BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Satoshi Ozaki Named To Head RHIC Project

"I have come back to BNL to become an AGS user: I hope to be the biggest user of the AGS — when RHIC is complete and the AGS is used as RHIC's primary injector of heavy ions," remarked Satoshi Ozaki last May, at the annual meeting for the users of the Alternating Gradient Synchrotron (AGS).

Ozaki made his remarks following

Roger Stoutenburgh

Satoshi Ozaki

his introduction by Lab Director Nicholas Samios as Brookhaven's choice to head the project to build the Relativistic Heavy Ion Collider (RHIC).

When built, RHIC will be used to investigate the nature of matter under conditions comparable to those in the early universe five to ten microseconds after the Big Bang (see sidebar).

Ozaki assumed the position of RHIC Project Head on October 1, establishing his office in the Collider Center, Bldg. 1005.

"I am extremely pleased to welcome back Dr. Satoshi Ozaki to Brookhaven and to announce his appointment as Head of the RHIC Project," noted Samios.

"In agreeing to return to Brookhaven, Dr. Ozaki will head a group of scientists, engineers and technicians who have brought the RHIC facility to its current state of construction readiness . . . . With the reaffirmation of RHIC's high national priority announced by the Nuclear Science Advisory Committee this summer, we expect RHIC construction to start in fiscal year 1991, and we look forward to this facility's . . . substantially expanding our research capabilities."

Most Will Be Involved

As Ozaki had informed the AGS users, "RHIC is not just an accelerator project — it is Brookhaven's project, the major effort of the entire Lab. Therefore, at a multidisciplinary lab like this, most of us will be involved in this project. Once RHIC is built, it will make a good lab even better."

During the RHIC Project, Ozaki will be working with BNL staff from the Accelerator Development, AGS and Physics Departments, as well as the National Synchrotron Light Source Department and the Computing & Communications, Instrumentation and Plant Engineering Divisions.

Ozaki is no stranger to BNL: For 22 years, he had been a member of Brookhaven's Physics Department.

A native of Japan, Ozaki took his Ph.D. in physics from the Massachusetts Institute of Technology in 1959. That same year, he came to the Lab as a research associate, to perform experiments at BNL's high-energy accelerator at the time, the 3.3-billion-electron-volt (GeV) Cosmotron.

On the First AGS Experiment

Following the commissioning of the 33-GeV AGS in 1960, Ozaki was a member of Sam Lindenbaum's

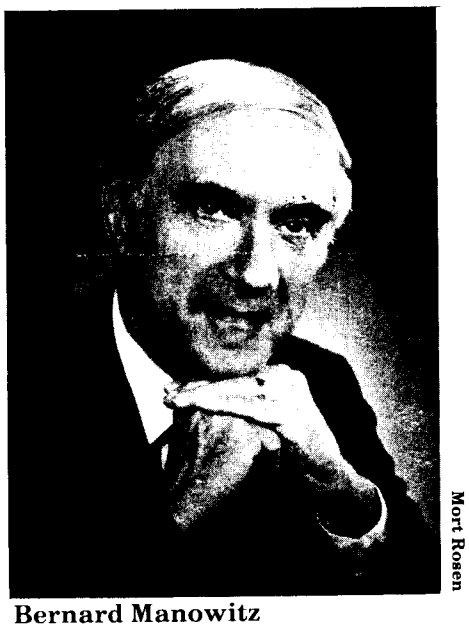
(Continued on page 2)

New DAS Chairman Is Leon Petrakis

With over 200 employees spread among ten buildings and 11 divisions, and with research interests ranging from the depths of the sea to the outer layers of the atmosphere, BNL's Department of Applied Science (DAS) presents "exciting prospects and challenges" to its new chairman, Leon Petrakis.

Petrakis expressed this enthusiasm for the job ahead shortly after he assumed the DAS chairmanship on October 1. His appointment followed "an extensive review of many outstanding candidates from within and outside the Laboratory," said BNL Director Nicholas Samios, in his announcement introducing the new chairman.

"Dr. Petrakis is a physical chemist who has spent 25 years at both Chevron and Gulf Research Laboratories working on a broad spectrum of fundamental and applied research projects in fossil fuels," Samios said. "He has taught and conducted collaborative research at the University of Pittsburgh. . . . He has managed



Mort Rosen

Bernard Manowitz

Roger Stoutenburgh

Leon Petrakis

a number of contract research projects for DOE and NSF. Dr. Petrakis has extensive book and scientific publications in surface science, catalysis, fossil fuels, molecular structure and materials."

Petrakis takes the DAS reins from Bernard Manowitz, who served as chairman since 1979. Said Samios. "I want to especially thank Bernie for his superior leadership of DAS. During his tenure as chairman, many new research programs and, indeed, efforts in new research fields were started. He sustained DAS as a healthy department during an era of difficult funding."

Petrakis too acknowledged the contributions of Manowitz and of Allen Goland, former DAS Deputy Chairman, both of whom have returned to research within the department.

"I offer sincere thanks to them for their leadership, hard work and dedication to the department, and for their splendid cooperation and efforts to effect a smooth transition," Petrakis said. "I extend best wishes in their

(Continued on page 3)

Nobel Prize in Physics Goes to Norman Ramsey

For work that led to the development of the present time standard, the cesium atomic clock, Norman F. Ramsey of Harvard University — one of the founders of Associated Universities, Incorporated (AUI) and the first chairman of BNL's Physics Department — was awarded half of the 1989 Nobel Prize in Physics.

"We are delighted that Dr. Norman Ramsey has received this award for his fundamental and seminal work in atomic physics," said BNL Director Nicholas Samios. "Norman has had a distinguished career not only as an eminent research scientist but also as an administrative scientist. He was a prime mover for the establishment of both AUI/BNL and URA/Fermilab, as well as serving as the first chairman of the Physics Department at BNL."

The other half of the $470,000 prize was shared by Hans G. Dehmelt, University of Washington, and Wolfgang Paul, University of Bonn, West Germany, for their development of the ion-trap technique to isolate atoms and subatomic particles for study.

The Royal Swedish Academy of Sciences announced on Thursday, October 12, that the three were cited for their "contributions of importance for the development of atomic precision spectroscopy" — research that has allowed science and industry to make more precise measurements and increase the accuracy of their data.

As described by Norman Ramsey in his 1966 Brookhaven Lecture, this group of five made up the entire staff of BNL's Physics Department during January 1947: "The man with the dark hair in the middle is myself as Chairman of the Department and on the right-hand side is [J.B. Horner] Kuper, who then headed the Electronics Section of the Physics Department. My secretary is between us and we had two administrative assistants on the left of the photograph. No other physicists were shown in the picture because, at that time, there were no other physicists in the department."

Specifically, Ramsey was commended "for the invention of the separated oscillatory fields method and its use in the hydrogen maser and other atomic clocks."

The Prize-Winning Science

Ramsey's resonance method using separated oscillatory fields permits the precise measurement of the movements within an atom. His work led to the development of the hydrogen maser, a device in which hydrogen gas is stimulated to emit excess energy in the form of stable and spectrally pure electromagnetic radiation.

As well, Ramsey's work provided the basis for the modern-day timepiece: the cesium atomic clock. The atomic clock keeps time by measuring the movements of the poles of the cesium nucleus, which spins like a top in a magnetic field.

Since 1967, the second has been defined as the time during which the cesium nucleus oscillates a total of 9,192,631,770 times. Accurate to one part in ten thousand billion, this clock is important in navigation and communication, and is used in making physical and astronomical observations.

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DNA Focus of Biology Symposium

In the human body, all the instructions for cell reproduction are contained in the pairs of chromosomes within each nucleus — chromosomes made of DNA. Ideally, DNA is perfect at birth and remains perfect throughout a person's life. In real life, however, DNA can be damaged. It can also be repaired.

The state of the art of understanding "DNA Damage and Repair in Human Tissues" was the subject of Brookhaven Symposia in Biology No. 36. Held October 1-4, the symposium drew about 100 scientists to BNL to share information about DNA lesion measurement in human tissue, the biochemistry and molecular biology of human skin, detection and analysis of human mutations, and DNA damage and repair in human skin, blood cells and internal organs.

A roundtable on risk assessment, based on human DNA damage and repair data, was led by Roger Cortesi (back, left), Environmental Protection Agency. Here, he is joined by members of the symposium organizing committee: (front, from left) Chair Betsy Sutherland, Biology Department; Avril Woodhead, Biology; Richard Setlow, Biology; (back, from right) John Sutherland, Biology; and Steven D'Ambrosio, Ohio State University. Also on the committee was Richard Gange, Harvard Medical School.

Satoshi Ozaki (cont'd)

high-energy physics group, which performed the first experiment at the AGS — a study of particle production. Ozaki was promoted to an assistant physicist in 1961, and, in 1963, he moved up to an associate physicist.

Promoted to a physicist in 1966 and made co-leader of what became known as the Lindenbaum/Ozaki group, Ozaki played a major role in overseeing the design, construction, commissioning and use of BNL's first multi-particle spectrometer (MPS I). He also managed the On-Line Data Facility.

From 1975 until 1980, when it was upgraded and renamed MPS II, the 700-ton MPS I was one of the world's largest electronic bubble chambers and the Lab's major spectrometer facility.

With the success of building such a large experimental facility behind him, Ozaki left Brookhaven as a senior physicist in 1981. He became Director of the Physics Department at KEK, the Japanese high-energy physics laboratory, with the intention of building TRISTAN, a high-energy electron-positron collider having 60 GeV in collision energy.

Taking TRISTAN to Completion

"My motivation for going back to Japan was to get the Japanese high energy physics going," explains Ozaki. "I was fortunate that TRISTAN was approved — there were not a lot of Japanese high energy physicists, and not many had my experience of building a large facility."

Under Ozaki's leadership, TRISTAN construction began on November 19, 1981. In 1983, he was named the Director of the TRISTAN project — which was was completed on time and within budget. After first successfully colliding its beams on November 19, 1986, TRISTAN held the record as the world's highest energy electron-positron collider until the Stanford Linear Collider came on line this spring.

Continuing to oversee TRISTAN's successful operations, Ozaki became the Director of KEK's Accelerator Department in 1987.

In returning to BNL this October, Ozaki will use his high-energy accelerator and experiment-building expertise in turning his attention from particle physics to nuclear physics.

Turning Attention to RHIC

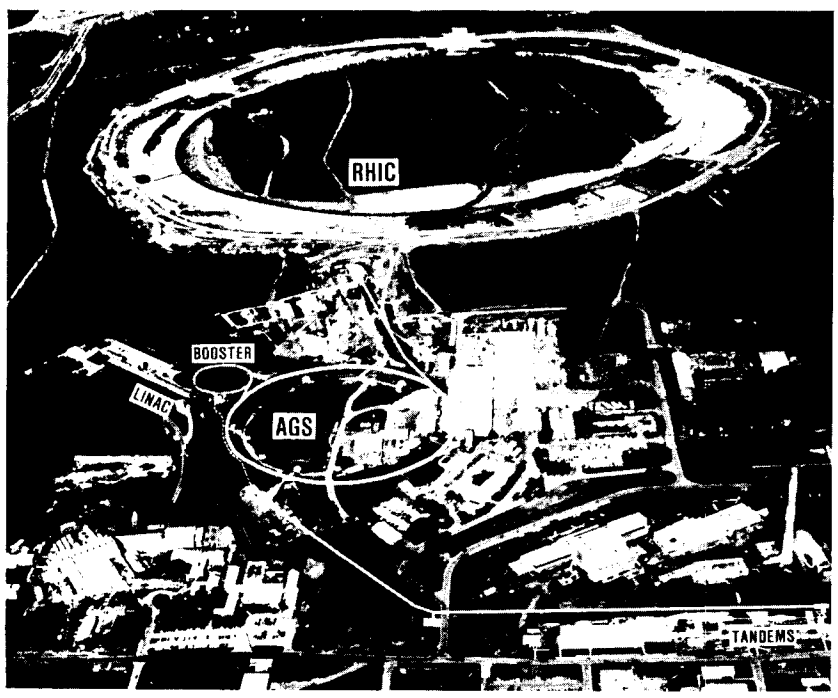
"In the high-energy world, RHIC is unique," explains Ozaki. "Rather than doing physics on a smaller and smaller scale at higher and higher energies, RHIC will open up a new domain by producing a very high energy-density state or a very high nucleon-density state. I cannot even predict all the new physics, exciting phenomena that this machine will produce while taking us back to the origins of the universe."

Ozaki continues, "Three Nobel Prizes in Physics have been awarded for work done at BNL's AGS. But not one of the research topics that won the prize for the AGS — discovery of CP violation, the J/psi particle or the muon-neutrino — was on the original proposal for the AGS."

Concludes Ozaki, "What this means for RHIC is that, in proposing a heavy-ion collider, we cannot foresee all that we may discover. So, here I am back at BNL — to explore the possibilities with RHIC."

— Marsha Belford

The Promise of RHIC



When built, BNL's Relativistic Heavy Ion Collider (RHIC) will be an interconnected set of high energy accelerators for nuclear physics research, incorporating BNL's two Tandem Van de Graaff accelerators, the Booster now under construction, the Alternating Gradient Synchrotron (AGS) — and RHIC itself.

RHIC has been designed to reproduce thermodynamic conditions last seen on earth five to ten microseconds after the Big Bang. By colliding heavy nuclei at ultrarelativistic energies, RHIC will produce nuclear matter at extreme temperatures and at energy or nucleon densities.

While little is directly known about what to expect under such conditions, the fundamental theory of strong interactions — Quantum Chromodynamics (QCD) — predicts that, when heated and condensed so extremely, nuclear matter can overcome the forces that confine quarks and gluons within protons, neutrons and other hadrons.

In becoming "deconfined," these quarks and gluons would undergo a change of phase to a new state of matter, a plasma in which quarks and gluons are more free to move around.

Over the past two years at BNL's AGS and CERN's SPS accelerators, preliminary high-energy experiments using beams of relatively light ions aimed at fixed targets have supported the calculations predicting that high enough temperatures and densities for quark-gluon plasma could be reached in collisions of heavy nuclei.

So, to advance QCD theory, and humankind's understanding of nuclear matter and of the early universe, in 1984, BNL proposed that RHIC be built as a collider to accelerate heavy ions having up to 100 billion-electron-volts energy per beam. As part of RHIC's facilities exist or are under construction as part of the AGS upgrade, only funds for the high-energy collider itself have been requested from the U.S. Department of Energy (DOE).

Established by DOE and the National Science Foundation to give advice on the future of nuclear physics, the Nuclear Science Advisory Committee (NSAC) this summer unanimously endorsed RHIC as the field's highest priority item for construction.

Construction funding for RHIC is expected beginning fiscal year 1991, with the first RHIC experiment to start in mid-1996. — M.B.

Norman Ramsey (cont'd)

Ramsey's Nobel Prize-winning work began in 1949. It evolved from the atomic-beam magnetic-resonance method for gathering information about atomic structure developed by the late Nobel laureate I.I. Rabi, another founding father of AUI and BNL.

Rabi's method relied on one oscillating electromagnetic field to cause electrons within atoms to make transitions from higher to lower energy states, emitting electromagnetic radiation of characteristic wavelengths in the process of lowering the atoms' energy.

Ramsey modified Rabi's method by introducing two separated oscillatory magnetic fields. The result is an interference pattern that gives information about the energy level structure of the atom, the sharpness of which only depends upon the known distance between the two oscillatory fields. In the 1950s, Ramsey advanced his method by using more than two oscillatory fields that were separated in time rather than in space.

An associate professor at Columbia from 1942-47, Ramsey was associated with both the Radiation Laboratory of the Massachusetts Institute of Technology and the Los Alamos Scientific Laboratory, working on the top-secret Manhattan Project to develop the first atomic bomb during World War II.

Recollections of AUI and BNL

Following the war, as Ramsey recalled during the 55th Brookhaven Lecture in 1966, "Insofar as I know, the idea that grew into [AUI and BNL] arose in discussions between Rabi and myself at Columbia University during the period from October to December of 1945."

As Ramsey and Rabi discussed, while physicists at Columbia had made significant contributions to the war effort, they had gotten "little scientific benefit in return." So the two were interested in "how we could best make a nuclear reactor available to Columbia."

As a nuclear reactor was beyond the means of Columbia or any other single institution, 21 major Northeastern research institutions were gathered for a meeting in January 1946 of the Initiatory University Group (IUG) — the predecessor to AUI, the parent of BNL.

Following a stint as IUG Executive Secretary and after coming up with the name for the new laboratory to be built on the site of Camp Upton, Ramsey served as the first chairman of BNL's Physics Department, 1946-47.

Also in 1947, Ramsey began his long association with Harvard University, where he became the Higgins Professor of Physics in 1966. Though at Harvard, Ramsey has spent several summers at BNL doing research, the last in 1967. He also served as an AUI Trustee, from 1951-54.

Ramsey also was a founding trustee of Universities Research Association (URA), overseeing the establishment of Fermilab, and he served as chairman of the URA trustee board from 1966-80.

Following his receipt of the Davisson-Germer Prize of the American Physical Society (APS) in 1974, Ramsey served as APS president, 1978-79.

Indoor Soccer

Starting today, October 20, the Soccer Club is moving indoors, playing Friday pickup games at the gymnasium, beginning at 5:30 p.m.

Club members will continue to play outdoors at the BERA recreation field on Wednesdays at noon. For more information, call Enrique Abola, Ext. 4383.

Computing & Communications — A Way of Life at the CSCF

BNL's Office of Educational Programs is in the process of establishing a new program with Gallaudet University to bring hearing-impaired students to the Laboratory next year for student research appointments either during the summer or during the academic year. The university, based in Washington, D.C., prides itself in being "the only liberal arts university in the world which is designed exclusively for hearing-impaired students."

Although this program is a new step in hiring hearing-impaired employees at the Lab, it's by no means a new concept. At the Central Scientific Computing Facility (CSCF), there are three hearing-impaired computer operators, one of whom — Jeff Levine — first came to BNL through a summer program with the Rochester Institute of Technology (RIT).

CSCF has had a summer program through the National Technical Institute for the Deaf at RIT since 1984. Levine worked at BNL during the summers of 1986 and 1987, and was hired in 1988. His hearing-impaired coworkers and fellow RIT alumni are Enrique Garcia, who started at BNL in 1979, and Robert Cruz, who was hired last year.

"In the general day-to-day work, once they know the routine and everybody's accustomed to communicating with their coworkers, it's really not any great problem," said Tony Natoli, head of operations in the Computing & Communications Division's (CCD) CSCF.

According to Natoli, establishing that routine for Levine and Cruz was made easier by Garcia, who is slightly hearing-impaired and often acts as an interpreter — as he did for this article.

"We're fortunate that we have Garcia," said Natoli. "He was our interface. We're very comfortable working with him, so we were sure we could adapt to working with other hearing-impaired people."

All three hearing-impaired operators — Garcia, Levine and Cruz — are pleased with their jobs at BNL.

"At first, some workers thought that being hearing-impaired meant we can't talk and we can't hear," said Cruz. "They didn't understand what being hearing impaired is all about. I had to prove to them that I can talk some, and that I can also hear some. But now, we work well as a team, and there's really good cooperation."

In some ways, the hearing-impaired operators have an advantage over their coworkers. With a stomp of the foot to get each other's attention, they can easily sign to each other across the room — while the other operators try to shout over the noise of the machines.

In communicating with the hearing impaired, Natoli said that they can often speak well enough to be understood.

"You only have trouble understanding them because their speech patterns are somewhat different," said Natoli. "After a while, you get used to it and it's less of a problem."

Hearing-impaired people also need some time to adjust — although Levine and Cruz can read lips, each person's speech patterns are different and need to be learned.

"The first day at work, I couldn't understand what people were saying, so I had them write it down," said Cruz. "Once I got used to them, I could understand them better."

And, Natoli added, "What you have to remember is not to put your hand in front of your mouth when you talk, or turn away and say something, or chew gum. You also don't want to accentuate anything — that just confuses the issue. Of course, hand gestures help too."

Those hand gestures are adding a new language to the CSCF — signing.

Roger Stoutenburgh

At the Central Scientific Computing Facility: (from left) Enrique (Ricky) Garcia, Jeff Levine and Robert Cruz.

"As the people here have become more and more familiar with working with the hearing-impaired, they've started to pick up signs — everyone knows 'telephone,' " said Natoli.

And there is also a signing course at Suffolk County Community College, which Natoli recommends.

But one sure-fire method of communication always works — writing. At the CSCF, they have a high-tech method: the computer.

"The computer is our right hand in this," said Natoli. "If you really want to get something across to somebody, you put it in writing — I write it on the terminal, and they answer me back on the terminal, so we have a firm way of communicating that's quick and easy to use."

Still, some special accommodations need to be made for the hearing-impaired.

"We are in the process of installing strobe lights, so when the fire alarm goes off, they'll see a flashing light," said Natoli. "We also put a strobe light on the telephone for the same reason, and we installed a TTY telephone device."

TTY is short for teletypewriter. The device provides an important communications link for the hearing-impaired.

"If we want to call Levine or Cruz to come in for overtime, there's no way we can contact them without TTY," said Garcia.

The TTY also allows Levine and Cruz to reach someone at a regular telephone. Using a service called the New York relay center, anyone can call the operator and have their message typed into a TTY machine, or call with a TTY and have the message relayed to a person on a regular telephone.

"If I'm sick, I can use my TTY at home to call the relay center, and they can call my supervisor for me," said Levine.

"There are a few things you have to do to make life a little easier," said Natoli, "but mostly it's understanding. Without the encouragement and support of upper management and other personnel, you couldn't do it.

"You also couldn't do it without the understanding of the user community," added Natoli. "They have to interact with the operators all the time."

"It's not just pure altruism why we're doing this: They're very good employees," said Arnold Peskin, who heads CCD. "It's an idea that works for our mutual benefit."

— Kevin Eber

Leon Petrakis (cont'd)

pursuit of their research, unencumbered now by administrative duties — Bernie concentrating on environmental research in the Atmospheric Sciences Division, and Allen in the Materials Sciences Division."

Of his own new direction, Petrakis said, "I am pleased and happy to be part of the BNL scene. I have long known, of course, of the great intellectual prestige that Brookhaven enjoys worldwide. The department also enjoys great prestige, both within and outside BNL. However, there remains a great deal to be done, if the department is to realize its potential.

"The mission of DAS," explained Petrakis, "is to carry out basic and applied research in energy-related physical, health and environmental sciences, and in mathematics."

He sees two sides to this mission: One is to develop the fundamental knowledge base necessary to understand phenomena that underlie energy technologies, always keeping in mind their environmental implications. The other is to transfer the useful results and knowledge gained to the scientific community and to the industrial and commercial sectors.

The department has many strong points, Petrakis noted. "We have outstanding people and core programs, as well as strengths and capabilities that could impact significantly major national and international priorities."

Today, for example, such priorities include research into global climate change and superconducting materials.

"We are aggressively looking to construct a cohesive program that addresses global climate change," Petrakis said. "I am very enthusiastic because there are some unique capabilities that DAS has in this area. Too, we have some seed money from the Laboratory Director's Exploratory Research Program and hope to position ourselves to play a major role in this area and to gain significant new support from DOE."

Petrakis called DAS's work with superconductors "a significant effort, geared to understanding the fundamental physics involved, which, hopefully, will lead to technological breakthroughs by facilitating or providing leads for useful devices and other applications."

"These are only two of the department's important activities," Petrakis said. "There are several other equally exciting prospects."

In terms of funding, Petrakis is also optimistic. "I think we have good programs of proven worth," he said, "and good rapport with DOE. We are confident that there will be strong, continuing support."

Over the years, Petrakis has been involved with several research collaborations funded by DOE and by the National Science Foundation. Most of his research has focused on using spectroscopic techniques to look at problems in the areas of energy and the environment. He has also done materials research, primarily in surface science and catalysis.

It was a DOE project that brought Petrakis to BNL for the first time, in 1980. He was part of an American Physical Society ad hoc committee doing a study for DOE, to identify research opportunities in coal science for physicists. As part of that effort he spent two weeks at the Lab. "I was impressed at the openness, the whole intellectual climate at BNL," he said. "That comes across strongly, even on a first visit."

Leon Petrakis earned his Ph.D. in physical chemistry at the University of California, Berkeley, in 1961. After a year as a postdoc with the National Research Council in Canada, he spent 1962-63 at the University of Maryland, as an assistant professor of chemistry.

Petrakis's first industrial experience came in 1963, when he joined the DuPont Company as a research chemist at the Experimental Station in Delaware. In 1965, he joined Gulf R&D Company in Pittsburgh, where he held several line and staff positions, becoming a senior scientist in 1985.

After Gulf merged with Standard Oil of California in 1985, becoming the Chevron Corporation, Petrakis moved to California as a research fellow, before coming to BNL.

From 1980-85, Petrakis was an adjunct professor of chemistry at the University of Pittsburgh. He was also a visiting professor at the University of Paris for part of 1985. In his research over the years, he has had many academic collaborations, including the California Institute of Technology, Colorado State University, the University of Delaware, the University of Pittsburgh and the University of Paris.

Since arriving on site in the beginning of the month, Petrakis and his wife Lina, an elementary school teacher now looking for a Long Island position, have been enjoying their living in the Danish House, while they actively hunt for a home of their own. Their son Alexis, an economics major, is working in Chicago. Their move east has made it easier for Leon and Lina Petrakis to visit with their daughter, Ismene, a resident psychiatrist at Yale.

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Camera Club

The Camera Club will hold its monthly meeting at the Recreation Building on Thursday, October 26, at 5:30 p.m. As always, interested nonmembers are invited to attend.

Club members should already have received information about tomorrow's outing to the Vanderbilt Museum and Planetarium in Centerport. The museum grounds should provide a good chance to photograph the fall foliage. Nonmembers are also welcome.

For information, contact Lew Jacobson, Bldg. 134C, Ext. 5193; Ripp Bowman, Bldg. 911B, Ext. 4672; or Anne Baittinger, Bldg. 134, Ext. 5055.

Buswell-Parnas-Luvisi Trio

Chamber Music Trio Featured In Debut of BERA Concert Series

The 1989-90 BERA Concert Series will begin the season on Thursday, October 26, at Berkner Hall, with a performance by the Buswell-Parnas-Luvisi Trio, musicians who have each established well-known reputations in their own right. By pooling their talents, they have also achieved recognition as a virtuoso chamber music group that blends the sounds of violin, cello and piano with a unique style and balance.

Violinist James Buswell, cellist Leslie Parnas and pianist Lee Luvisi are artist-members of the esteemed Chamber Music Society of Lincoln Center, where they appear frequently in the Society's sold-out series at Alice Tully Hall. Last season, the trio gave debut performances at Kennedy Center, the Shriver Hall Series in Baltimore, Friends of Chamber Music in Kansas City, the Cleveland Chamber Music Society, the Colemans Chamber Music Series in Pasadena, and at the University of California, Berkeley.

The trio has also appeared in recital series throughout the world, and has been featured on radio and television broadcasts in seven countries.

The program for the concert will include the Saint-Saens Trio in F Major, Op. 18; Bernard Heiden's Trio (1956); and Trio in E-flat Major, Op. 100 (D.929) by Schubert.

The Buswell-Parnas-Luvisi Trio performance will be the first in a series of five concerts for the 1989-90 series, which will include:

- Christopher O'Riley, pianist, Thursday, November 16.
- Aspen Wind Quintet, Wednesday, December 13.
- The Shanghai Quartet, Monday, February 26.
- David Tanenbaum, guitarist, Wednesday, April 11.

All concerts will begin at 8 p.m. in Berkner Hall. Tickets will be available at the door for $9, general admission; $6, students and those over age 65; and $5 for children under 18.

Block tickets, honored at any concert, can be purchased at the door on the evening of the first concert of the series at $6 each for a minimum purchase of five tickets. They may also be obtained from any of the following:

	Bldg	Ext.
Clemens Auerbach	197C	2914
Jane Bennett	460	5406
Leroy Blumberg	725C	4600
M. Kay Dellimore	185	2873
Howard Gordon	510A	3740
Geoffrey Hind	463	3400
Richard Holroyd	555A	4329
Alfredo Luccio	911A	7699
Benjamin Magurno	197C	5207
Edwin Popenoe	490	3622
Stephen Schwartz	426	3100

Amateur Radio Club

The BERA Amateur Radio Club will meet in the Berkner Hall auditorium on Thursday, October 26, at noon. The agenda includes the progress of the UHF repeater and the amateur radio-licensing classes. Schedules for upcoming meetings and activities will also be discussed.

All licensed radio amateurs employed at the Lab, as well as those interested in becoming licensed, are invited to attend. For more information, contact Andy Feldman, Ext. 3264, or Bob Bacharach, Ext. 7790.

Cafeteria Menu

Sunday, October 22
Grill & sandwich area open 9 a.m. to 2 p.m.

Weekday luncheons during "Apple Week":

Monday, October 23

Soup: Split pea	(cup)	.75
	(bowl)	.95
Entree: L.I. Beef stew		3.10
Entree: Roast turkey w/apple stuffing		3.10
Fitness fare: Fish Gardener		3.10
Carvery: Fresh ham sandwich		2.85

Tuesday, October 24

Soup: Maryland corn chowder	(cup)	.75
	(bowl)	.95
Entree: Pork & cabbage w/apples		3.10
Entree: Fish à la Greg		3.10
Fitness fare: Top round roast beef		3.10
Carvery: Pastrami sandwich		2.85

Wednesday, October 25

Soup: Cream of acorn squash	(cup)	.75
	(bowl)	.95
Entree: Eggplant Parmesan w/1 veg.		3.10
Entree: Pepper steak over rice		3.10
Fitness fare: Chicken Provencale		3.10
Carvery: Hot roast beef sandwich		2.85

Thursday, October 26

Soup: Seafood bisque	(cup)	.75
	(bowl)	.95
Entree: Grilled lamp chop w/apple sauce		3.10
Entree: Glazed chicken w/apple curry		3.10
Fitness fare: Shrimp fettucini		3.10
Carvery: Hot corned beef sandwich		2.85

Friday, October 27

Soup: Black bean	(cup)	.75
	(bowl)	.95
Entree: Baked halibut		3.10
Entree: Beef Burgundy w/noodles		3.10
Fitness fare: Chicken Szechuan		3.10
Carvery: Hot turkey sandwich		2.85

Dinner entrees, served from 5 to 6:30 p.m.:

Monday: Honey-dip chicken	3.10
Tuesday: California burger	2.35
Wednesday: Basket of fried clams	3.10
Thursday: Grilled flank steak	3.10
Friday: Fish & chips	3.10

Saturday, October 28 — Open 9 a.m. to 2 p.m.

Grill special: Reuben	2.85

Next week at the Center Club:
Oktoberfest, October 22-27

Att: TEX Users

The Mathematical Sciences Division in the Department of Applied Science would like to form a TEX Users Group for all those at BNL who use this technical typesetting program on their computers. So if you're a TEX user, or if you're interested in exchanging ideas and information about TEX, contact Fern Simes, Ext. 3969, who coordinates TEX usage on site.

Bowling

Pink League
Pam Mehan had a 199, Renie Rosati 191, Tracy Ryan 179, Debbie Keating 171.

Red/Green League
T. Prach had a 254, J. Morris 240, R. Mulderig 212, R. Sick 207.

White League
Caryl MacDougall had a 195, Mary Grace Meier 183, Gerry Riker 181.

Purple League
Rob Simes had a 236/220/643 scratch series and converted the 4/6/10 split, Vito Manzella had a 213, Fran Brown 188.

Arrivals & Departures

Arrivals

Stephen S. Adler ..... Physics
Bruce L. Murray ..... S&EP
Milan Kumar Sanyal ..... Physics

Departures

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

Bernard F. Belligan ..... Plant Eng.
Henry Boomer ..... Plant Eng.
Anthony Calligeros ..... Plant Eng.
James P. Clint ..... AGS
John Connelly ..... Plant Eng.
Dominic DeAngelis ..... Plant Eng.
Adolph E. Densieski ..... AGS
Richard W. Emanovsky ..... AGS
Richard F. Harrison Jr. ..... AGS
Jacob L. Haufman ..... AGS
Richard E. Hildenbrand ..... AGS
Douglas Hill ..... DAS
John F. Iulo ..... Plant Eng.
Enrique Jimenez ..... Central Shops
John D. Langfeldt ..... AGS
Edward Leitgeb ..... Plant Eng.
Paul V. Mohn ..... Plant Eng.
James A. Morris ..... Plant Eng.
James G. Nekerman ..... Plant Eng.
Douglas E. Paquette ..... Medical
Michael R. Polito ..... AGS
Maureen F. Raia ..... DNE
Robert O. Rasmussen ..... Plant Eng.
Adolf W. Rosenka ..... Central Shops
Seppo E. Valkealahti ..... DAS
Patricia J. Vilardi .... Occ. Med. Clinic

Coming Up

"The Voyager Spacecraft: Results From the Grand Tour of the Solar System" will be discussed by astronomer Bonnie J. Buratti of the Jet Propulsion Laboratory, Pasadena, California, on Monday, October 30, at 1:30 p.m. in Berkner Hall. This overview of the results obtained by the scientific instruments on the two Voyagers will be presented by Brookhaven Women in Science (BWIS), as part of their 10th Anniversary Celebration, Monday-Friday, October 30-November 3.

A luncheon in honor of the speaker will be held the day of her talk, at noon in Room C, Berkner Hall. To make reservations, at $8 per person, contact Carmen Benkovitz, Ext. 4135

During their 10th Anniversary Celebration week as well, BWIS will offer a one-hour workshop, "Me First or You First: The Fine Art of Juggling," a special program not for women only. Aimed at helping women and men better manage their personal and work lives by improving relationships, the workshop will be presented by sociologist Duffy Spencer of Personal Presence, a human relations management training organization.

IBEW Meeting

Local 2230 IBEW will hold its regular monthly meeting on Monday, October 23, at 6 p.m., in the Knights of Columbus Hall, Railroad Avenue, Patchogue. On the agenda are regular business, committee reports and the president's report.

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

Classified Advertisements

Placement Notices

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

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

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

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

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

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

4118. SCIENTIFIC ASSOCIATE POSITION - Requires BS/MS in biochemistry or other related science field. Will label proteins with metal clusters for use in the scanning transmission electron microscope (STEM) and medical applications. Experience with HPLC and PAGE preferred. (Reposting of Job #4116). Biology Department.

Motor Vehicles & Supplies

88 YAMAHA - 2-h.p., $275; Apelco 9900 radar head, no antenna, brand-new, $200. Ext. 3341 or 981-9474.

88 HYUNDAI EXCEL GL - dark blue, 4-dr. sedan, a/t, ac, am/fm stereo cass., mint cond., $6,000. 736-5971.

88 HYUNDAI EXCEL GL - h/b, 3-dr., red, 5-spd., p/w, sunroof, am/fm cass., 16k mi., v.g. cond., asking $4,800. R. Meier, Ext. 4629 or 929-4258.

88 MITSUBISHI PRECIS - h/b, white, 2-dr., 4-spd., am/fm radio, 15k mi., dark blue int., $4,600 neg. Ext. 3753, leave message.

88 VW GOLF - for rent until June '90, suitable for visiting scientist. Steve, 874-3729 eves.

87 CADILLAC DEVILLE - 99k mi., showroom cond., tan/tan, leather, am/fm cass., wire wheels, more, $14,900. John, Ext. 7039 or 929-4450.

87 MUSTANG LX - 5-spd., black, gray int., 24k mi., alarm, orig. owner, mint cond., $9,000 neg. Ray, Ext. 7238 or 472-3622.

87 MAZDA 323-LX - 4-dr., a/t, ac, p/s, am/fm cass., sunroof, $5,000. John, Ext. 3147 or Linda, 924-1038.

86 MAZDA V-2000 PICKUP - w/cap & bedliner, low mileage. Pat, 924-2298 eves.

86 FORD MUSTANG GT - excel. inside and outside, $7,950. John B., Ext. 4028.

86 CHEVY NOVA - silver, 4-dr., 5-spd., 41k mi., $4,500. Jay, Ext. 2172 or 751-0538.

86 CHEVY SPRINT - 2-dr., 5-spd., body damage, $500. Joe, pager 0925 or 728-1859 eves.

86 HONDA SPREE MOPED - w/helmet, $250. 567-5131 after 6 p.m.

85 THUNDERBIRD TURBO - coupe, 50k mi., clean, front-end damage, make offer. Mike, 758-2457.

85 TOYOTA CAMRY LE - ac, stereo cass. w/equalizer, a/t, good cond., asking $5,500. Tim, 924-5282.

84 HONDA MAGNA R30 - like new, 3k mi., extras, $1,200. Keith, Ext. 4241 or 298-2046.

84 ESCORT - red, 4-dr., a/t, ac, new equip., excel. cond. in/out, $2,600 neg. Ext. 4177 or 878-1848 after 6 p.m.

84 OLDS CIERA - 53k mi., ac, p/s, p/w, excel. cond., must sell, asking $3,000. Tom, Ext. 3531 or 632-2245 eves.

See supplement for more classified ads.

Classified Ads (cont'd)

84 OLDS DELTA ROYALE - 2-dr., ac, am/fm, cruise, 41k mi., excel. cond., $6,800. 727-0563 after 4 p.m.

84 MERKUR XR4Ti - a/t, ac, p/w, p/l, new turbo, extended warranty, $7,500. Rich, Ext. 5284.

84 CHEVY CAPRICE - s/w, 9 passenger, p/s, ac, am/fm, high mi., good cond., asking $2,500. 698-8514.

84 OLDS OMEGA - 65k mi., 2-dr., p/s, p/b, ac, am/fm cass., excel. cond., $3,300. Jim, Ext. 4606 or 654-5049 after 6 p.m.

84 EAGLE - 4x4, 4-dr. s/w, a/t, p/s, ac, am/fm/tape, low mi., clean, ask. $4,900; '83 Subaru, 4-dr. wagon, $2,200 neg. Ext. 2604 or 473-2473.

83 NISSAN SENTRA - 5-spd., am/fm cass., excel. mechanical cond., $1,895. 369-9221.

82 HONDA ACCORD LX - ac, p/b, p/s, 5-spd., excel. cond., asking $3,100. 744-4185.

82 SUBARU GL - 4-dr., 5-spd., runs well, 25 mpg, high mi., must see, $1,200 or best offer. Joann, Ext. 4968 or 472-6742.

81 LYNX - a/t, radio, good transportation, needs carburetor, $350. Barry, Ext. 5624.

81 SUBARU - h/b, 2-dr., 4wd, body terrible, motor good, 125k mi., $150. Bob, Ext. 5314.

81 HONDA ACCORD - 5-spd., 4-dr., p/b, p/s, am/fm stereo cass., new brakes, excel. running cond., asking $1,850. Gestin, Ext. 5469 or 3117.

81 SUBARU WAGON - 4wd, am/fm, ac, 83k mi., excel. cond., well kept, serviced, $2,500. David, 345-0326.

80 MAZDA 626 - 2-dr., 5-spd., ac, am/fm, new wheels, $875. Jim, Ext. 7735.

80 MUSTANG - 3-dr., p/s, p/b, sunroof, am/fm cass., runs well, $800. Keith, Ext. 4241 or 298-2046.

80 FORD PINTO - needs engine, $200; '79 Dodge Aspen, 6-cyl., a/t, for parts; '80 VW Rabbit, diesel, for parts. 654-4661 eves. & wknds.

80 BUICK SKYLARK - ac, a/t, p/b, p/s, 4-dr., runs well, absolutely no rust, 112k mi., $850 or best offer. Alan, Ext. 4237.

80 CHEVY CITATION - a/t, p/s, p/b, new am/fm stereo tape deck, 77k mi., excel. running cond., price neg. Ext. 5076 or 744-4615.

80 BUICK SKYLARK - p/s, p//b, ac, 72k mi., 2 new tires, good cond., $1,500. John, Ext. 3821.

79 SUNLINE TRAVEL TRAILER - sleeps 6, new tires, battery & brakes, stands & awning, $4,100 neg., will deliver. Artie, Ext. 4988 or 325-0743.

79 DODGE OMNI - a/t, stereo, good body, runs well, $400. Ext. 4108.

79 CHEVY MONZA - 4-cyl., good cond., $900. Greg, 289-6724 after 6 p.m.

79 FORD TRUCK GRILL - & right door, factory new, $125 ea.; ¾-ton rear, complete, $125. Dick, Ext. 3457 or 589-9103.

78 TOYOTA CELICA - h/b, ac, 5-spd., runs well, $500 or best offer. 369-0533.

78 PONTIAC FIREBIRD - motor A1 cond., very clean in & out, mint cond., must see, asking $2,500. Ext. 5105 or 286-1615.

78 MERCURY COUGAR XR7 - 351 engine, 68k orig. mi., garaged, all power, a/c, am/fm, new tires & battery, mint cond., must see. Bob, 475-2598.

77 DODGE VAN 318, good for parts, motor has bad bearing. Bob, Ext. 4201.

75 GRANADA - a/t, p/s, p/b, stereo, good tires & battery, needs muffler & rear bumper, make offer. Ext. 3569 or 268-9560 after 6 p.m.

74 MERCURY COUGAR - 350 V-8, high mileage, $125. 821-0250.

73 CHEVY - s/w, 350 V-8, fair cond., p/s, p/b, good transportation, $100. Ben, Ext. 7732.

72 DODGE DART - a/t, ac, p/s, p/b, slant 6, 50k mi., well maintained, $750, incl. free car parts. 286-8724.

68 PLYMOUTH VALIANT - 4-dr., a/t, slant 6, 180k reliable miles, orig. owner, $150. 751-3551.

65 FORD PICKUP F250 - 4-spd., good cond., very little rust, truck from Colorado, $1,000. Mark, Ext. 4289.

JEEP CJ-5 - rebuilt V-8, 289 engine installed, new accessories, partially completed, cab/body no rust. George, 286-0641.

TIRES - 13" radials, 4 ea., $50; 14" radials, 4 ea., on red Camaro rally wheels, $125; other sizes available. Ken, 289-8212 after 8 p.m.

WHEELS - 2, 13", for Chevette, $5 ea. Bob, Ext. 4824/0343 or 744-5098.

SNAP-ON TUNEUP CENTER - 3 meters, asking $250; Snap-on brake bleeder, $125; air assisted hydraulic jack, 20-ton, asking $200. 474-5715.

SNOW TIRES - 2, 7.00-16, very good cond., $60; overdrive for Willys jeep, good cond. Roger, Ext. 7518 or 878-8847.

CAR AM/FM STEREO CASSETTE - Sanyo, high power, auto reverse, LOC-DIST switch, used only 2 mo., $30. Ext. 2679 or 472-6922.

Boats & Marine Supplies

25' MORGAN SAILBOAT - great bay boat, draws 2'9" w/ c/b up, all sails & outboard recent. Steve, Ext. 4008.

22' STARCRAFT - center console, aluminum, 70-h.p. Johnson ob., trailer, VHF, depth recorder, asking $4,000. 475-7092.

19' BOWRIDER CRUISER - 1972, w/1976 115-h.p. Johnson, Coast Guard pkg., trailer w/electric winch, $3,000. Frank, Ext. 2314 or 567-5131.

18' FIBERGLASS SKIFF - on trailer, i/o needs work. Don, Ext. 4821 or 286-2267.

Furnishings & Appliances

FURNITURE - living room, dining room & bedroom, plus misc. items, moving, everything goes, all less then 1 yr. old. Dee, 696-8464.

KITCHEN TABLE - good cond., $60. Yannis, Ext. 3182.

SOFA - chair & rocking chair, hardwood frames, w/removable covers on cushions, country fabric, all v.g. cond. Frank, Ext. 3120.

FURNITURE - chair, $30; queen-size bed, $100; coffee table, $30; food blender, $10; more. Steve, 874-3729 eves.

BEDROOM SET - girl's, desk, dresser, hutch, mirror, daybed, hand-painted detail, light pine, excel. cond., $500 neg. Bill, Ext. 7625 or 732-9102.

BOX SPRING - new, queen-size, w/frame, orig. $400, asking $125; Kenmore upright freezer, 15.9 cu. ft., $150. Jutta, Ext. 2671.

DINING ROOM TABLE - Queen Anne, Ethan Allen, w/6 chairs, solid cherry, quality, $1,800. 938-8344.

MAPLE DRESSER - $95; Oriental tea set, $20; tea kettle w/strawberries, $10; hand-carved whale, $15. Kathy, 744-2203.

SCREEN - five-panel, light oak & wood, like new, orig. $75, sell for $30. Kim, Ext. 4461.

MATTRESS - & box spring, twin, excel. cond., $125. Ext. 7716.

AIR CONDITIONER - Climatrol, 2 yrs. old, 5,000 Btu, $195. Ext. 3341 or 981-9474.

FREEZER - upright, 4 cu. ft., excel. cond., $95. 654-4661, eves & wknds.

WASHER - Whirlpool, large capacity, 1 yr. old, $250; dryer, $400/both. Mike, Ext. 2841.

CD PLAYER - portable, w/cord for home stereo, strap, headphones, a/c connector, rechargeable battery, like new, $125. Ext. 4153 or 732-5829.

SPEAKERS - Pioneer, 3-way, 35W, new, $90/pair. 289-0413.

STEREO CABINET - like new, glass top & front door, wood sides, on rolling wheels, $20. Kim, Ext. 4461.

MOVIE PROJECTOR - Super 8mm, w/zoom, sound attachment, $12; tri-fold screen, amber w/oak trim, excel. cond., $12. Ext. 2679 or 472-6922.

COMPACT STEREO - Yorx Q1200, radio, disc, 2x tapes, fast dubbing, speakers, $50; 19" GE TV, w/remote control, $150. Steve, 874-3729.

Miscellaneous

COOKIE JAR - Christmas tree shape, $10; foreign coins, $1; glass antique car, $10; glass train, $20. Kathy, 744-2203.

TICKETS - New York Jets, Sun., Dec. 10, 1 p.m., 4 seats, good section, $22.50/per seat. Michael, Ext. 7909 or 325-0447.

STROLLER/CARRIAGE - Aprica, w/basket, matching boot & storage bag, $50; Strollee car seat, $40; table seat, $8. Ext. 4695 or 744-1917.

SEAFOOD BISQUE - homemade, thick, delicious, fattening, $12/quart. Ruth Ann, Ext. 7774.

Whose Ads Are These Anyway?

The Bulletin's classified ads are intended for use only by active and retired BNL employees, Laboratory guests and visitors, on-site employees of AUI and DOE, and permanent employees of service organizations on site.

Please note:

- Items submitted on **Sales & Notices** forms must be owned or offered by the submitting employee or by members of the employee's immediate family living in the same household.
- **Services** should only be offered by employees or their immediate family members in the same household.
- **Real Estate** ads are more restrictive: Real estate offered for sale or rent must be the property of the employee.

Thus, ads should never be submitted for friends or relatives living outside the employee's home, for charitable organizations, or for commercial enterprises. Real Estate ads may not be submitted for anyone other than the employee.

These rules are necessary in order to ensure that employees' ads run in a timely manner. The complete Classified Advertisement Policy is posted in the Public Affairs Office lobby, Bldg. 134. To obtain a copy, call Ext. 2345.

MICROWAVE - Sharp, $140; king-size mattress frame, $80; garden table, chairs, $50; Gorilla guitar amplifier, $70; plants. Gestin, Ext. 5469 or 3117.

Tools, House & Garden

SNOWPLOW - 8', power angle plow w/all hardware, fits 73-79 Ford, must sell, asking $500. 474-5715.

WOOD STOVE - Vermont Casting, default, make offer; mattress w/built-in springs, for day or bunk bed, 34", $20. Ron, Ext. 4715.

STOVE - Le Petite Godin, coal or wood, $100. Patricia, 736-3384 affter 6 p.m.

CIRCULAR SAW - Sears, 7¼", 2⅛ h.p., w/case & new carbide blade, excel. cond., $40. Bill, Ext. 4986 or 563-1940.

TOPSOIL - also sand & gravel, delivered, $22/yard. 696-6011.

LAWN THATCHER - Jacobsen, 21", good cond., $300; wood or coal stove, w/Chappee fireplace adapter, $225. 727-1342 after 5 p.m.

SNOW BLOWER - Toro, #401, 4 h.p., $100. 588-1251 eves & wknds.

KEROSENE HEATER - Sears, 9,300 Btu, used 2 seasons, excel. cond., $50. Ben, Ext. 7732.

Sports, Hobbies & Pets

ELECTRIC GUITAR - Memphis, red, excel. cond., $75. Bill, Ext. 7625 or 732-9102 after 6 p.m.

TURTLE - w/cage, food & accessories, $15. Susan, Ext. 2168.

WEIGHT-LIFTING SET - steel, barbell/dumbell set, w/bench, 130 lbs., $100. Frank, Ext. 2314 or 567-5131.

CLARINET - student model, $125; advanced Signet, excel. cond., $250. Jim, Ext. 3372 or 821-0250.

CAMERA - Chinon Bellami, 35 mm, compact, used only a few times, orig. $125, sell for $75. Joann, Ext. 4968 or 472-6742.

DRYSUIT - Poseidon, man's large, like new, must sell, asking $500. 474-5715.

GOLF CLUBS - Cannon advanced, graphite driver, 3 through 9 irons, PW, SW, used six times, $275. 265-6238.

PIANO - Lester Betsy Ross, spinet, w/bench, excel. cond., $700. Tony, Ext. 3658 or 929-4903 after 6 p.m.

POOL TABLE - 4'x8', slate, w/extra balls & accessories, good cond., $500. Mike, 758-2457.

Audio, Video & Computers

STEREO - w/CD player, tuner, amplifier, tape recorder, speakers, 70W, 10 mo. old, Magnavox, Pioneer & Scott, $200. Gestin, Ext. 5469 or 3117.

CAR RADIO - Clarion, am/fm, excel. cond., $5. Bill, Ext. 4986 or 563-1940.

DIGITAL KEYBOARD - Yamaha, fm, w/MIDI, SHS-10, owner's manual, like new, $39. John, Ext. 2710.

BOMBER JACKET - rabbit fur, tan, size large, excel. cond., $30. 744-6874.

FUR JACKET - lamb, size 14-16, excel. cond., $55 neg. 475-1826 after 6 p.m.

Lost & Found

LOST - man's gold school ring w/blue stone, in the gym area, Wednesday, 10/11. Dorry Tooker, Ext. 2103.

LOST - print by Rance Hood of Sioux Raindancers, from Room 60, Bldg. 475. Graves, Ext. 4967.

Free

SKI BOOTS - used once, 8 years old, Lange, size 6, red. Ext. 5459.

COCKER SPANIELS - male 4 yrs., neutered, female 3 yrs., both have shots, both housebroken & need loving family. Linda, 981-4738.

CERAMIC FLOOR TILES - loose, used, approx. 100 sq. ft. Bob, Ext. 5286.

Car Pools

MASTIC AREA - paying rider needs ride to and from BNL, 8:30 a.m.-5 p.m. Sharon Edwards, Ext. 2456.

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

Yard Sales

FARMINGVILLE - Oct 21, 9-5, multifamily, 59 Hanrahan Ave. (off Horseblock Rd.), rain date Oct. 22.

SOUND BEACH - Oct 21, 10 a.m.-3 p.m., crafts, video cases, clothing, dining lamp, material, skates, rain/shine, 24 Glenwood Rd.

MANORVILLE - Oct. 21, 9 to 5 p.m., crafts, pillows, dried herbs, wooden cutouts, Schultz Road. 727-5194.

CENTER MORICHES - Sat., Oct 21, 11-4 p.m., romance & children's books, lamps, toys, perfume, etc., 14 Canalview Drive. Leslie, 878-0375.

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

BELLPORT - 3-bdrm. ranch, furnished, l/r, d/r, eik, den, 2 baths, gar., $1,000/mo. + util. Fred, Ext. 3155

BELLPORT VILLAGE - charming, secluded home, steps to golf & tennis, French doors, decks, outside hot tub, delightfully furnished, $1,200 + util. Susan, Ext. 2888 or 286-0422.

BROOKHAVEN HAMLET - 3 bdrm. house on quiet country lane, 2 baths, l/r-d/r w/fp, avail 11/1, $925/mo. + sec., util. Ext. 7607, beeper 0830, or 286-0204.

CENTER MORICHES - 3-bdrm. house, eik, bath, l/r, yard, $650/mo. + util., sec. 878-1115.

MASTIC BEACH - 3-bdrm. ranch, 2 baths, large l/r, den, d/r, eik, fin. bsmt. w/bdrm., pool table, ½ acre, fenced, gar., rent w/opt., $950/mo. + util. or $150,000, avail. Nov. 1. Ext. 3142 or 671-8498.

MASTIC BEACH - 2-bdrm. furn. house, 15 min. from Lab, f/p, fenced yard, $750/mo. 281-4372 or 212-777-3449, leave message.

MEDFORD - 1-bdrm. apt., kitchen, l/r, bath, sun deck, priv. ent., nonsmoker, no pets, no children, $650/mo. + sec. incl. all. 475-7250.

MEDFORD - 1 room + priv. bath and priv. ent., no children, no pets, nonsmoker. 475-7250.

MEDFORD - 1-bdrm. apt., l/.r, eik, priv. ent., deck, walk to shopping, 12 min. to Lab, single or working couple, $600 + elec. Bobbie, Ext. 2456 or 654-1993.

PORT JEFFERSON VILLAGE - 3-bdrms., l/r, eik, bath, nonsmokers, no pets, $950/mo. + util. Ext. 3705 or 689-1877 eves.

PORT JEFFERSON STATION - 2 large rooms + full bath, very private, $650/mo. + util. and sec. 473-8637.

QUIOGUE - furn. studio apt, kitchen, bath, l/r-bdrm. combo, w/w, 30 min. from Lab, nonsmoker, $575/mo., 1 mo. sec. Ext. 4960 or 288-5576.

ROCKY POINT - unfurn. studio apt., one person only, sep. ent., kit., bath, gar., $400/mo. + sec. 928-7993 after 5:30 p.m.

ROCKY POINT - furn. efficiency apt., priv. ent., patio, full kitchen and bath, suitable for one person, nonsmoker, $425/mo. includes util. and cable. 744-8659.

SHIRLEY - 4-bdrm. center-hall Colonial, igp, bsmt, fd/r, eik, fam. rm., den, woodburning stove, gar., all appl., $1,300/mo. or $400/bdrm. 399-1868.

SHIRLEY - 1-bdrm. apt., l/r, eik, full bath, w/w, priv. ent., 15 min. from Lab, $575/mo. incl. util. 281-1840 after 6 p.m.

SOUND BEACH - 2-bdrm. house, large kitchen, l/r, full bath, $650/mo. + util, sec., avail. Nov. 15. 744-5278 after 7 p.m.

SPEONK/WESTHAMPTON BEACH - 2-bdrm. townhouse, 1½ baths, five appliances, swimming pool, cac, 20 min. to Lab, $850/mo. or $139,500. Rich, Ext. 4834 or 588-0507.

CATSKILLS, NY - 3-bdrm. chalet w/sleep. loft, furn., near Hunter & Windham Mts., great for hunting, skiing. Ben, Ext. 3642 or Kay, Ext. 4501.

KISSIMMEE, FL - 2-bdrm. fully equipped villa, 2 baths, full kit., sleeps 6, 2 pools, playground, 2 mi. to Disney, week of April 15-22. John, 924-4262.

HILTON HEAD, SC - 2-bdrm. condo, 2 baths, sleeps six, tennis, golf, beach, pool, Oct. openings, $400/wl. 689-5378.

For Sale

MASTIC - 3-bdrm. ranch, ¼ acre, 1½ baths, den, fin. bsmt., deck, appl., house fan, 3 ceiling fans, shed, fence, near school, shopping, 15 min. to Lab, ask. $115,000. 265-2366 after 6 p.m. wknds.

MEDFORD — 5 bdrm., 2 baths, large country kitchen, l/r, den, + legal 1-bdrm. accessory apt., close to shopping and Lab, $150.000. Bobbie, Ext. 2456 or 654-1993 after 5:30 p.m.

MIDDLE ISLAND - Lake Pointe, 2 bdrm., l/r-d/r, cac, gas heat, wood deck, pool, tennis courts, clubhouse, ask. $81,000, neg. Bob, 924-7316.

ROCKY POINT - 3-bdrm. high ranch, l/r w/brick fp, cath. ceiling, d/r, large kit., 2 baths, bsmt., cac, deck, 2-car gar. w/elec. doors, beach rights, 0.34 acre, $162,900. Kochman, 744-1057.

SELDEN - Village in the Woods, one bdrm. deluxe co-op, upper unit, eik, d/r, l/r, pvt. balcony, asking $75,000. 696-5386.

SETAUKET - 7 rm., 2 baths, custom-designed & built by technical expert owner for own use, 0.86 acre, rare plants, deeded beach rights. 473-4666.

SHOREHAM - 3-bdrm. ranch, ⅓ acre, l/r, d/r, kitchen, partially fin. bsmt., 2-car gar., 24' round ag pool, 10 min. to Lab., low taxes, SWR schools, $139,000 neg. Ext. 5263 or 821-0401 eves.

WEST SAYVILLE - 4-bdrm. high ranch, 8 rms., l/r, d/r, 1½ baths, 2-car gar., ac, ¼ acre, Sayville SD, avail. immed., $152,000. Meade, Ext. 3452 or 499-8816.

ADIRONDACKS - 2 wooded, waterfront properties 20 min. from Lake George; one, 590' on water, $57,000; other, 290' on Schroon River, $55,000; terms avail. for both. Pat or Barbara, 288-5576.

MADERIA BEACH, FL - 1-week time share in Commodore Beach Club, Gulf view, pool, jacuzzi, sleeps 4 adults, asking $5,000, must sell. 474-5715.

Wanted

CHILD CARE - for 6-month-old, 2 days per week, starting January, Rocky Point area, refs. 821-0379.

AIR COMPRESSOR - gas or electric w/tank. Ken, Ext. 3263.

OLD FLOOR SAFE - will gladly pick up. Artie, Ext. 4988 or 325-0743.

DOUBLE STROLLER - for twins. Ext. 3106.

PERSONS TO SKI - or shop Quebec and Montreal, Feb. 16-19, includes trans., meals, lift tickets, tours, hotel. Bea, Ext. 3642 or 732-2472.

UTILITY TRAILER - heavy duty, any condition, cheap. Bruce, Ext. 5316.

SNOW BLOWER - gas powered, self-propelled. Ken. Ext. 3263.

BASEBALL CARD COLLECTORS - memorabilia collectors meet on-site monthly, talk, trade, sell. Write, Tony S., Bldg. 355.

WHEEL RIM - for 1972 Blazer, 6-hole. Richard, Ext. 3254.

RECORDS - 50s & 60s era, 45 & 33⅓ LPs, rock & roll, polkas w/assorted others. Frank, Ext. 3120.

Classified Ad Policy Deadline is 4:30 p.m. Friday for publication Friday of the next week.