

Maurice Goldhaber to Receive Wolf Prize in Physics



Maurice Goldhaber (center) was the guest of honor at a Physics Department reception following the announcement that he will share the 1991 Wolf Foundation Prize in Physics.

Photos on this page by Roger Stoutenburgh.

Maurice Goldhaber, AUI Distinguished Scientist emeritus, will share the 1991 Wolf Foundation Prize in Physics, it was announced earlier this week.

Located in Israel, the Wolf Foundation was established in 1975 by the late Ricardo Wolf to "promote science and art for the benefit of mankind." The Foundation presents annual awards of \$100,000 each, for outstanding achievements in fields chosen from physics, chemistry, medicine, agriculture, mathematics and the arts.

Goldhaber will share the Physics prize with Valentine Telegdi of the Swiss Federal Institute of Technology (ETH), Zurich, "for their separate seminal contributions concerning the nature of the weak interactions, one of the four fundamental forces of nature."

The two honorees will receive their awards from Chaim Herzog, the President of Israel, in ceremonies this spring at the Knesset (Parliament) in Israel.

On learning of this award, Goldhaber said, "Much of the work for which I have been honored was done in collaboration with many students, postdocs and others to whom my thanks are due. To mention some who were or are now at Brookhaven: the late Andy Sunyar; Lee Grodzins, now a professor of physics at the Massachusetts Institute of Technology; Gary Feinberg, now a professor of physics at Columbia University; Bob Hill, now a consultant in Santa Barbara; Joe Weneser; Ed der Mateosian; and last, but not least, my wife Trudy."

In 1957, Goldhaber and his collaborators set out to determine the neutrino's helicity — to decide whether the spin of the neutrino points in the same direction as its momentum or opposite to it. If the spin were opposite to the momentum, the neutrino would have a negative helicity or be "left-handed"; if the spin were in the same direction as the momentum, the neutrino would be "right-handed."

By an intricate experiment involving the decay of the radioactive isotope europium-152m into the stable isotope samarium-152, the

(continued on page 2)

Cruise to Survey Carbon in the Atlantic — From Brazil to the Congo

Earlier this week, after two hectic weeks of prepping and packing, the last of 4,010 pounds of oceanographic research materials and equipment left BNL's shipping dock headed for Vitória, Brazil.

Next Tuesday, Kenneth Johnson, Douglas Wallace and Richard Wilke, all of the Oceanographic and Atmospheric Sciences Division in the Department of Applied Science, will follow. They'll meet up with their instrumentation on board the German research vessel *Meteor*.

After a few days in port setting things up, they'll depart on February 10 for a five-week research cruise. First, they'll hug the parallel at 19° south latitude until they near the coast of West South Africa, where they'll veer north to dock in Pointe Noire, Congo, on March 23.

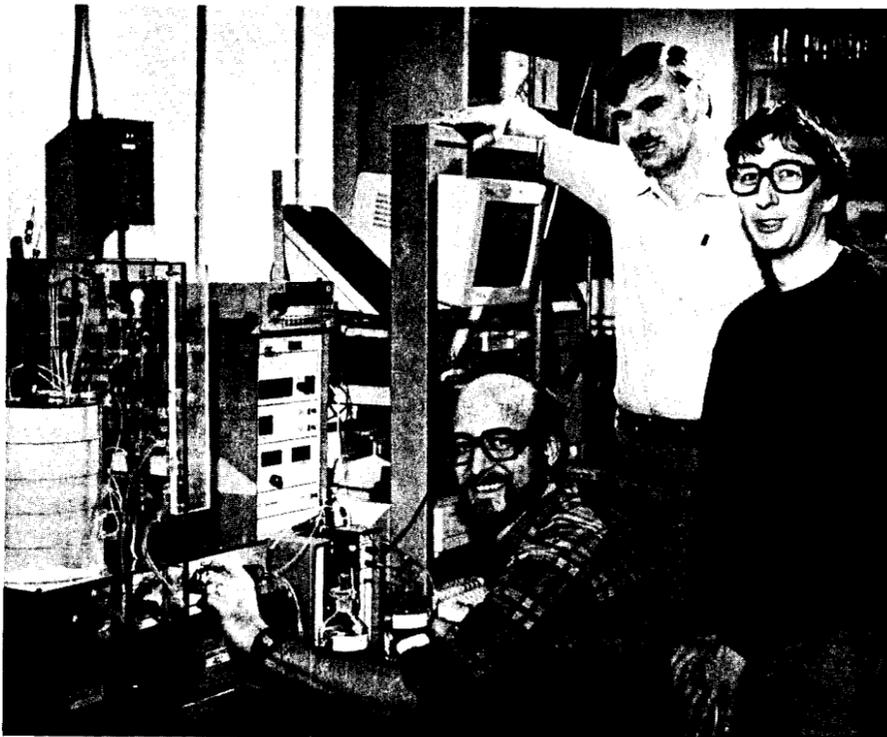
Their cruise is part of a global survey of inorganic carbon in the ocean, which is funded by the U.S. Department of Energy (DOE) and which is taking place during the World Ocean Circulation Experiment (WOCE). In this effort, the BNL team is working in cooperation with groups from Columbia University, Woods Hole Oceanographic Institute and Scripps Institution of Oceanography to complete the survey of all the world's oceans over the next eight to ten years.

Johnson and Wallace are the principal investigators for the BNL part of the experiment. "As a group, we're trying to concentrate on the Atlantic," said Wallace.

Sampling the Ocean

While crossing the Atlantic Ocean, the *Meteor* will stop every 30 nautical miles to allow the researchers to take samples. Each full-depth vertical profile that the BNL team takes will yield about 24 samples.

Some of these samples will be run through the Coulometric Titration Analyzer (CTA), which Johnson designed for measuring the total amount of dissolved inorganic carbon in sea water. With an accuracy of about one part in 2,000, Johnson's



Grouped around the Coulometric Titration Analyzer before it was shipped to Brazil for their upcoming research cruise were (seated) Rick Wilke, (standing, left) Ken Johnson and Doug Wallace.

device should allow the observation of fossil-fuel carbon dioxide (CO₂) buildup in the ocean over repeated ocean surveys.

This is the maiden voyage for the

CTA, as it is for the BNL team as a part of WOCE. At Brookhaven, the researchers are completing another five CTAs for use by other groups

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Exciting Results From First Large-Bore SSC Magnet

Michael Anerella watches as Glenn Jochen, both of the Magnet Division of BNL's Accelerator Development Department, inspects the construction of the superconducting coil of the second BNL-built, 1.8-meter long, 50-millimeter (mm) bore dipole magnet for the national Superconducting Super Collider (SSC) in Texas. It was fabricated following successful testing of the first large-bore SSC dipole, which was also made at Brookhaven, and this second magnet is being tested now.

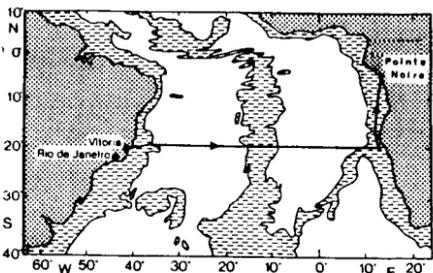
Along with other improvements recently made to the SSC's design to decrease the time needed to commission the huge accelerator, the diameter of the superconductor within the dipole magnets was increased from 40 mm to 50 mm. The increased aperture of the superconductor is expected to improve the quality of the magnetic field that will bend the beam around the 53-mile-in-circumference SSC.

Following the redesign, the Lab's Magnet Division built and tested the first 50-mm-bore test dipole. This short version of the 17-meter SSC bending magnet passed its initial tests last December. At that time, the modified magnet operated at currents that exceeded the design value for the SSC by 12 percent.

At a temperature of 4.35 kelvins (K), the test magnet's first natural quench, which occurs when the magnet's superconductor makes the transition from the superconducting to the normal resistive state, was at a current of 7.50 kiloamperes, which is equivalent to a magnetic



field of 7.5 teslas (T) — significantly above the SSC's design operating field of 6.7 T. Subsequent quenches at 3.35 K resulted in fields equivalent to 8.5 T.



The route of the research vessel *Meteor*.

Cruise

(cont'd)

participating in the experiment.

With other instrumentation, the BNL team will also look at the amount of anthropogenic halocarbon compounds — Freons 11 and 12 — contained in the sea water, as well as its pH content.

Explained Wallace, "We can use the amount of Freon in the sea water to tell how recently the water was in contact with the atmosphere. The more Freon, the more recent the contact."

Carbon content is not so clear-cut. "CO₂ has always been in the atmosphere, and the amount added by fossil fuels is relatively small," Wallace said, "so we can't use it like Freons. On this trip, we're testing our methods of identifying fossil-fuel CO₂ in the ocean, and our special interest is to see if there is a relationship between ocean penetration of Freon and fossil-fuel CO₂ — whether they are evolving in parallel."

In addition to using Freons as tracers of ocean circulation, the BNL team will be trying out a new one — carbon tetrachloride.

"This is a relatively stable, man-made compound, that has been added to the atmosphere since the early 1900s," said Wallace. "Previously, the available man-made tracers have been tritium, bomb radiocarbon and the Freons, all introduced since 1945. But with carbon tetrachloride we should be able to extend our tracer techniques back further in time."

On-the-Spot Analysis

Most of the analysis, said Wallace, "will be done on the spot. We'll try to keep up with the processing on board, then do the interpretation at home."

Once the BNL team's data are finalized, they will be entered into a large common data bank for all WOCE investigators.

"DOE has made a great effort to make sure that measurements by all groups are intercomparable. They've arranged standard reference sea water for inorganic carbon, and a lot of that is coming with us," Wallace observed.

Most of what the researchers are taking with them had to pass through Shipping & Receiving in BNL's Supply & Materiel Division. Wallace praised the group for their cooperation and expertise in packing up the sensitive equipment and making the complicated arrangements for shipping the researchers' necessary chemicals to Brazil. Leading this effort was Harriet Allen, assisted by Izzy Garcia, Pat Jencius and Janet Soper.

Now these materials are on board a very modern scientific vessel, equipped with 20 laboratories for the 28 scientists who are taking this voyage to conduct various oceanographic research projects.

As eager as he is to get started, Wallace cautions, "It's not as glamorous as it sounds. It's hard work, and out in the middle of the ocean, it can get quite tedious working around the clock."

The tedium, however, is more than made up for by the science. That's why Wallace is already looking beyond this cruise to the next one in the WOCE series — from Greenland to Scotland next September. And, since that trip will also be aboard the *Meteor*, where their equipment will remain when they complete this voyage, he's also looking forward to traveling *without* having to pack everything up again.

— Anita Cohen

In Stormy Weather: Dial 282-INFO

Equipment Demo

LeCroy Instrumentation will host an exhibit on Thursday, February 7, from 10 a.m. to 2 p.m., in the lobby of Berkner Hall. LeCroy factory representatives will demonstrate the latest instrumentation in FASTBUS, HV, and digital pulsers and oscilloscopes. They will be happy to discuss individual instrumentation requirements.

Warding Off Worms: Computer Security Workshop



Threatening worms, mischievous hackers and vicious crackers, infections from viruses — these were some of the intriguing topics at the Computer Security Incident Workshop held at the Computing & Communications Division (CCD) on January 23 and 24.

Organized by Peter Pohlig, Safeguards & Security Division, with support from CCD, the workshop was conducted by Computer Incident Advisory Capability (CIAC). It centered on the problems of detecting and recovering from different types of computer-security incidents. For example, worms and viruses constitute automated attacks, while hackers and crackers are human. Hackers break into computers just to see if it's possible; crackers break into computers expressly to damage or change the data.

Among the 46 participants were: (from left) BNL's James Allegue, Michael Losquadro, Vincent Bilms, Fred Hohmann and Mark Israel; instructor Eugene Schultz, CIAC; Pohlig; and instructor Tom Longstaff, CIAC.

Sessions focused on specific PC problems, as well as on those involving mainframe computers that run VMS, UNIX and networks. The workshop ended with a special simulation exercise, allowing attendees to play the role of a system manager deciding security practices, and responding to threats and incidents.

— Photo by Roger Stoutenburgh

HMO Enrollment Now Open

Between now and February 28, eligible BNL employees can either join a Health Maintenance Organization (HMO), change to the AUI Group Medical Insurance Plan administered by Connecticut General Life Insurance Company, choose another HMO, or opt to keep their present coverage.

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

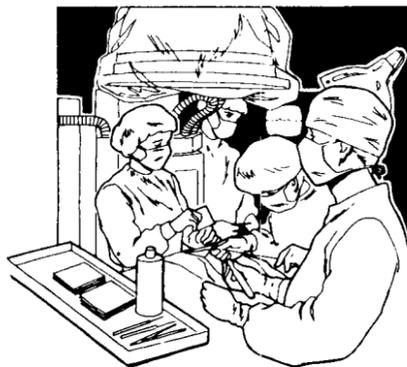
Under the AUI Plan, employees may choose any physician or health-care facility, and fees for services are reimbursed according to plan policies. In comparison, an HMO provides a number of health services on a prepaid premium basis for enrolled members. So, instead of charging a fee for each service provided, the HMO collects the premium fee from members' employers in advance.

That fee entitles the member to most health-care services, such as physician visits, surgical costs, x-rays, hospitalization charges and diagnostic tests. Some HMO services require a small copayment from the member, but most services are covered by the prepaid fee.

Associated Universities, Inc. (AUI) will subsidize the cost of an HMO by paying up to the premium amount it currently pays for the AUI plan. At this time, there will be no charge for employees who enroll in any of the HMO plans, unless they are also covered by the AUI Dental Assistance Plan. Employees who enroll in an HMO and the Dental Plan will pay monthly charges of \$2.08 for individual and \$5.20 for family coverage.

Representatives of the various HMOs will be at Berkner Hall on three consecutive Wednesdays — February 13, 20 and 27 — between 11 a.m. and 1:30 p.m., to answer any questions about their plans. Plan literature, including lists of participating physicians and application forms, will be provided by the HMO representative or can be obtained from Personnel Services, Bldg. 185, Ext. 2877.

To change coverage, employees must obtain the necessary forms from Personnel Services. The deadline for medical coverage changes is Thursday, February 28, with coverage effective March 1, 1991, through February 29, 1992.



Goldhaber

(cont'd)

researchers concluded that the neutrino is left-handed.

This finding advanced the understanding of what happens when an atomic nucleus decays and provided important confirmation of what is known as the V-A theory describing weak interactions. Today, it is known that left-handedness is a property of all particles involved in weak interactions.

Telegdi's research was complementary to Goldhaber's in helping to demonstrate the universality of the weak interactions. In addition, observed the Wolf Foundation:

They have each made significant contributions to the understanding of other fundamental phenomena.

Goldhaber and Telegdi have each contributed broadly to our knowledge of the properties of many nuclei, their energies, their radioactive and electromagnetic decays and their excitations. It is this background of experience and broad understanding of nuclear properties which formed the basis of their experiments on the weak interactions.

The vast body of knowledge regarding nuclei has been essential for applications to medicine (in diagnosis and therapy), to biology, natural science, archeology and geology, as well as in industry and in the exploration for minerals and oil.

These uses of great importance to society have come to be accepted without notice, but it is appropriate to emphasize here these practical consequences and their connection to subtle experiments so removed from everyday life, alongside the significant contribution of these experiments to the beautiful structures describing the physical world.

Born in Austria, Goldhaber earned his Ph.D. in physics at the University of Cambridge in 1936. He came to the U.S. in 1938, to join the faculty of the University of Illinois.

In 1950, Gertrude and Maurice Goldhaber joined BNL's Physics

Department, which he chaired from 1960 until 1961, when he became Laboratory Director. After leaving the Directorship in 1973, he was named AUI Distinguished Scientist. He has been AUI Distinguished Scientist emeritus since 1985, and he has been an adjunct professor of physics at the State University of New York at Stony Brook since 1961.

Goldhaber has served on many of the world's major scientific councils, universities and research centers. He was president of the American Physical Society in 1982, and he is a member of the National Academy of Science and a fellow of the American Academy of Arts and Sciences.

Ducky Memories Of Camp Upton

Our correspondent in Vienna, Eugene Weinstock, sent us this clipping which appeared in the "100, 75 and 50 Years Ago" column of the International Herald Tribune of January 9, 1991. Now in the midst of a two-year assignment with the United States Mission to the United Nations System Organizations in Vienna, Weinstock will return to BNL's Department of Nuclear Energy in September. In the meantime, he never knows where he will find a reminder of home:

1941: Ducking Orders

CAMP UPTON, Long Island — Ducks, for the second time in less than a month, have been the cause of changes in anti-aircraft training here. The first time it was wild ducks, which interfered with firing of anti-batteries. Now, because of the nerves of market ducks on the south shore, anti-aircraft searchlights of the 198th Coast Artillery Regiment will be directed only north and west of the camp. Members of the Long Island Duck Farmers Association said that when the beams swept the skies, the ducks injured themselves by dashing frantically against their wire pens.

— From the New York edition of the New York Herald Tribune

Next BERA Concert to Feature Trio Bell'Arte

The melodious blend of flute, oboe and harpsichord will permeate Berkner Hall on Wednesday, February 6, at 8 p.m., when the Trio Bell'Arte performs the third BERA concert of the 1990-91 season.

Formed in 1985, the critically acclaimed trio has become recognized not only for its chamber music, but also for its repertoire of works from contemporary composers such as Vincent Persichetti, Heitor Villa-Lobos, Arthur Honegger and Scott Joplin.

The trio's three distinguished instrumentalists — oboist Bert Lucarelli, flutist Robert Stallman and harpsichordist Elaine Comparone — have attained international stature for their contributions to chamber music and their solo performances. The members of the Trio Bell'Arte often perform duets or solos during their concerts, to allow the audience to savor each instrument's distinctive voice.

The varied program at the Laboratory will include Georg Philipp Telemann's Trio Sonata in C minor; Deuxième récréation de Musique, Op. VIII by Jean Marie Leclair; Alberto Ginastera's Duo for Flute and Oboe; Domenico Scarlatti's The Cat's Fugue (L. 499, K. 30) and Sonata in G minor (L. 489, K. 12), both for solo harpsichord; Antonio Vivaldi's Trio in G minor; and three ragtime pieces by Scott Joplin: Eugenia (1905), Peacherine Rag (1901) and Elite Syncopations (1902).

Also on the program will be Stephen Gryc's tongue-in-cheek composition called "Six Mechanicals from A Midsummer Night's Dream" being six tedious brief pieces for flute, oboe and harpsichord after the play within a play as presented by Quince, Bottom, Flute, Snout, Starveling and Snug."



Trio Bell'Arte

To enrich the audience's enjoyment of the concert, the artists will intersperse their playing with brief comments about the composers and their pieces.

Tickets for the concert can be purchased at the door the night of the performance. Ticket prices are \$12 for general admission, \$9 for students and people over age 65, and \$5 for children under 18.

Focus on Black Women Achievers

Seventeen black women achievers will be featured in a Smithsonian Institution poster exhibit to be shown in Berkner Hall in celebration of Black History Month. Titled "Black Women: Achievement Against Odds," the show will be on view from Monday, February 11, through Friday, February 15, from 11:30 a.m. to 1:15 p.m., daily. There will be an opening day reception, and refreshments will be served.

The exhibit is sponsored by two BERA organizations — the Afro-American Culture Club and the Art Committee.

Microcomputer Club

The Microcomputer Club has moved its equipment to a new location — Room M8 in Bldg. 480.

The club is grateful to the Department of Applied Science and in particular to Kelvin Lynn, Head of the Applied Physics Division, and David Welch, Head of the Materials Sciences Division, for allocating this space, and to Robert Sabatini for his help in finding this new home.

For more information, contact Irving Montanez, Ext. 2540.

Arrivals & Departures

Arrivals

Mildred A. Laster.....AGS
Ken S. Rehder.....Chemistry

Departures

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

Bayard C. Fenner.....Sup. & Mat'l
Andrew J. Jaisle.....Accel. Dev.
Starr E. Mattone.....Personnel

Cafeteria Menu

Luncheon served 11:15 a.m. to 1:30 p.m., grill open to 3:45 p.m., Cafeteria closes 4 p.m.

Monday, February 4

Soup: Chunky chicken noodle .75/.95
Entree: Barbecue chicken w/1 veg. 3.10
Premier: Stuffed flounder w/crab meat & 1 veg. 3.85
Fitness: Baked beef, tomato & macaroni casserole w/1 veg. 3.10
Carvery: Hot pastrami sandwich 2.85
Grill: Grilled chicken cutlet 2.85

Tuesday, February 5

Soup: Beef barley .75/.95
Entree: Crispy fried chicken w/1 veg. 3.10
Entree: Creamy noodles Alfredo w/1 veg. 3.10
Fitness: Chef's choice w/1 veg. 3.10
Carvery: Hot roast beef sandwich 2.85
Grill: Ham melt 2.65
SPICE: Soup & sandwich special

Wednesday, February 6

Soup: Puree of split pea .75/.95
Entree: Sautéed veal w/mushroom gravy & 1 veg. 3.10
Entree: Baked potato w/broccoli & cheese sauce 1.50
Fitness: Salisbury steak w/1 veg. 3.10
Carvery: Hot Black Forest ham sandwich 2.85
Grill: Burger deluxe 2.85

Thursday, February 7

Soup: Savory Greek lemon .75/.95
Entree: Chef's choice w/1 veg. 3.10
Entree: Chicken fajitas w/1 veg. 3.10
Fitness: Creamy seafood linguini w/1 veg. 3.10
Carvery: Hot corned beef sandwich 2.85
Grill: Spicy sloppy Joe on a bun 2.35
SPICE: Oat bran special

Friday, February 8

Soup: Spicy Manhattan clam chowder .75/.95
Entree: Golden fried Maryland crab cake w/1 veg. 3.10
Entree: Baked fish w/1 veg. 3.10
Fitness: Roast loin of pork w/1 veg. 3.10
Carvery: Hot turkey sandwich 2.85
Grill: Tuna melt 2.85

Surf & Turf With Love At the Center

For Valentine's Day, Thursday, February 14, the Brookhaven Center will serve a special surf & turf dinner from 5 to 7 p.m. The \$10.25 price includes filet mignon, lobster tail, baked potato and broccoli spears.

Postponed: Next Outreach Workshop

The Outreach workshop entitled "Anger, the Misunderstood Emotion: Making It Work for You," which was to have been presented on February 5, 12 and 19, has been postponed.

Next in the Outreach series sponsored by the Employee Assistance Program is the two-part workshop "Caring for Elderly Parents or Loved Ones," scheduled for Tuesdays, March 5 and 12.

More information about the next workshop will appear in the Bulletin of March 1. If you have questions about EAP or its Outreach workshop series, please call Ext. 4567.

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

Software Demo

Representatives of LOTUS Corporation will give a presentation on the latest versions of 1-2-3 on Tuesday, February 5, at 2 p.m. in the CCD seminar room, Bldg. 515.

1-2-3 for Sun workstations supports 3D spreadsheets with file linking and data consolidation, external database access to Sybase through Datalens, macro programmability, and built-in SunOS features such as multitasking, background processing and industry-standard networking.

1-2-3 versions 3.1 and 2.2 support 3D and 2D spreadsheets respectively, with file linking, spreadsheet publishing (Impress and Allways), WYSIWYG interface, DOS and Windows 3.0 compatibility, external database access through Datalens.

Basketball

Week of January 24

Celtics 43		Scram 42	
G. Mack	13	T. Powers	11
B. Turner	12	E. Gregory	10
A. Schwabb	7	J. Duggan	9
R. Schullman	5	V. Cassella	5
L. Mairo	4	M. Davis	4
A. Jones	1	S. Nappi	3
J. Wells	1		
Three-point shots: S. Nappi, T. Powers (3)			
Trailblazers 83		Deep Six 32	
D. Evans	25	B. Brown	16
T. Mayo	22	J. Willi	7
R. Domenech	14	J. Kuchara	5
S. Springston	8	D. Eleazer	2
C. Edwards	7	M. Morrow	2
R. Garapolo	7		
Three-point shots: R. Domenech (3), R. Garapolo, J. Kuchara			
Bulls 50		Runaways 46	
B. O'Brien	14	P. Ratske	12
S. Gilbert	13	J. Desmond	10
M. Williams	13	L. Walcott	8
P. Bruhwiler	6	J. Garrison	5
L. Furenlid	4	J. Belz	4
		R. Wells	4
		G. Shepherd	3
Three-point shots: J. Desmond (2), J. Garrison, S. Gilbert, L. Walcott (2), M. Williams (3)			

Bowling

Red/Green League

T. Prach had a 255, H. Dawson 242/624 scratch series, K. Asselta 225/205/614 scratch, R. Eggert 225/200/611 scratch, N. Parrinello 222, R. Priest 214, L. Jacobson 211, K. Riker 206, E. Sperry IV 204, H. Arnesen 201, D. Jesaitis 200.

Purple League

Ed Sperry IV had a 246/207/633 scratch series, Ron Dobert 207, Lee Grimes 205, Kay Conkling 197/188, Nancy Erickson 189.

White League

Dick Adams had a 234, Jim Goode 225, Norman Fewell 217, Kurt Jellet 209, George Munoz 209, Andy Warkentien 209/200, Ed Beadle 207/202, Gerry Riker 191, Mary Adessi 191, Annamaria Spira 185.

Volleyball

Standings as of January 23

Open League		League I	
Phoenix	31-11	Cannonballs	28-5
GTEAM	30-12	Upfagrabs	25-8
Me & the Boys	26-13	Rude Dogs	17-16
Magnum	25-14	Dinkers	17-16
Dig It	19-23	Network News	11-22
Penetrating		Upsetters	1-32
Vollies	11-31		
Jet Setters	3-39		
League II		League III	
Fossils	30-3	High Volley'em	20-10
Net Wits	26-7	NoKaOe	18-15
Nuts & Bolts	23-10	Good Timers	16-17
Pteropods	19-14	Nutcrackers	15-15
Upton Ups	11-22	Renegades	14-16
Slammers	10-23	Undertakers	13-17
Chungas		Sourcerers	12-18
Revenge	10-23		
Aces	3-30		

Last Chances

Today is your last day to:

• Buy tickets for tomorrow night's 10th Annual Gospel Extravaganza, which gets under way in Berkner Hall at 7 p.m.

Tickets will not be sold at the door, so get them now from: Pauline Dixon, Ext. 5209, Bldg. 197D; April Donegain, Ext. 2459, Bldg. 134A; Fran Ligon, Ext. 3709, Bldg. 185A; or Bruce Penn, Ext. 7213, Bldg. 197C.

• Send a L♥ve N♥te to your Valentine. Send or bring your 15-to-20 word L♥ve N♥te to the Bulletin, Bldg. 134, by 4:30 p.m. today, on a Sales & Notices Bulletin classified ad form marked "Valentine's Day."

You must sign your name and include your life number and extension, but your name will not be printed unless it is clearly part of the message. Copy must be deemed tasteful, and all L♥ve N♥tes will be accepted at the Bulletin's discretion. Only one message per employee, please.

Hospitality News

Jan Rohrer will be the guest speaker at the next Hospitality Committee get-together on Tuesday, February 5, at 9:30 a.m., in the dining room of the Brookhaven Center.

Rohrer will demonstrate how to make paper tote bags for gifts and provide the necessary materials for anyone who would like to make one. Please bring along a small pair of scissors.

Please join us for this interesting presentation. Spouses of Laboratory employees and guests are welcome. Coffee, tea and danish will be served, and baby-sitting will be provided free of charge.

Archery Club

The Archery Club will hold its monthly meeting on Thursday, February 7, at noon in the Seminar Room Lounge of Physics, Bldg. 510. New members are welcome. For information, call Bill Schoenig, Ext. 2377.

Correction

John E. Denes, who observed 30 years of BNL service in January, is with the Computing & Communications Division. In last week's Bulletin, he was inadvertently assigned to the Division of Contracts & Procurement.

BROOKHAVEN BULLETIN

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

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Classified Advertisements

Placement Notices

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

Each week, the Personnel Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Personnel, and, second, for general recruiting under open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people.

Except when operational needs require otherwise, positions will be open for one week after publication.

For more information, contact the Employment Manager, Ext. 2882.

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

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.

NS 8835. BUDGET POSITION - Requires BS in accounting or equivalent work experience and excellent communication skills. Knowledge of Laboratory policies and procedures is essential. Familiarity with MIS inquiry systems, in particular the accounting and budget systems and C/SCSC is highly desirable. Will assist senior-level administration personnel in supporting diversified needs of Department. Must be able to work under minimum supervision. Accelerator Development Department.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

NS 8720. ASSISTANT DIVISION MANAGER - Requires bachelor's or advanced degree in a suitable discipline plus extensive management and administrative experience to assist the Division Manager in the management/administration of all Division functions. Assigned responsibilities include, but are not limited to, safety management, housing, travel, transportation, charter aircraft, dining and conference facilities, and special events. Prior experience should include the following: project management; maintenance, repair and modification management; planning, analysis and control of large operating budgets; and the use of business computer applications. Staff Services Division.

NS 0909. PROJECT PLANNING POSITION - Requires BS degree in an appropriate field and work experience using PERT scheduling techniques within a C/SCSC environment, including work package and earned value concepts for all resource scheduling. Requires the ability to work independently and communicate well in a technical/research environment, and proficiency in computer network techniques, including VAX. Accelerator Development Department.

Motor Vehicles & Supplies

89 T-BIRD - full power, 32k mi., 100k mi. warranty, excel. cond., \$10,500. Jeff, Ext. 5262.

88 FORD 150 XLT - 8' bed, 2wd, fully equipped, \$6,900. George, Ext. 5456.

87 BMW 325 - black, a/t, ac, clean, sunroof, spoilers, 45k mi., 2 snow tires, Alpine radio/cass. player, \$11,900. Warren, 924-7552.

87 HONDA ACCORD - h/b, a/t, ac, immaculate, orig. owner, 44.5k mi., \$7,000. Beth, Ext. 3555 or 472-0706.

86 MITSUBISHI CORDIA - 73k mi., 5-spd., fm/cass., moon roof, ac, new tires, orig. owner, maint. records, \$2,100. Ext. 3815.

85 FORD LTD WAGON - 6-cyl., ac, a/t, 68k mi., excel. cond., \$3,800. Barbara, Ext. 2456.

85 SUBARU - 4-dr. sedan, \$2,800. 286-0466.

84 FORD ESCORT - 53k mi., body good, exhaust system 1 yr. old. Frank, Ext. 2314 or 567-5131.

84 OLDSMOBILE FIERENZA - 2-dr. h/b, a/t, p/s, p/b, am/fm, 2-toned white/beige, 100k mi., runs well, \$600. Phil, 286-1348.

84 CENTURY - s/w, blue, a/t, 62k mi., am/fm, p/s, p/b, ac, overhaul, orig. owner, \$2,200. Jean, 499-8758 eves.

80 CHEVY MALIBU WAGON - well maint., perfect second car, \$800. 924-4206, 9 a.m. to 9 p.m.

80 VOLVO GL - \$2,200; Mitsubiti's transportable cellular phone, \$100 off list price. Mike, 665-4495.

79 MERCURY GRAND MARQUIS - 2-dr., loaded, 72k mi., excel. cond. in/out, \$1,900. Ron, Ext. 2525 or 286-0353.

79 Z28 - 350-4V, 4-spd., Hays clutch, T-top, sub frame, new suspension, 373 Posi, new leafs, orig. paint, clean. Joe, Ext. 2419.

79 BUICK CENTURY WAGON - rebuilt engine, clean in/out, \$1,500. Duke, Ext. 2957 or 289-3586.

78 PLYMOUTH WAGON - \$400; '73 VW 412, recent motor job, new battery, \$400. George Westwater, Ext. 4584.

78 FORD WAGON - new brakes, starter, radiator, 75k orig. mi., asking \$1,500. Rich, Ext. 7129 or beeper 3003.

76 VOGUE MOTOR HOME - 32', new engine & trans., phone, am/fm stereo, sleeps 6, Escort tow car, \$24,000. Tallon, Ext. 5454 or 821-5801.

75 MERCURY COMET - V-8, runs OK, \$75. Hugh, Ext. 4773 or 286-9257 eves.

74 VOLVO - runs, damage to front, good for parts, best offer; '86 Subaru, 80k mi., dependable, good cond., \$2,500. Walter, Ext. 3357 or 368-1650.

73 AMC GREMLIN - 3-spd., 2-dr., good cond., needs little body work, asking \$300. O. Booker, Ext. 3082 or 727-5912.

64 BELAIR - 2-dr., new seats, rug, tires, brakes, exhaust, carb, fuel pump, 6-cyl., blue. Joe, Ext. 3083 or 395-6765.

ROLL BAR - 4", steel, 4 pt., black, for large pickup, \$125 or best offer. Mark, 744-5161.

Boats & Marine Supplies

19' BOWRIDER CRUISER - 1972, w/1976 115-h.p. Johnson, canvas, trailer, w/elec. winch, \$2,500. Frank, Ext. 2314 or 567-5131.

13' BOMBARD - inflatable, 1987, 30-h.p. Mariner, trailer, all access., excel. cond., great scuba diving, must sell, moving, asking \$3,000. 474-5715.

Furnishings & Appliances

COUCH - 86", chair & ottoman, brown plaid, brand-new, end tables, \$500. 298-4398 eves.

COUCH - tan, all leather, 2 yr. old, orig. \$2,600, now \$500, you pick-up. 472-0029.

DINING ROOM - oval table w/3 leaves, 2 armchairs, 4 side chairs, excel., \$500; china closet, \$375, \$800/both. Arleen, Ext. 4519 or 924-6051.

HEATERS - electric, baseboard; Sears air conditioner, 17,000 Btu; more misc. items, all in excel. cond. Frank, Ext. 3120.

FREEZER - 10 cu. ft., upright, 2 mo. old, excel. cond. Joe, Ext. 3397.

REFRIGERATOR - Gibson, works, 2 doors, gold. Bob, Ext. 5286.

WASHING MACHINE - Hotpoint, small, \$25. 281-2573.

WATER BED - super single, semi-waveless, 6 mo. old, all access., asking \$175. 732-0648.

Tools, House & Garden

ELECTRIC SMOKER - for fish, fowl, meat, new; aluminum extension ladder, 24', like new. 325-0447 after 6 p.m.

FIREWOOD - seasoned, hardwood, split, delivered locally, \$130/cord. Glenn, 924-2035.

KEROSENE HEATER - KeroSun Omni 105, \$65. Jeff, Ext. 5262.

STORM DOORS - unused, 36"x80", full glass, 30"x80", crossback, bronze, w/screens, at cost. Janet, Ext. 4049 or 744-8087.

Sports, Hobbies & Pets

BICYCLES - 1020 Ross, man's, 10-spd., \$85; Raleigh 27 Sprite, woman's, 10-spd., \$85. 928-1020.

BIKE - Vista, girl's, 24", blue, 1-spd., \$25. Joe, pager 0925 or 728-1859 eves.

DRYSUIT - Poseidon, man's, large, like new, must sell, orig. \$1,500, asking \$500. 474-5715.

EXERCISE BICYCLE - Volt, ergometer, orig. \$180, sell for \$75. Rich, Ext. 7129.

EXERCISER - Schwinn Air Dyne, air-resistance, excel. cond., \$300. 369-2716 after 6 p.m.

SIBERIAN HUSKY - beautiful, female, spayed, looking for a home. Pam, Ext. 4082.

FIGURE SKATES - woman's, size 9 1/2, \$14; man's, size 10, \$16. Paul, Ext. 4309.

POOL TABLE - & accessories, Brunswick, circa 1945, regulation 2 1/2" slate, chrome corners, showroom cond., asking \$2,500. Darcy, Ext. 3362.

SKI LIFT PASSES - 2, all day for Stratton Mt., \$20/ea.; 1 all day for Maine areas, \$18. Ext. 4727.

SKIS - Kastle/FWI, 170cm, w/Geze bindings, excel. cond., \$240; Kneisel cross-country, 180cm, w/poles, excel. cond., \$80. Les, Ext. 2920.

SKIS - K-2, 170cm, w/poles, good cond. Scott, 722-4821.

SLEDS - Flexible Flyers, \$10-\$20; Mexican hat, \$10; room divider, wood, \$20; children's car seat, \$50. Kathy, 744-2203.

TENT - sleeps 2, room for table & chairs, mosquito mesh, used 4 weeks, orig. \$190, now \$90. Arnim, Ext. 5240.

HAM TRANSCEIVER - Kenwood TS-140S HF, \$425; MFJ 949D deluxe tuner, \$75; AEA PK-232 Pakratt w/IBM-Mac soft., \$200. John, 751-2713.

Audio, Video & Computer

RADIO - 1920, in 30" cabinet, \$25; 8-track player, \$20; cabinet, short-corner, maple finish, \$50. 289-8212.

COMPUTER - C-64, 1702 color monitor, 1541 disc drive, star printer NX10c, manuals, computer desk, \$300. Bill, Ext. 4312 or 281-6498.

COMPUTER MONITOR - EGA & card, \$225; Koss wireless headphones, \$50. Jim, Ext. 4584.

JUKEBOX - Seaburg, needs amp repair, late 50s, early 60s model, \$250. George, Ext. 5456.

TV - 41", Pro Screen, NEC stereo, 3 yr. old, excel. cond., warranty, \$1,700. Jeff, Ext. 5262.

Miscellaneous

AIRLINE TICKET - 1, American Airlines, 1-way, Islip to Miami, Feb. 20, \$99. Nancy, 722-3635.

CONCERT TICKETS - 3, for BERA series, good for any date, \$9/each. Kathy, Ext. 2671.

ENGAGEMENT RING - 1/2-carat diamond solitaire, 14k yellow gold, appraised at \$1,175, asking \$500. Frank, Ext. 5120.

SILVER FOX JACKET - size 10, worn 1 season, \$350. Ext. 3699.

THEATER TICKETS - 2, *Phantom of the Opera*, Sat., May 18, matinee, \$50/each. Ray, Ext. 3680.

Free

CAT - female, gray, affectionate, declawed & trained. Fulong, Ext. 2338.

CLOTHES DRYER - electric, working cond., you carry. Nancy, 427-3133 after 6 p.m.

HAMSTERS - young, healthy, friendly. Judy, 698-4882 after 6 p.m.

SOFA BED - double-size, brown tweed, come & get it. 744-7172.

TURTLES - small, young, legal, friendly, 1 slider, 1 painted, w/pump, tank, island. Christa, Ext. 3988 or 821-5078.

Lost & Found

FOUND - dog, white, 9-mo.-old, shepherd, well-behaved, pretty dog. Tony, 281-4799.

Car Pools

BOHEMIA-OAKDALE-SAYVILLE - need 1 more driver for car pool. Frank, Ext. 2314 or 567-51341.

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 - room for rent w/full use of house, 1/r, kitchen w/dw, d/r, w-d, \$350/mo. Sidney, 286-4028 or JJ, Ext. 5171.

EAST PATCHOGUE - 3-bdrm. house, 1 acre wooded lot w/beautiful garden, badminton court, avail. for full year in Aug. or Sept., \$800/mo. Vera, 286-3903.

EASTPORT - 3-bdrm. house, 2 baths, 1/r, d/r, kitchen, large fam. rm., bsmt., 2-car gar., \$950/mo. incl. yard maint., avail early Feb. Ray, Ext. 2012 or 325-0928.

EAST SETAUKET - 1-bdrm. apt., 1/r-kitchen combo on ground floor, five min. from SUSB, sep. ent., cable use of w-d, no pets, \$600/mo. includes util. Valerie, 751-6091 or 632-6656.

GORDON HEIGHTS - 4-bdrm. house, new appl., new carpet, new paint, \$800/mo. + util. 10 min. from BNL. R. Wilson, Ext. 3900 or 696-6718.

MASTIC - 2-3 bdrm., 1/r, city water, avail immed., \$700/mo. pays all. Jim, 281-2849.

MASTIC BEACH - 1-bdrm. apt., full bath, kitchen, 1/r, priv. ent., \$650/mo. includes all. 281-9793.

MASTIC BEACH - 1-bdrm. apt., full bath, full kit., priv. ent., for single, \$550/mo. pays all. Anthony, 281-2513.

MEDFORD - 3-bdrm. condo, 1 1/2 baths, w/w, all appl., cac, attic, storage, walk to clubhouse, indoor/outdoor pool, golf, tennis. Ext. 3921 or 689-6117 after 5 p.m.

MILLER PLACE - barn apt., 5 rooms, fp, deck, panoramic view of Mt. Sinai harbor, priv., semi furn., near beach, no pets, avail. Feb. 1, \$800/mo. + util. Sue, 928-6368.

PORT JEFFERSON STATION - 3-bdrm. house, eik, 1/r, d/r, screened in porch, partially furn., w-d, cable, fenced yard, \$950/mo. all. 698-5298.

PORT JEFFERSON VILLAGE - 1-bdrm. apt., 1/r, kitchen, full bath, w/w, priv. ent. & parking., no pets or smoking, \$700/mo. includes all. Tallon, Ext. 5454 or 821-5801.

RIDGE - 3-bdrm. ranch, eik, 1/r w/fp, 2 1/2 acres, quiet area, full bsmt., min. from Lab., \$950/mo. + util. Jim, Ext. 4606 or 654-5049.

SELDEN - 1-bdrm. apt., 1st fl., 1/r, eik, priv. ent., avail, immed., 15 min. to Lab, no pets, \$650/mo. incl. util. 698-0576 or 698-8360.

SHIRLEY - 1-bdrm. apt., 1/r, eik, full bath, w/w, single working adult, no pets, \$575/mo. incl. util., 1 mo. sec. Jerry, 281-1840 after 6 p.m.

SOUND BEACH - 1-bdrm. apt., full bath, kitchen-1/r combo, cable, priv. ent., \$650/mo. incl. all; also, 2-bdrm. apt., bath, 1/r, eik, near all, \$675/mo. + elec. Ext. 2671 or 744-3284 after 4 p.m.

WADING RIVER - 3-bdrm. apt., 10 min. to Lab. & walk to beach, 929-4032.

YAPHANK - 4-bdrm. restored Victorian, patio, 5 min. to Lab, large treed property, avail. now, 924-7106 or 924-4872.

YAPHANK - Whispering Pines, 3-bdrm. condo, 2 1/2 baths, carpeted, fin. bsmt., brick patio, gar., pool, clubhouse, no pets, 5 min., to Lab. \$950/mo. + util. 924-0314.

CLAREMONT, NH - 2-bdrm. condo, 40 mi. to Killington, Okemo, Magic Mt., Mt. Sunnape, \$300/wk., \$225/wknd. Frank, Ext. 7749 or 758-7913.

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

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, 2 baths, beach, pool, tennis, golf, Feb. \$250/wk. 689-5378.

WEST COAST, FL - winter retreats, two 2-bdrm., 2-bath houses available, reasonable rates, short term possible. 261-2719 after 5 p.m.

For Sale

BROOKHAVEN - 10 acres industrial property on LIE, terms, tax abatement for 10 yrs. 928-1020.

CORAM - Strathmore East, 4-bdrm. ranch, 2 baths, cath, 1/r, 2-car gar., gas heat, fenced corner lot, \$120,000. Ext. 3791 or 928-7154 after 7 p.m.

MASTIC - 3-bdrm. ranch, 2 baths, 100'x100', bsmt., fenced, skylight, all appl., \$16,000 cash over existing \$100,000 mtg., owner helps w/closing costs. 399-5051.

MIDDLE ISLAND - 3-bdrm. ranch, eik, den w/fp, d/r, 1/r, 1 1/2 baths, screened porch, patio, full bsmt., wooded 1/2 acre, \$149,500. 924-6051.

MIDDLE ISLAND - Lake Pointe, 2 bdrm., 1/r-d/r area, cac, gas heat, wood deck off master bdrm., w-d, all appl., bsmt., pool, tennis, will pay half closing cost, ask. \$69,000. Bob, 924-7316.

RIDGE - 2-bdrm. house in adult community Leisure Knoll, ac, newly carpeted & decorated, walking distance to rec. hall, pool, tennis, lots of extras, 5 mi. to Lab, \$135,000. 744-3366.

SHOREHAM - 3-4-bdrm. ranch, 1/2 acre, eik, 1 1/2 baths, 1/r, d/r, laundry rm., large workshop/storage rm., ig sprinklers, 5 appl., 5 min. to Lab, \$149,500. Ext. 2833 or 744-7172.

SOUTHAVEN - 6-bdrm. house, 3 baths, 2 1/2 car gar., custom built, on secluded 1 acre, 5 min. to Lab, ask. \$210,000. Darcy, Ext. 3362.

WADING RIVER - 3-bdrm. cottage, Riverhead Schools, walking distance to beach, new OHWH, sell, \$90,000 or rent, \$750/mo. Charles Miller, 914-354-4239.

Wanted

LAVA LIGHT - any color, Lincoln Logs, any cond., table tennis, 5'x9'. 289-8212.

CARD TABLE - or equivalent for computer & printer, inexpensive. Helena or Keijo, Ext. 3106.

FEMALE BOWLER - for a congenial team, Thurs. at Shirley. Ext. 2743.

HOUSEMATE - to share 2-bdrm. apt., 10 min. to Lab, \$450/mo. 878-6590.

HOUSEMATE - to share 3-bdrm. house, furn., quiet, renovated, w-d, cable, fenced, 10 min. to Lab, \$375/mo. Henry, Ext. 5110 or 399-6947.

JUNK 1980-81 TOYOTA TERCEL HATCHBACK - for parts, will pay finder's fee. Bill, Ext. 4312 or 281-6498.

MICROSCOPE - high power. Tim, Ext. 7238.

MOTHER & TODDLERS - to meet every Wed., 9:30-11:30 in the Rec. Bldg., all welcome, esp. those w/young children. Terry, Ext. 3009.

SCUBA DIVING CLUB - forming, at least 9 more needed for BERA sanction, any skill level OK. Mark, Ext. 7978.

SKIERS - to ski Windham, Feb. 13, \$41 incl. bus and lift, leave Lab, 5 a.m. Nick, Ext. 3884.

TOYS - in good cond., for donation to BNL mother & toddler group, will collect, Vivienne, Ext., 3011 or Terry, Ext. 3009.

TUBED AUDIO COMPONENTS - working or not by McIntosh, Marantz, ARC, REL, Brociner, also Collins, S-line ham gear. Jim, 474-3766.

Services

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

BRICKWORK - masonry, patios, walks, swimming pools, retaining walls, landscaping ties. Belgian block, 25 yrs., exp., Lab discount. Tony, 698-9274.

CAREER PLANNING - re-entering the workforce, mid-career transitions, resume writing & interview strategy. 689-1877.

CARPET/UPHOLSTERY CLEANING - spot, pet stains, odor removal, auto interior, fabric protector, free est., Lab. discount. Jerry, 924-6019, days.

CARPENTRY - all phases, decks, sheds, etc., seeking small jobs. Kevin, 758-2653.

CERAMIC TILE - installation, bathrooms, kitchens, foyers, etc. repairs, all types of tile, cheap prices, quality work. Patrick, 475-8504.

CHILD CARE - affordable, clean, safe, creative, structured playtime, nutritious meals, before & after school, Middle Island. Staci, 924-2850.

CHILD CARE - mature college student will work around school hours, excel. refs., Bellport area. A. Seubert, Ext. 286-3917 or 286-8563.

CHILD CARE - Calverton, Riverhead area, reasonable rates, refs. upon request. Darlene, 369-9884.

FINANCIAL & INSURANCE PLANNING - free consultation by CFP, tax-saving advice. Bob, 689-7963.

GUTTERS - cleaned. 281-2746.

HANDYMAN - all phases of home improvement, licensed/insured. Ed, 928-7539.

HOUSECLEANING - reliable woman will clean your home, grocery shop, run errands, weekly, bi-weekly, 5 year's exp., refs: Roberta, 736-0416.

HOUSECLEANING - weekly, bi-weekly, experienced, reliable, trustworthy, in business 6 years, reasonable rates. Dina, 924-3915.

KARATE - private or group instruction on martial arts. Kirk, 924-6723.

LANDSCAPE CLEANUPS - trim shrubs, tree work, decking, r/r tie wall, masonry, patios, tile work, cement driveways. Dennis, 395-6055.