fm cass., new tires, starter, brakes, water pump, etc., good cond., make an offer. Ext. 3583 or 3204.

78 OLDS OMEGA - 4-dr. sedan, p/s, p/b, a/t, am/fm radio. 732-1913.

78 NOVA - p/s, p/b, a/t, 6-cyl., runs well, clean inside and out, asking $800. Tom, Ext. 2372 or 281-2669.

78 JEEP CJ7 - 6-cyl., a/t, 4WD, p/s, p/b, mint cond., 50k orig. mi., $3,995. Ext. 7686 or 878-0897.

76 MERCURY CAPRI - 4-cyl., 4-spd., good tires, reliable, starts, some rust, needs water pump, $375 neg. Ext. 2946 or 281-2463 after 5 p.m.

75 TOYOTA COROLLA - 5-spd., 2-dr. sedan, $300. Ext. 7793 or Ext. 3441.

75 SKYLARK - ugly, but runs every day. 929-5945 after 6 p.m.

75 DODGE DART - 4-dr., V-8, good cond., 4 new tires, $300 or best offer. 878-2015.

74 FORD F240 - 4x4 pickup, cap, new engine, trans., brakes, bearings, 7" lift, 8' snow plow, power angle, asking $4,000. Rex, 474-5715.

73 FORD WAGON - good transportation, very reliable, $600. Rich, Ext. 2043 or 435-4316.

68 PLYMOUTH FURY 3 - 8-cyl., good cond., reliable, $450. 981-1155 days or 758-3751 eves.

TOW DOLLY - 14" wheels, rated for 3,000 lbs, spare, lite-bar, buddy hubs, $995. Tallon, Ext. 4847 or 473-3987.

HONDA CRX WHEELS - 2 new, $20 ea. 924-3082.

SNAP-ON TUNE-UP METERS - $250; Snap-on brake bleeder, $25; 20-ton air assist hydraulic jack, $250. Rex. 474-5715.

TIRE - new 721 Firestone, 235/75R15, Eldo rim, $75 neg. Ernie, 588-4987.

SCOTTY CAMPER TRAILER - 14', sleeps 4, asking $700. 281-8916.

Furnishings & Appliances

FURNISHINGS - antiques, collectibles, make appointment. 744-2203.

FREEZER - Imperial 19.3 cu. ft., heavy-duty commercial, used only six months, $400. Pat, Ext. 5392.

REFRIGERATOR - Gibson side-by-side, needs charge and slow leak fixed. Free. Rich, Ext. 3386.

GAS RANGE - double oven over and under, good cond., $150. Ed, 581-1509.

LAMP - yellow, 27" tall, $15; yellow braided oval rug, 5'x8½', $45. 286-0259 after 4 p.m.

PASTA MACHINE - Simac, new, all attach., $125; food prep. center, Sunbeam, $100; food processor, Sunbeam Oskar, $75. 585-6518, 8 a.m. & 5 p.m.

REFRIGERATOR - w/freezer, self-defrost, Westinghouse, 14 cu. ft., $50. Carol, Ext. 2895 or 475-8640.

Tools, House & Garden

FIREWOOD - seasoned oak, full cord, $130, del. 732-2849.

IRRIGATION PIPE — two 2", 20' lengths, $30. Ext. 2452.

TOP SOIL - delivered, fine screened, $19 per yd., also sand and gravel delivered. 924-9427 anytime.

SULKY - for Gravely Tractor, 2-wheel, Model L, will sell or barter. 363-7032.

AMARYLLIS BULBS - potted and budded, $2.75 ea. 727-8631.

COAL STOVE - Surdiac, Southport model, 38k BTU rated, heats 11k cu. ft., incl. accessories, best offer. Joe, Ext. 5139.

VERMONT CASTINGS STOVE - Defiant, good cond., $425; 2 mattresses, bunk-size, 33", $25 ea. Ron, Ext. 4715 or 289-1003.

STOVE - wood/coal, good cond., $100. Pat, Ext. 5392.

SPACE HEATER - elec. radiator, Welbilt, never used, paid $40, sell $30. Ext. 2345 or 929-3910.

Sports, Hobbies & Pets

BUNNIES - dwarf, raised outdoors, $6. John, Ext. 3675 or 924-3528.

SKI PANTS - bibs, insulated, navy, woman's size 10 and junior's size 16, both excel. cond. Ext. 4449 or 751-8403 after 6 p.m.

SKIS - man's, Lange, 170 cm Salomon bindings, size 12, boots, $150; Bell motorcycle helmet, white, size large, $40. 281-8458.

EXERCISE BIKE - Vita Master, tach, speedometer, $25. Bill, Ext. 4967.

WEIGHT BENCH - Joe Wieder brand, incline, decline, leg lift, excel cond., $60. Ext. 4052 between 12-12:30 p.m.

BICYCLE - AMF stationary w/flywheel, excel. cond., was $160, asking $80. Joann, 472-6742.

BICYCLE - boy's 20", good cond, $25; light, 10-lb. bowling ball, $10. 928-3868.

PIANO - Lester Betsy Ross spinet, light wood, includes bench, $700. Tony, Ext. 3658 or 3637.

GOLF CLUBS - Spalding Top-Flite irons, 2-9, + PW, #1 & #4 woods; Wilson Andy Bean irons 3-9 + PW, #1 & #3 metal woods; $50 ea. set. Ext. 3273.

MUSIC SHEETS & BOOKS - old, $1 & $2 ea.; oak, foot-pedal sewing machine, $50; 386 LP & 45 records, $50 all. 878-6637.

Audio, Video & Computers

YAMAHA ORGAN - and bench, $350. 286-9430.

MONITOR - monochrome, for Atari ST, $100; WordPerfect, $75. Dave, Ext. 4148.

AUDIO TAPES - 8-track, w/2 rotating storage racks, $15. Tony, Ext. 2050.

AUDIO COMPONENTS - Pioneer SX828 stereo receiver, CTF500 dolby, stereo head, tape deck, much more, first offer over $250. Ext. 3264.

Miscellaneous

WALKING SHOES & BOOTS - leather, woman's 38 European size, imported, like new; sweaters, new, handmade, many colors. Amalia, Ext. 3102.

AIRLINE TICKETS — round trip Islip-Ft. Lauderdale, Nov. 6, return Nov. 14, $350, pair. Toni, Ext. 5257.

MAGAZINES - *National Geographic*, 20 yrs., $20; *Reader's Digest Condensed Books*, hardcover, $1 ea. Ext. 4848.

TICKETS - 2, Metropolitan Opera, Massenet's *Werther*, Sat. matinee, March 18, dress circle, $47 ea. Carmen, Ext. 4135.

MOLDING - 2⅝" Sprung Crown, white, good cond., 190', 25¢ ft. or $40 all. Ext. 2452.

TICKETS - 2 BERA Concert tickets, good for either remaining performance, $6 ea. Matt, Ext. 4860.

TICKETS - 2, Metropolitan Opera, *d'Elisir D'Amore*, center orchestra, Sat. matinee, April 29, Pavarotti, Battle, Remzetti, Plishka. Ext. 3922.

ELECTRIC NCR - commercial fire extinguisher; slicing machine; 3 ladders, 3', 4' 5'; Delco 50 battery, new; 3 14" tires, like new. 363-7032.

Lost & Found

LOST - time-line program, from Computer Store, was borrowed by a friend. Dave, Ext. 2076.

Free

BABY BUNNIES - free to a good home, adults also, all albino. Mary, 399-3390.

TRAILER - plywood box, Chevy truck axle. Rich, Ext. 3386.

Car Pools

BOHEMIA-OAKDALE-SAYVILLE - need 2 more drivers for car pool, also can meet at Ext. 59 LI Expressway. Frank, Ext. 2314.

Real Estate

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

For Rent

BROOKHAVEN HAMLET - house on quiet country lane, 2-bdrm., 2-bath, large kitchen, security & util., avail. immed., $900/mo. Ext. 7607 or 286-0204.

MASTIC BEACH - 4-rm. apt., kitchen, l/r, bdrm., bath, priv. ent., 10 min. to Lab, $600 mo. incl. utilities, single person preferred. 281-8357 after 4 p.m.

PATCHOGUE - 3-bdrm. house, 5 appliances, storage, deck, $950 + util., security. 289-7921.

RIDGE - 2-bdrm townhouse, wall-to-wall carpeting, all appliances, furnished, 5 min. from Lab. Ext. 4525 or 981-4696 after 6 p.m..

SHIRLEY - 1-bdrm. apt., l/r w/fp, eik, full bath, priv. ent., 10 min. to Lab, $650/mo. includes. all. 399-1699 eves.

WADING RIVER - 1-bdrm. apt., eik, full bath, large l/r, one block to Sound, 10 min. to Lab, $575 incl. util. 929-3419 after 6 p.m.

CATSKILLS - 3-bdrm. chalet w/sleeping loft, fully furnished, near Hunter & Windham, great for skiing. Kay, Ext. 4501 or Bea, Ext. 3642.

GILBOA - chalet, sleeps 6, TV, VCR, stereo, near Hunter, Windam & Deer Run, 4WD recommended in winter, weekly or monthly rents only in winter. Ted, Ext. 4052 or 928-1445.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, tennis, golf, beach, pool, Feb. $300/wk. Guy, Ext. 3147 or 585-9149.

For Sale

CORAM - 9-rm. Colonial, cul-de-sac, 4-bdrm., 2½-bath, fam. rm., f/p, eik, d/r, l/r, mud rm., in-ground pool & sprinkler, 2-car gar., extras, $195,000. Nelson Tyler, Ext. 2303 or 732-3902 after 5 p.m.

EAST SETAUKET - 4-bdrm. Colonial, 2½-bath, eik, l/r, d/r, fam. rm., f/p, wood floors, screened porch, finished bsmt., 2-car gar., 0.52 acre, GHWH, vinyl siding. Shiue, Ext. 4395/3372 or 751-8224.

MASTIC BEACH - 5-rm. ranch, 3 bdrms., tiled bath, cabinet-lined country kitchen, OHW, full basement, oversized lot, approx. 120' x 100'. 281-8685.

MIDDLE ISLAND - Coventry Manor 3-bdrm. townhouse, 2 baths, 5 appliances, c/ac, swimming pool, tennis courts, $118,000. 289-5704 after 5 p.m.

NORTH SHIRLEY - ½-acre lot, 75 x 265, Manorville school and fire district, 5 min. to Lab, nice area, $50,000. Jim, Ext. 2305.

RIDGE - Strathmore Ridge, 2-bdrm. townhouse, up & down, $95,000. Ext. 2043 or 473-1549 after 5 p.m.

RIDGE - 3-bdrm. Colonial, 1½ baths, all appliances, assumable mortgage, large yard, 5 min. to Lab, city water and sewage, $139,000. Ext. 7865 or 821-6945 eves.

ROCKY POINT - 3-bdrm. ranch on flat ¼ acre, full bsmt, garage, laundry room, fenced backyard, patio, OHW, oak floors, excel. cond. $129,000. Ted, Ext. 7992 or 821-2569.

SETAUKET - 3-bdrm. L-ranch, 2 baths, eik, l/r, d/r, rec. rm., wood floors, patio, full bsmt., attic, 2-car garage, central a/c, ⅓ acre, mint cond., 3V schools, $230,000. Ext. 5265, or 584-8339 after 6 p.m.

SHIRLEY 2-bdrm. Cape, washer/dryer, city water, low taxes, expandable attic, 7 mi. from Lab, S. of Montauk, $96,000. 395-4272.

STONY BROOK - 4-bdrm. Colonial, 2½-bath, d/r, family rm., eik, 2-car gar., fenced, ½ acre, new siding, windows, doors, immac. cond., asking $199,000. 689-8605.

WADING RIVER - 3-bdrm. ranch, eik, l/r, d/r, solar, circular drive, new bath w/skylight, extras, $130,000, neg. Kathy, Ext. 7105 or 929-3207 after 5 p.m.

WADING RIVER - 3-bdrm. ranch, 2 baths, l/r w/fp, den, formal d/r, full bsmt., 0.62 acre, landscaped yard, private beach, $158,000. Nick, 929-4901 after 5 p.m.

HOLIDAY, FL - Sandpiper, 3-bdrm., 2-bath, 1½-car gar., cathedral ceilings, corner lot, utility rm., sprinklers, clubhouse facil., near mall & County park, 3 yrs. old, asking $75,900. Rex, 474-5715.

MADERIA BEACH, FL - timeshare, Commodore Beach Club, week 45, Nov 5-11, sleeps 4 adults, pool, hot tub, on Gulf, beautiful view, asking $5,000. Rex, 474-5715.

PALM COAST, FL - ¼-acre lot, 80' x 125', 5 min. to Atlantic Ocean, 24 mi. N. of Daytona Beach, water drainage & sewage util. in, $1,995 and assume loan of $11,995. Thomas Nolan, Ext. 5265.

Wanted

CAMERA REPAIR PERSON - music stand. 363-7032.

ACOUSTIC GUITAR - looking for quality instrument. Ron, Ext. 4662.

Ads left out of this issue due to lack of space need not be resubmitted to appear in the next issue.