



BROOKHAVEN BULLETIN

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2 To 20,000 GeV

Possible Vector Exchange?

Of the three forces that are important at the microscopic level, two, the electromagnetic and the weak, are known to transform like a vector. In the case of electromagnetism the mediating field or "particle" is known to be the photon. In the case of the weak interaction a mediating particle has been postulated but never observed experimentally. It is interesting to speculate that, in analogy, the strong interactions are basically vector in character.

Three experiments have been performed, the first at the Cosmotron designed to observe a dynamical effect in proton-proton scattering if the interaction were due to a simple vector particle exchange, the second at the AGS designed to search for the possible mediating particle (the intermediate vector boson) in the weak interactions. The third experiment, done with cosmic rays, is being done to check a recent result that the zenith angle dependence of very high en-



ergy muons is in disagreement with what is presently known about high energy interactions. One possible explanation is the copious production of intermediate vector bosons in some unknown way.

Dr. Lyle W. Smith of BNL's Accelerator Department will develop this theme in his lecture on January 22. This BNL Lecture will be given in Berkner Hall at 8 p.m.

A graduate of the University of Illinois receiving a doctorate of Physics, Dr. Smith worked in the Office of Scientific Research and Development during the war on theoretical aspects of various chemical warfare. He joined the staff of BNL in September of 1948, and participated in the design and construction of the 3-billion-electron volt Cosmotron and was responsible for many design and operational aspects of this machine. He is at present a Senior Physicist and Deputy Chairman of the Accelerator Department.

Refreshments will be served immediately following the lecture.

Affirmative Action Advisory Committee



Planning for tomorrow's meeting in the Physics Seminar Room, members of the Affirmative Action Advisory Committee discuss procedures. Left to right are: George Bryant, Health Physics; Walter Milian, PE & P; Margaret Hind, Applied Math; Harold Avent, Physics (Chairman); Paul Kelly, PE & P; Ella McLean, Photography; and Louis Remsberg, Chemistry.

—Humphrey

ANS TO Give Awards

The American Nuclear Society, in recognition of the important contributions of the late Mark Mills to nuclear science and engineering, established the Mark Mills Award in 1958. This \$500 cash award and special certificate is given each year to the author who submits the best original technical paper contributing to the advancement of science and engineering related to the atomic nucleus.

To be eligible for this 1969 award, the student must have been registered in a graduate degree program in a recognized institution of higher learning after January 1, 1968. The deadline for papers is July 1, 1969.

Interested graduate students may contact Mr. Octave Du Temple, American Nuclear Society, 244 East Ogden Avenue, Hinsdale, Illinois 60521 for further details and nomination form.

In 1966 the ANS established the Arthur Holly Compton Award in recognition of the late Dr. Arthur Holly Compton, scientist, teacher, national leader and Nobel Laureate. The honor and monetary award of one thousand dollars is made annually to the person who has made an outstanding contribution to education in the fields of science and engineering germane to the interests of the Society. The awardee may be a member of any profession and need not be a member of the American Nuclear Society.

Nominations for the award and supporting documents should be submitted in eight copies to the attention of Mr. Octave Du Temple by March 1, 1969.

French Group At BNL

The next meeting of the group will take place on Wednesday, January 29, at 8:30 p.m. in the small meeting room of the Conference Center.

M. Marcel Blistène, well known movie director, will deliver the first of two lectures on "Jean Cocteau, Poète de l'Écran" (Jean Cocteau, Poet of the Screen). Both this lecture and the second, to be given on March 24, will be illustrated with 16mm movies.

Among M. Blistène's movies may be mentioned "Étoile sans Lumière," with Edith Piaf and Yves Montand, and "Macadam" with Françoise Rosay and Simone Signoret. Blistène is also known as a radio and television director.

A donation of one dollar per person will be collected, and refreshments will be served.

Hospitality News

The next regular Hospitality Committee coffee meeting will be held on Monday, January 27, from 10 a.m. until 12 noon in apartment 6-C. This month's meeting will feature a demonstration of wigs, wiglets, falls, and accessories sponsored by the Village Wig-In of Patchogue.

Bring the children — everyone is welcome to attend.

Scanners Help Identify New Particles



700,000 bubble chamber photographs were scanned in order to pick out 150 photographs that contained events which revealed the new baryon particles. Scanners Milda Vitols, Carolyn Thompson and Patricia Meehan check data at a scanning table. —Humphrey

New Strange Particles Discovered at BNL

Two new sub-atomic particles, each having an isotopic spin of one-half and strangeness of minus two, have been discovered at BNL by an international team of physicists using the AGS and the 80-inch Bubble Chamber. In addition, the existence of a third particle was verified.

The three particles, called Xi-star resonances, are classified as baryons, the group of sub-atomic particles that have the strongest interacting forces.

The discovery of these new baryons doubles the numbers of known baryons having a strangeness of minus two. Strangeness is a term applied to elementary particles that are formed via a strong interaction (baryons and mesons), but which decay via a weak interaction. This relationship was simply noted as "strange" when it was first observed, and it subsequently became known as strangeness.

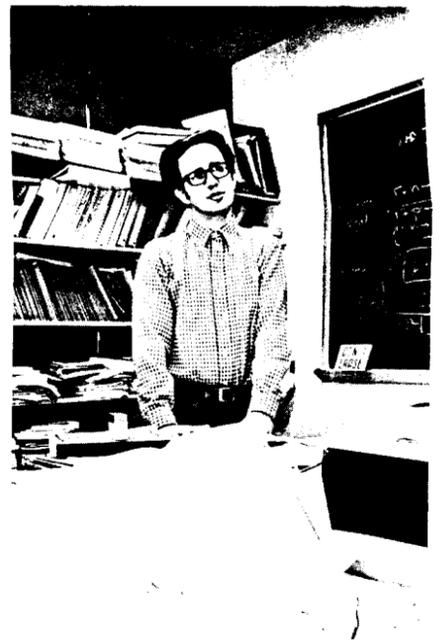
The new discovery provides additional support for the SU(3) theory of elementary particles, more commonly known as the eight-fold way. This theory was first proposed in 1961 by M. Gell-Mann in the United States, and independently by Y. Ne'eman, who was attached to the Israeli Embassy in London at the time. The SU(3) theory is a useful and valuable tool in physics because it arranges elementary particles, including undiscovered particles, into groups having similar properties. The strongest support for the SU(3) theory came about in 1964 when the omega-minus particle was discovered at Brookhaven Laboratory by physicists using the AGS.

The new baryon particles are produced when a negative K-meson collides violently with a proton in a hydrogen atom. In order to produce negative K-mesons, the AGS accelerates protons to 99.9% the speed of light and 33 GeV (billion electron volts) of energy. At this speed and energy, the protons smash into a target of beryllium metal, producing many sub-atomic particles, including K-mesons. These K-mesons are separated from the other unwanted nuclear particles, and then directed into the 80-inch liquid hydrogen bubble chamber where the K-mesons collide with the protons in the nucleus of the hydrogen atom, occasionally producing the baryon particles.

In this experiment, some 700,000 bubble chamber photographs were taken. Each of these was analyzed initially by "scanners," who have been especially trained to view projected bubble chamber film. In the initial scanning a total of 70,000 pictures was selected for more careful analysis, which then reduced the number of pictures to 760. Out of these, only 150 proved to contain events in which the negative K-meson and proton collision produced the final decay into the looked-for new baryon particles.

The experiment and analysis were performed by an international team of physicists, consisting of:

J. Alitti, Saclay France, Visiting Assistant Physicist; V.E. Barnes, Associate Physicist; D. Bassano, Syracuse University, Guest Research Associate; E. Flaminio, Italian physicist affiliated with CERN, Switzerland, who was at BNL as a Visiting



One of the scientists involved in the analysis of bubble chamber photographs that revealed new particles was Dr. N.P. Samios of the Physics Department.

Assistant Physicist; M. Goldberg, Syracuse University, Guest Assistant Physicist; J. Leitner (now deceased) from Syracuse University, Guest Senior Physicist; W. Metzger, Research Associate currently at Ecole Polytechnic, France; D. Radojicic, British Physicist with Oxford University, Guest Associate Physicist; R.R. Rau, Chairman of the Physics Department; C.R. Richardson, U.S. Atomic Energy Commission, former Associate Physicist at BNL; and N.P. Samios, a Senior Physicist on the staff of BNL.

All of the staff members and guest appointments are in the Physics Department of Brookhaven National Laboratory.

Flyers Meet Tonight

Color films depicting CAP Cadet training and CAP search and rescue missions will be shown to BNL Aviation Club members and their guests at the regular monthly meeting at 8 p.m. tonight at the Recreation Building.

Cadet Wings in the CAP deals with the flight training provided for qualified cadet members, and *Daybreak Call*.

Capt. Joseph T. De Paolo of Suffolk Senior Squadron No. 1, CAP, will present the program. Should you wish to learn more about the BNL Aviation Club or the activities of the CAP, you are invited to attend this meeting.

U. of Rochester — BNL Crew



Three graduate students and a BNL employee comprise the lab crew of the Rochester group. They are Jack Sanders, BNL (foreground) and Carol Smith, Bill Hakel and Tony Smith. —Humphrey

Rochester Group Says Thank You

At an after-hours reception in their laboratory last Friday, the University of Rochester groups at BNL made known their appreciation of help given to them during their past and present experiments.

The party, in building 117 "in beautiful downtown Upton" was to recognize the valuable assistance given by personnel of the AGS and various other groups within the laboratory.

The University of Rochester has two counter groups and one bubble chamber group which have been actively carrying on research in high energy physics at the AGS. During the past two years the counter groups have done experiments investigating the decay properties of neutral kaons and, in collaboration with BNL and Cal Tech, have measured the backscattering of pions, charged kaons and protons. They are presently testing a new wire plane spark chamber system.

The party was organized by Jack Sanders of BNL who is assigned to the group with the assistance of Mr. and Mrs. Charles Smith of the University of Rochester. Jeanne Simone, Ken Gray and Jack Haufman of the Columbia group helped in arrangements. Food was prepared by Mrs. Patricia Sanders and Mrs. Amie Beese. Dr. Bob Phillips and Dr. Allan Carrol of the BNL Physics Department lent financial aid to the project.

Members of the Rochester Group are: J. Rosen, B. Gobbi, S. Shapiro, A. Melissinos, F. Lobkowitz, T. Yamanouchi, Y. Nagashima, T. Ferbel, P. Slatery, and H. Yuta,

Mallory Retires As Plant Engineer

Donald E. Mallory, Plant Engineer, retired from the Laboratory on January 10, 1969, after 21 years of service.

Born in Callicoon, New York, he is a graduate of Cornell University, receiving a degree of Civil Engineer. He spent many years with the Long Island State Park Commission developing and constructing the Island's parks and parkways, including some of the initial construction at Jones Beach and the Southern and Northern State Parkways. As Assistant District Superintendent in the Operating Department, he operated seven State Parks.

After four years with the New York City Board of Water Supply, Mallory joined the Corps of Engineers, and was commissioned and assigned to Camp Upton as Assistant Post Engineer on July 2, 1942. He was promoted to Post Engineer a year later, and served here for the duration of the war as a Major, C.E. He was responsible for the maintenance of the Camp, as well as for the construction program including the \$8,000,000 conversion of Camp Upton from a Reception Center to a Convalescent Hospital.

At the end of the war, Mallory joined BNL as Division Head of the Buildings and Grounds Division. Since that time, as Plant Engineer, he has been responsible for the maintenance of the Plant at the Laboratory. Twenty five miles of roads, 400 acres of lawns, \$1,000,000 per year alterations and additions to facilities, and the operation and maintenance of plant utilities all came under his care. His responsibilities also included the Warehousing Group (un-



til it became a separate Division), an automotive fleet and drivers, housing and travel. Later he was assigned the Communications area and the BNL Mail Room. In 1965 the Staff Services Group and the Communications Group were merged into a separate Division.

Mr. Mallory has a New York State license as Professional Engineer and Surveyor, and a Certificate of Qualification from the National Board of Engineering Examiners. He is a member of the Cornell Society of Engineers and the New York State Society of Professional Engineers.

Mr. Mallory and his wife, Lenoir, reside in Sun City, Arizona.

Here and There

Dolores del Castillo

Powell Richards (NED) gave an invited presentation entitled, "Current Status of Short-Lived Isotope Generators," at the Radiological and Medical Physics Society of New York meeting held at the Sloan-Kettering Institute for Cancer Research, January 8.

Maynard Smith (Meteorology), speaking on "Problems of Air Pollution Measurements," participated in a panel discussion entitled "Air Pollution - An airing of some current thoughts on the subject, by three experts from our polluted urban environment." The discussion was sponsored by the New Jersey Chapter of the American Meteorological Society, Princeton, N.J., January 15. Abe Kussman, Air Pollution Meteorologist for the U.S. Weather Bureau at Rockefeller Plaza, and Lou Winkelman, Manager of Plant Engineering for Public Service Gas and Electric in Newark, were the other panelists.

Alden D. Hinckley (Biology) recently presented a paper on "Communities of terrestrial arthropods on the Tokelan Atolls" at a meeting of the Entomological Society of America, held in Dallas.

Sergio H. Ferreira (University of Sao Paulo) recently joined the staff of the Biology Department as a Guest Associate Pharmacologist. He is working with Lewis J. Greene.

Harold H. Smith (Biology) participated in the recent dedication ceremonies of the Plant Sciences Building at Cornell University.

The United States Patent Office granted the following patents to the AEC for inventions made at BNL:

by Jorge Llacer (I & HP-terminated), "Lithium Drifted Semiconductor Radiation Detector," No. 3,413,528, November 26, 1968;

by Richard L. Cassel (Accelerator), "Rectifier for Accelerator Magnets," No. 3,421,071, January 7, 1969;

by Carl H. Distenfeld (I & HP), "Thermoluminescent Tissue Equivalent Dosimeter," No. 3,420,999, January 7, 1969;

and by Panayotis Katsoyannis (Medical) and Andrew M. Tometsko (Medical-terminated), "Process for Joining the A and B Chains of Insulin," No. 3,420,810, January 7, 1969.

USNR Research Co. 3-9

Brookhaven National Laboratory
Upton, New York YA4-6262, Ext. 2910

Drill Schedule

For Quarter Ending March 31, 1969

19 February

Molecular Storage of Biological Information
Dr. Leonard Hamilton
Medical Department, BNL

12 March

The Health Sciences Center, SUNY, Stony Brook
Dr. E.D. Pellegrino
The Health Sciences Center,
SUNY, Stony Brook

19 March

Comparisons of Contemporary Naval Medicine with World War II
Capt. E.P. Cronkite
Medical Department, BNL

Alien Address Registration

During January of each year, every alien in the United States must report his address to the Commissioner of the Immigration and Naturalization Service. Alien address report forms are available at the U.S. Post Office, 2 Center Street.

Coming Attractions

1/22 BNL Lecture - Lyle Smith (Berkner Hall - 8:00 p.m.)

1/24 "The Crucible" (BNL Theatre - 8:30 p.m.)

1/25 "The Crucible" (BNL Theatre - 8:30 p.m.)

1/31 "The Crucible" (BNL Theatre - 8:30 p.m.)

2/1 "The Crucible" (BNL Theatre - 8:30 p.m.)

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NORBERT J. DERNBACH
Public Relations Officer

Letters To The Editor

Dear Sir:

I must join in protesting the opening of the Lab's North tracts to deer hunters. There is more than enough acreage available for those who have a compulsion to snipe at living creatures without allocating Laboratory facilities for such "entertainment."

Susan de Pillis

Dear Sir:

This is in response to Disillusioned's letter regarding deer hunting on the BNL North Tract during the State's open season. I haven't shot anything myself for a long, long time. However, thinning out the deer is all for the best; at least those remaining will have enough to eat, and will not be stunted or starve to death. With the elimination of the deer's natural predators (and who wants wolves hanging around the first grader's bus stop?), man must take their place in preserving the balance of nature.

There are many good books in the Public Libraries on ecology, wild life conservation and so forth, which are helpful in gaining some perspective on the best way to manage this man-scarred earth.

Malthus

Arrivals & Departures

Arrivals

Richard M. Davin..... P.E.P.
Bernard F. Dvorsky..... Accelerator
Joanna Fowler..... Chemistry
Eunice R. Reilly..... Security
George H. Schuette..... P.E.P.

Departures

Kathleen E. Erickson..... Physics
Donald E. Mallory..... P.E.P.
James J. Phelan..... Biology

Service Awards - January 1969

Twenty Year

Cooke, Helen H. Inst. & H.P.
Jackson, Donald H. Security
Kampe, John W. PEP
Kostuk, Sophie..... Chemistry
Tiller, Gerhard..... Physics
Tuttle, Donald R. Physics
White, George S. Biology

Ten Year

Bennett, Gerald W. (On LOA) Accelerator
Berg, Walter R. Mech Eng.
Bergin, Gwendolyn B. Nuc. Eng.
Christoffersen, Bjarne..... PEP
Dilworth, Lawrence G. PEP
Dunn, Arthur PEP
Hummer, George J. Physics
Kelsch, John J. Inst. & H.P.
Kissel, George Nuc. Eng.
Laurie, John B. Photography
Lawrence, Leslie L. Applied Math
Levine, Gerald S. Accelerator
Moger, Harold W. PEP
Nedosik, Richard E. Accelerator
Rebehn, Albert W., Jr. PEP
Reisert, George R. PEP
Sutter, Richard J. Physics
Young, Robert J. PEP

Swimming Pool Schedule

Daily Monday through Friday

12:00 noon - 3:00 p.m.
5:00 p.m. - 9:30 p.m.

Smile!

It Costs Less

A motorist in Pittsburgh made faces at a policeman cruising past in a patrol car. He found himself before a justice of the peace in short order, accused of making faces at a policeman "to the annoyance of the peace officer whereby the public peace was broken and disturbed and the travelling public annoyed."

The motorist was fined \$10 plus \$10 costs.

Smile!

Witchcraft Trial Brings Crucible To Climax



Most of the cast is on stage when the Salem witch trial is in session. Governor Danforth (John Gorr) questions Abigail Williams (Gladys Rech)

during this suspenseful scene in the play which opens Friday, January 24 in the BNL Theater. Photos by Humphrey

**Shop Early!
Buy Your Crucible Ticket Now!**

"The Crucible" performances will be on January 24, 25, 31 and February 1. Tickets may be purchased at any one of the following locations:

- AEC..... Barbara Strohm
- AGS..... Carmen Falkenbach
Mary Smith,
Paula Hughes
- Applied Math..... Nancy Griffen
- Biology..... Irene Steele
- Chemistry..... Tony Nappi
- Cosmotron..... Mildred Eisold
- Directors' Office.. Eleanor Murgatroyd
- HFBR..... Terry Terlizzi
- HIRDL..... Fran Rizzo
- I&HP..... Ann d'Esposito
- Medical..... Amanda Harrison
- NED..... Pat Taylor
- Physics..... Pat Towey, Laura Tinjen
- Reactor..... Audrey Bangel
- Res. Library..... Ginne Lyons
- Hot Lab..... Mary Kinsley

General admission tickets to the *Crucible* are now on sale at the Recreation Office, or may be had from ticket sellers in most Departments. Opening night is Friday, January 24, at the BNL Theatre. Performances will be given on Saturday, January 25 and February 1 as well as on Friday, January 31.



First picture: Rebecca Nurse (Anna Passell) sips a cup of coffee while waiting for her entrance cue. Second picture: "I'm not hurting her!" pleads Mary Warren (Pat Campbell). Third picture: Mary Warren seeks forgiveness from Abigail Williams (Gladys Rech). Fourth picture: "Who is this man?" asks Deputy Governor Danforth (John Gorr). Fifth picture: Ezekiel Cheever (Geoffrey Hind), clerk of the court, takes notes.

Dollars and Sense

Leon Meshel

No Tax Deduction Is Too Small

There is a tax deduction most often overlooked by those who itemize their deductions on Federal Income Tax returns. In these times of rising costs, rising taxes and tight credit, it is a shame to ignore any deduction no matter how small. We here at Brookhaven National Laboratory participate in an excellent medical insurance program for which we pay a very modest premium. One-half of this premium is deductible for the calendar year 1968.

You may tend to forget this deduction when itemizing on Form 1040 because of the deduction limitations relating to "Medical and dental expense" (1% of total income applied to cost of medicine and drugs and 3% of total income applied to remainder of medical and dental expense). BNL's hospital, surgical and major medical coverage generally covers all but the extraordinary expenses so that most employees have little net cost. Even those employees who may be unfortunate enough to be hospitalized for a long period of time have found that their BNL major medical coverage has reduced net cost to a relatively small amount. As a result of this excellent medical insurance policy, many employees have overlooked a small but nevertheless valid tax benefit.

For calendar year 1968 BNL employees are entitled to at least the following medical deduction reportable on IRS Form 1040, page 2, Part IV, line 1:

	Employee Premium Paid in 1968	Tax Deduction (one-half)
Employee only	\$ 30	\$15
Employee with one family member	68	34
Employee with family members	100	50
Student (Addition per student)	30	15

Call For Musicians And Cast Members

Musicians are needed to play in the orchestra for the musical "Gypsy" which will be performed by the BNL Theatre Group on May 16, 17, 23 and 24. We would like to welcome employees and their family members who can play the following instruments: violin, saxophone, viola, oboe, trumpet, bassoon, trombone, French horn, baritone saxophone, flute and piccolo, clarinet and alto sax, clarinet and bass clarinet.

CASTING is almost complete but the following interesting roles have not been cast: **June** as a child - 9 or 10 year old girl with stage presence and a proficiency in singing and dancing.

Tessie Tura - comic character role - buxom, slightly over-the-hill stripper with some singing ability.

Tulsa - male in late teens with proficiency in solo singing and dancing.

Newsboy - teen age boy for chorus singing and dancing.

Young Newsboy - 10 year old boy for chorus singing and dancing.

Anyone who would like to join the orchestra or cast or who desires additional information please send your name, BNL address and phone number, and musical proficiency or cast interest to Mary Kinsley, Hot Lab, 60 Rutherford Drive.

Valentine Dance

The next BERA Lab-Wide Dance to which all employees are invited will be held on Friday, February 14.

There will be dancing and musical entertainment provided by the Tony Forlano Orchestra and vocalist Margie Farrell from 9:00 p.m. to 2:00 a.m.

A group of employees from the Central Shops Division has volunteered its services to do the necessary committee work to insure an evening's pleasure.

As always, there will be refreshments, prizes and fun.

Next Week - More details - **Right Now** - Save the date.

Free Boating Classes

The United States Power Squadrons of District 3 will give free boating classes to the Public, male and female over the age of sixteen, at the following local schools at 8 p.m. starting on the dates noted.

Bellport Senior High School
Monday, January 20

Hampton Bays High School
Tuesday, January 14

Mastic Beach, Wm. Floyd School
Tuesday, January 14

Mattituck High School
Tuesday, January 14

North Babylon High School
Tuesday, January 4

Port Jeff, Vandermuellen High School
Tuesday, January 28

Bay Shore, Brook Avenue School
Wednesday, January 22

Volleyball

The first half is completed except for some postponements. The standings as of January 9 are:

	Won	Lost
Accelerator	19	2
Spikers	15	3
Bubble Chamber	11	7
Chemistry	8	10
Old Timers	8	10
Red	5	13
Blue	0	9
Converts	0	18

The first half winner in the Associated League is the Accelerator team while the determination of the Universities League winner must await the scheduling of a postponed game.

There are openings for additional players on teams playing Wednesdays at 5:15. If interested submit your name to the Recreation Office, Extension 391.

Bowling News

Irma Carl

Purple League

We got over the "bug" and all the teams eventually bowled their final games. S&M in first place and Designers took second.

High Average

Joe Scesny 191

High Scratch Game

Vinnie Felice and John Van Norman 257

High Scratch Series

Joe Scesny 648

High Gross Game

John Van Norman 281

High Gross Series

Joe Cuccia 686

High Team Gross Series

Designers 3061

We started the second half with some good bowling by Vinnie Felice 247-233-621 scratch; Arnold Benson 234-545; Joe Scesny 203-545; Jay Rowland 207 and Bill Brown 203.

Red League

The Fabricators must be slowing down! They took only one game this week. Sandbaggers leading and the Bubble Boys right behind them. Only three 200's bowled: C. Buzzco 205, A. Manger 203 and E. Meier 205. R. Nelson still maintaining his 181 average.

Pink League

Very few of us found ourselves up to par after two weeks away from the alleys. However, we started the second half with ties from 1st to 8th... sharpshooting should take care of this problem next week. Only gals who showed signs of life were Pat Fox and Ann Kirkpatrick with high gross series of 618 and 622 respectively and Kay Trautwein who came pretty close to them.

Green League

First night of first half shows three wins and three losses. High games for the night were: Streier 225, Hayes 217, and Adams and Rhodes 213.

Classified Advertisements

Positions Available

Rigger (1) - Plant Engrg. & Planning
Application Deadline: January 27, 1969

Employees interested in applying for above positions should inform their Supervisor and file written request with Employment Office on or before deadline date.

Autos & Auto Supplies

SHOP MANUAL - 66 Dodge-Cornet & Dart. \$4. Dave, Ext. 2460.

57 CADDY - Has everything, immaculate. \$395. Ext. 481.

MOTORCYCLE - 65 Triumph 650 cc., excel cond. 924-3082, Ext. 445.

CORVETTE COFF - Fiberglass, for Stingray, black. \$100. 924-3082. Ext. 445.

58 ENGINE - '283" complete, trans & radiator, runs well \$100. Ext. 481.

64 RAMBLER - Stan shift, economical and in good cond. \$400. Ext. 2287.

DODGE ENGINE - 426, dual ign, solid lifters, full cam headers, 2-4 bar carbs, alum flywheel, others, very good cond. \$300. Ext. 318.

65 TRIUMPH - Spitfire, green, R/H, new battery, tires & top excel cond. Bob, AT6-1079 after 5:30.

59 CHEVY PICKUP - 1/2 ton, green. Asking \$300. Must keep till Feb 7th. Brownie, Ext. 7382.

65 CORVAIR MONZA - 110 hp, 4 spd. trans, bckt seats, r/h, good tires, good cond. Ext. 2198, 289-0532.

66 VW - White, r/h, snow tires, 28,000 mi. excel cond, very good buy, make offer. JU4-8492 or Ext. 7517.

STATION WAGON - 67 VW squareback, r/h, snow tires, like new cond, a real cream puff. JU4-8492 or Ext. 7517.

65 CHEVY IMPALA - Wagon, 6 cyl, s/t, r/h, excel excel tires, 2 snow/w avail Feb. \$1100. Ext. 2142.

59 STUDBAKER HAWK - V8, auto trans, r/h, eng just tuned up, excel cond, 2 snows, 1 spare, owner leaving country Jan. \$150. Nomura, Ext. 2403.

64 PONTIAC LE MANS - 8 cyl, bckt seats & console, navy blue & inter. blk, r/h, new muff, tail pipe, etc. 281-4528 after 6.

64 RAMBLER AMERICAN 220 - 6 cyl, stan shift. \$400. Ext. 2287 or 878-2702.

67 COUGAR - 3 speed stan, vinyl top. \$1900. Jimmy, 475-9790.

65 CHEVY IMPALA - 2 dr, hd tp, auto trans, excel cond. Must sell. \$1500. J. Carle, Ext. 2582.

65 CORVETTE - 327-300, 2 tops, new paint, 4 new tires, 4 custom mag wheels, must see to appreciate. \$2650 firm. Rosalie, Ext. 2342.

61 CHEVY BEL AIR - 4 dr, auto trans, ps, 6 cyl, new tires & brakes, very good 2nd car. \$250. Andy, Ext. 2797.

62 DODGELANCER - Auto trans, smoothly running eng, well kept. \$250 or best offer. Call me by 3:00 today, Tak, Ext. 7411.

68 SHELBY CCBRA MUSTANG - 350, ps/pb, bckt seats, A-1 cond \$3600. A. Kreisberg, Ext. 7501.

62 FALCON STATION WAGON - Would you believe 1800 miles? Beat up body. \$250. Ed, Ext. 2251.

64 MUSTANG - Blk, r/h, 4 spd, new tires & muffler, 54,000 mi. \$950. Ext. 7112.

56 VW - '66 motor, recent front end, rear shocks, wiper motor, red int/ext, radio, runs fast & well. Asking \$250. Jon, 744-5969.

60 VW SUNROOF SEDAN - Blk, radio, 72,000 mi, good clean cond, good reference available. \$400. G. Kinne, Ext. 7115.

57 CHEVY 283 - Auto trans, new generator, starter, coil & wires, chrome reversed wheels, perf running cond. \$350. J. Salvato, SE2-5941.

65 CHEVY IMPALA - V8, auto trans, ps, 5 good tires, excel cond. \$1350. Hank, Ext. 601, LT9-7785.

61 CLASSIC STATION WAGON - 6 cyl, r/h, auto trans, ps, inspected last month. S. Senator, Ext. 7183.

Boats & Marine Supplies

59 RICHARDSON HARTOP SKIFF - 170 gray marine, new trans, engine overhauled 20 hrs, 25'-8 1/2 beam, sleeps 2. \$1675. 666-3541 after 6.

NYLOPRENE WET SUIT - 3/4" thick, full zipper, 1 yr old, good cond, men's light build. \$25. R. Meyer, Ext. 7934.

16' CANOE-OLD TOWN - Fiberglass, 2 yrs old, 3 paddles, 2 dble blade paddles, motor bracket, removable thwart, excel cond. 751-1660.

Miscellaneous

HAMMARLUND REC SUPER-PRO - Needs work, \$30; ski boots, size 9 Lackner, new, \$15; Yashica movie camera, \$50. Ron, Ext. 2969.

HOT WATER HEATER - 30 gal, gas fired, glass lined, good cond. Wheeler, Ext. 2989, 473-7657.

ROYAL PORTABLE TYPEWRITER - W/zip leather case, can be seen 1-1:30 p.m. at Bldg. 459. Best offer. 281-4528 eves.

FIREPLACE LOGS - Seasoned oak. 18" long, 25/\$1, 12/\$1, 8/1. YA4-3236.

DBLE BED - W/walnut headboard, mattress & box spring. Best offer. Andy, Ext. 2516.

PROPERTY - 1/2 acre in Hamlet of Brookhaven, very close to water. R. Meyer, Ext. 2934, LT9-5757.

BABY CRIB - Good cond. \$15. R. Meyer, Ext. 2934, LT9-5757.

SONY TAPE RECORDER - TC800A, 1 of the best compact size recorders you can buy. \$110. Tak, Ext. 7411, by 3:00 today.

HI-RISER - Can be used as couch or twin beds, separates, good cond. Best offer. Abate, 281-4528 eves.

ELEC APPLIANCES - Broiler, \$5; portable oven, \$8. Don, Ext. 7373, 727-5619.

FUR STOLE - Good cond, style needs alterations. \$25. Don, Ext. 7373, 727-5619.

ICE SKATES - Canadian brand, size 10, never used. New \$20, sell for \$10. JU8-4766 after 6.

SPEED GRAPHIC - Roll film back, 4 cut film holders, film pack, flash att, shade & filters, \$65; Zeiss contact twin lens reflex F 1.5, \$35. Ext. 560.

PONY - 12.2 h, 4 yr old bay gelding, jump/hunt schooled, 100% sound, always in ribbons & championships, owner outgrown, sacrifice. Asking \$500. Ext. 2149, JU4-7050 after 6.

FURNITURE - Sofa, chairs, rocker, table w/4 chairs, refrig, gas stove, dresser. Reasonable. 727-1344.

FIREPLACE WOOD - 325-0567, 727-0271.

GERMAN SHEPHERD PUPS - AKC, whelped 11/27/68, champion grand-sire, grand-dam top obedience winner, males, females, sable, blk-tans. Fran, 298-4263 after 6.

MAYTAG WASHER - Deluxe, perf cond. New \$270, sell for \$87.50. J. Palmer, Ext. 2373, 751-1315.

TENNIS TABLE - Net, 2 bats. \$12. Gunnar, Ext. 7574.

SEASON SKI LIFT PASS - Good thru April '69 at Gray Rocks Inn. Any reasonable offer (won in contest). Bruce, Ext. 2929.

UNITED REFRIG/FREEZER - Very good cond, 9 yrs old. \$75. K. Boggi, Ext. 7503, 585-5756 after 6.

BEAUTIFUL TABLE LAMP - \$5; stroller, \$5; crib w/ mattress, \$15. Phelan, Ext. 2351, GR5-4661.

OLYMPUS PEN FT - W/150 mm lens, 1/2 size SLR 35 mm camera, built-in TTL CDS exposure meter, used 3 times. \$165. Tak, Ext. 7411.

OPERATION CHAIRLIFT - Temp controlled, up, up & away, single or group, free pilotage, will share plane rental tab. Arnold, Ext. 7667.

EBONY COFFEE TABLE - Long, mod, \$25; Spanish iron candlestick lamps, \$20/pr; tea cart, \$10. 744-6433.

FOLDING FIREPLACE SCREEN - \$7.50; cast iron fire basket, \$4; both in excel cond. 929-6261.

DRESS FORM - 2 yrs old. \$10. AN5-7054.

TAPE RECORDER - \$129; orig Silver tone, \$40. AN5-7054.

GIRLS BICYCLE - 20" wheels, coaster brake, handlebar basket, kick stand. \$15. Ext. 7407.

GIRLS ICE SKATES - Child size 3, white, insulated, used 3 times. List \$9.95, asking \$3.50. Ext. 7407.

TICKETS - To BERA's "The Crucible," 1/24, 25, 31, 2/1. Ext. 391 or your Department salesman.

COMPL SET LUDWIG DRUMS - Champagne, 4 drums, 2 cymbals, high hat, cases for everything. \$300. Al, Ext. 2848.

LOT - Southampton, 140x200 overlooking golf course, prime residential. \$7800. 473-0178 eves.

SONY TV - Portable, 6 mos old. \$40. Ext. 524.

NORWEGIAN SKIS - 195 cm (6'5"), Tyrolia bindings, Bottenhoeffter boots (men's), 7 1/2 C. \$40. G. Lellouche, Ext. 7411.

ELEC GUITAR & AMPLIFIER-SPEAKER - Sterling, 2 pick-up tremolobar, strap, case, amplifier, reverb & tremolo, all in new cond. \$65. Ext. 2959, AT6-0295.

GE PORTABLE TV - Wooden stand, very good cond, 1.5 yrs old, owner leaving country. \$55. Nomura, Ext. 2403.

2 HI-FI SPEAKERS - 12", like new, Lafayette SK58A, \$15; E-V-LS12, \$10. M. Tainiter, Ext. 2728.

AIRLINE ACOUSTICAL GUITAR - Very good cond. \$35 or best offer. Mrs. Hull, Ext. 7420.

GARAGE ROLLUP DOOR - 10x10, \$35; 36" Magic Chef stove, combination gas & kerosene, perf, \$25. Ext. 574.

GE IRON - \$2; RCA radio, \$5; folding roll-away innerspring mattress, \$5; maple tea wagon, \$20. Ann, 286-2280.

MASSIVE MEDITERRANEAN BEDRM SET - 2 yrs old, orig \$600, a buy at \$300; refrig, washer, dryer. Marilyn, SE2-7572.

PEERLESS JET DEEP WELL WATER PUMP - 1/2 hp. Ext. 423.

LP GAS HOT WATER HEATER - Rheems glass lined, new, still in crate. Torre, Ext. 423.

GAS RANGE - 42", 4 burner plus oven, immaculate. \$40. Kazdin, Ext. 7576.

JUDO SUIT - Size med, new cond, \$5; wireless intercom, 110 AC, \$15; 6M converter pwr supply, \$20. Ron, Ext. 2969.

GIRLS BICYCLE - 16" w/solid tires, excel cond. \$8. Gil P., Ext. 2204.

GE STEREO HI FI RADIO PHONOGRAPH - \$50; Zenith portable TV, \$20. Beckurts, Ext. 531.

SKI RACK - Barrecrefters, attaches to trunk lid, for conv or sedan. \$10. Chen, Ext. 2419.

24" TV - Needs tuner repair/alignment but usable as is. \$15. Ext. 7213.

RECORD CHANGER - Dual 1009 w/base & ADC MkII stereo cartridge. \$50. P. Craig, Ext. 7396.

MATTEL POWER SHOP - For a budding junior carpenter. \$10. Joan, Ext. 7332.

BOYS' ICE SKATES - Size 6, \$3; ladies' shoe boots, size 9, blk w/fur trim, \$2; baseball shoes, size 6, \$2; left hand catchers mitt \$2; left hand fielder glove, \$2. Ext. 567.

ROLL AWAY COT - Not mattress, \$2; 2 elec irons, 1 steam & dry, \$2 ea; square waffle iron, \$2; man's elec shaver, \$5; 2 basketballs, \$2 ea. Ext. 567.

MOBILE HOME - 1963, good cond, must sell, Sacrifice, \$2800. 878-2224 after 6.

KOFLACH SKI BOOTS - Champion White Star, size 6 1/2, new last season. Cost \$45, sell for \$25. AT6-1046.

Houses

PATCHOGUE - Beautiful 2-3 bedrm ranch on lg landscaped lot, finished basement, nice area, extras. \$16,500. 475-0549.

CENTER MORICHES - 6 rms, 3 bedrms, lg din rm, 1/2 acre in village, convenient to shopping, schools. \$18,000. 878-1743.

N. PATCHOGUE - Well built custom ranch, w/w carpet, beautifully finished basement, den, att garage, fully landscaped corner lot. nice area. AT9-2382.

KINGS PARK - 6 rm ranch, furn, landscaped, h/w heat, sun deck, 140x140, 5 yrs old. 26K. AN5-7054.

PT JEFFERSON STATION - 4 bedrm hi-ranch w/ finished den, 2 car garage, 1/2 acre. HR3-7264.

ROCKY POINT - Wooded 1/2 acre, 2 yrs old, 8 rm custom ranch, 4 bedrms, 2 baths, dble garage, 5 new appliances. 744-5309.

BELLPORT - Maple Ave, 3 bedrm ranch, lg liv rm, eat-in kitchen, full basement, oversized garage, deep beautifully treed lot. Asking \$16,900. Ext. 572.

BELLPORT VILLAGE - 2 yr old spacious colonial near everything, 4 bedrms, 2 1/2 baths, fam rm, din rm, dble garage, basement, deck, wooded, 0.8 acre. \$31,000. AT6-8724.

SHIRLEY - 3 bedrms, 2 baths, very lg rec rm, garage & basement, w/w carpet in liv rm, steps, balcony & foyer, breakfast bar. \$16,500. Abate, 281-4528 eves.

For Rent

3 BEDRM HOUSE - Rocky Point, fully furn, 1 1/2 baths, avail 1/169-6/30/69. \$125, no util. YA4-3082.

N. SHIRLEY - 4 rm mod apt & bath, util incl, near Lab. 924-6118.

FURN APT - Shirley, pvt bath, pvt entrance, good for 1 or 2, 5 min to Lab, close to shopping. 281-5341 after 6 p.m.

3 BEDRM HOUSE - Yaphank, unfurn. \$125/mo, no util. 878-1110.

3 RM APT - Center Moriches, suitable for 1 or 2, heat & elec incl, partially furn. \$105. 878-0792, 878-1969.

Wanted

BIG OVERSEAS TRUNK - In good cond. Eigh, Ext. 524.

BENCH GRINDER ARBOR - 1/2" shaft (have 6" grinding wheels & motor). Ext. 2983, AT6-9158.

TO RENT - 2 bedrm apt or house in Blue Point-Bayport area Ext. 7453.

BABY CARRIAGE - Collapsible, decent cond, not fancy, inexpensive. Chase, Ext. 386, 878-2524.

TYPING - Term papers, etc., to do at home. Claire, Ext. 2131

AVON LADY - To ring your bell & fill our orders. J.E. Smith, Ext. 2797.

PRE-SCHOOLERS & MOTHERS - For new coop nursery school in Mastic Beach, 10 min from Lab. \$15/mo. Levine, 878-0248, 281-6750.

COIN BANKS - Made of tin, paper, iron, white metal, porcelain, brass or glass. S. Roe, Ext. 2700.

MOTHERS - Of children ages 2 1/2-4, to join active play group in Yaphank-Shirley-Bellport area. Mrs. Felder, 924-8544.

US SILVER COINS - Any amt, will pay 10% over face value. Arnold, Ext. 7667.

HOME FOR PUPPY - 4 mos old, part collie, has 1st shot, house trained. 585-2391.

TO RENT - Apt or bungalow, 2/1/69. Mrs. J. Reac, 234-5031

PLAYPEN - 924-6972.

BOY SCOUT & CUB SCOUT UNIFORMS - All sizes, reasonable cond; camping equipment; for Pack & Troop 265, Hampton Ave School. E. Hendrie, AT6-8412.

GIRLS ICE SKATES - Reasonable, size 3. G. Baer, 475-0037.

CHEST - For child's room. Dick, Ext. 7229.

EXPERIENCED TARGET SHOOTER - W/22 cal rifle for indoor competition in Long Island Industrial League. Roy, Ext. 2404.

BABYSITTING - Will babysit for working mothers in my home, N. Patchogue. M. Koslosky, 475-7750.

WHEELS - For 4 wheel drive jeep. 281-8274.

Carpools

WOULD LIKE TO JOIN - Carpool from Center Moriches. Andy, Ext. 2797.

DRIVER WANTED - To complete carpool from Bayport. Lee, Ext. 566.

PAYING RIDER - Wants ride to & from Bay Shore, Tues, Thurs. Tharp, Ext. 322.

WOULD LIKE TO START - Or join existing carpool from S. Sayville area. J. Di Siena, Ext. 2328.

Lost & Found

LOST - Silver tie clasp. A. Auskern, Ext. 2712.

Classified Ad Policy

Deadline is 12 noon Friday for publication the following Thursday.

- The Brookhaven Bulletin classified section may be used only by active and retired Laboratory employees.
- All items for sale or rent must be the advertiser's property.
- Persons listing houses, apartments, or rooms for sale or rent, do so with the understanding that these must be available without regard to race, creed, color, or national origin.
- Ads for material acquired for resale in association with a full or part-time business cannot be accepted.
- Ads should be restricted to 20 words or less and typed

- or printed on the form provided, and must bear the employees signature.
- Ads not carried because of space restrictions will be held for publication in the next issue.
- Ads are run only once and must be resubmitted if they are to be repeated.
- Firearms offered for sale or trade may not be brought on site.

For Sale: Auto & Auto Supplies For Sale: Houses Carpools
 For Sale: Boats & Marine Supplies For Rent Check the heading applying to your ad.
 For Sale: Miscellaneous Wanted Print or type your ad in 20 words or less.

(Name & Phone No. To Call)

If this ad concerns housing for sale or rent, such housing is available without regard to race, creed, color, or national origin.

Employee's Signature..... Life No..... Ext.....

Send to: Brookhaven Bulletin, 40 Brookhaven Avenue