

Ancient Man & Modern Science

Nakht, a young weaver of Thebes who died over 3000 years ago, is involved in a research project just getting underway at Brookhaven. At least, one of his teeth is involved.

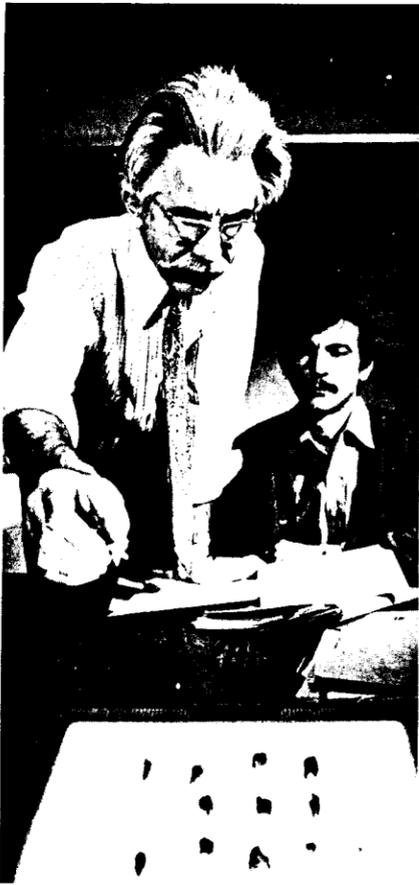
Nakht's mummified body was formerly on display at the Royal Ontario Museum. Due to a resurgence of interest in paleopathology, the study of ancient diseases in man, his mummy was autopsied last year in Toronto in the presence of over 40 scientists from the U.S. and Canada. Among other things, this autopsy revealed that he had perfect teeth.

Nakht's tooth is one of 13 ancient teeth that Louis Stang, a chemist in DAS and principal investigator, has acquired for analysis with a technique called charged-particle X-ray excitation in a new dental analysis project. Included in this first group is a tooth from a young woman, about 25, who died over 2000 years ago, and eleven more from the remains of people living circa 1100-500 B.C. found at the Dira Abu el-Naga site in Egypt.

The purpose of the project, the analysis of teeth from living donors as well as the ancient teeth, is to see whether teeth provide useful information on the effect of environmental pollution on man. The literature search, so far, indicates that a large number of elements find their way into teeth and accumulate there. Stang hopes that, with a sufficiently sensitive procedure, teeth might become a good indicator of uptake of trace elements.

He asks, "what is 'normal' for the concentration of any given element in the human body? Since world-wide environmental pollution presumably did not exist thousands of years ago, the teeth of ancient man might serve as a reference standard."

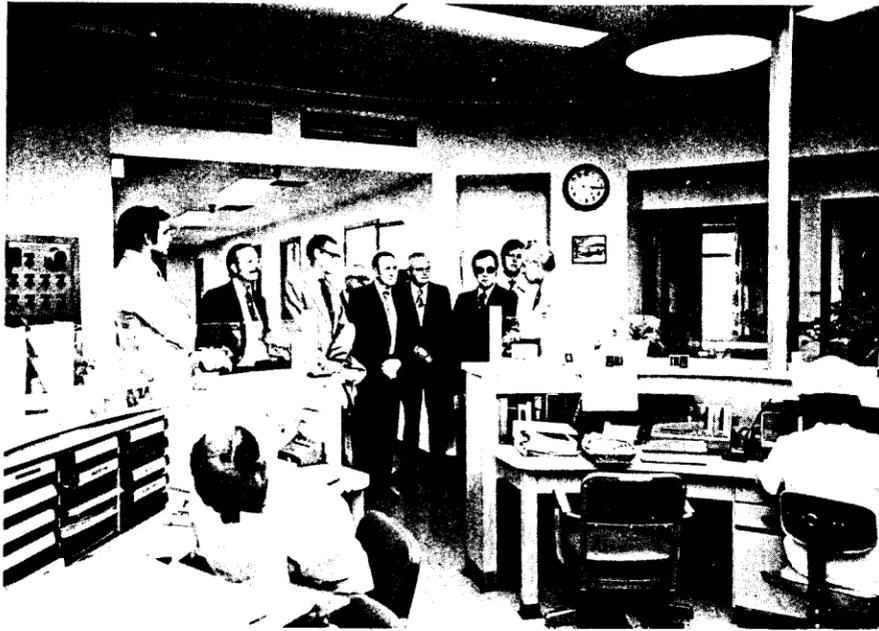
In the procedure, a tooth will be dissolved and a fraction of the solution put in the



Louis Stang (foreground), principal investigator, and William Sachs, chemist, who are initiating the Dental Analysis Program in DAS.

Radiological Research Accelerator Facility and bombarded with 3.5 MeV protons. The sample gives off X-rays that are characteristic of elements in the sample. The teeth will be analyzed for every element with atomic number greater than 15. The results will be tabulated by element beginning with those already associated with energy technologies or believed likely to become so associated.

Teeth are ideal biopsy and autopsy specimens that are readily available from living donors. Stang has contacted institutional sources, such as hospitals and prisons, to obtain healthy teeth that have been extracted



Staff members of the House and Senate Appropriations Committees, Subcommittee on Public Works, and ERDA representatives, were accompanied by Laboratory officials at a briefing on various BNL programs October 30. In the Medical Department, Dr. Eugene Cronkite, Chairman, explains the operation of one of the patient pavilions.

A Native American Point Of View

"The Native American from invasion to the present," is the concern of Billie Nave Masters, a woman of Cherokee heritage and specialist in education, who will speak at Berkner Hall on November 20.

Ms. Masters' talk will include consideration of how Indians and non-Indians perceive each other from an Indian point of view and their contribution and influence on American life. Her lecture entitled "Historical Overview: Native American Perspective," will be presented twice on November 20; once at 3 p.m. and again at 8 p.m.

This dynamic speaker, who is Supervisor of Teacher Education at the University of California, Irvine, came to the attention of several Brookhaven officials who attended an ERDA Native American Employment Seminar in Albuquerque last September where Ms. Masters was featured. She was subsequently asked to give a talk at Brookhaven.

Her lecture will touch on many aspects of Indian life, both past and present. For example, the problems of finding education and housing when Indians leave the reservation, as well as the programs that exist to help alleviate these problems will be discussed.

The Indian has an extended family and Ms. Masters will describe the Indian's concept of living and brotherhood within this family. Among other things, she will deal with the question of American bureaucracy and how it relates to the Indian and the contributions of American Indians to science.

Ms. Masters was born in Hominy, Osage County, Oklahoma. She received her B.A. degree from Northeastern State College in Oklahoma and her M.A. degree from San Jose State College in California.

In her teaching career, she specialized in remedial language arts, learning disabilities

AUI Scholarships

Parents of eligible students are reminded that application forms must be mailed to the Educational Testing Service and copy lodged in the Office of Scientific Personnel no later than November 14, 1975.

If further information is required, the Office of Scientific Personnel can be contacted, Ext. 3336.

for one reason or another, for example, impacted wisdom teeth. Records are more readily available from such institutions than from individual sources, and records are vital to the experiments.

Quantities of teeth, by themselves, are of no use. With each tooth it is necessary to at least have basic information about the donor - age, sex, occupation and history of geographical residences.

The value of the ancient teeth is that they provide a comparison with present population groups. As Stang says, "if, for instance,

(Continued on page 2)

Coastal Shelf In-Depth Study

Over 100 experts are expected to attend a conference on the Effects of Energy-Related Activities on the Atlantic Shelf to be held at Berkner Hall on November 10, 11, and 12. The coastal area under discussion includes all of the New York Bight, and extends roughly from Cape Cod to Cape Hatteras.

According to Bernard Manowitz, General Program Chairman of the conference and Associate Chairman for Environmental Programs in DAS, "the conference is not a Brookhaven program review," but will bring together representatives of the industrial world who are proposing various activities in the coastal region; scientists from the academic and oceanographic field who will evaluate what is known about this environment; officials from regulatory agencies who will describe proposed rules and regulations, and members of the public and press.

Manowitz says, "the theme of the conference is an attempt to tell the story as best we know it, and then try to come up with some conclusions as to whether or not the criteria being used for environmental impact statements are adequate."

The conference is particularly timely as part of the New York Bight has been under consideration for oil leases and application for the installation of off-shore nuclear power plants has been made.

The chairmen of the various sessions are: E.H. Harlow, Frederick R. Harris, Inc., "Description of Proposed Activities"; G.T. Csanady, Woods Hole Oceanographic Institute, "Characteristic Physical Processes of the Atlantic Continental Shelf"; Gordon Riley, Dalhousie University, "Characteristic Biological Processes of the Atlantic Continental Shelf"; J.R. Schubel, Marine Sciences Research Center, SUNY, Stony Brook, "Characteristic Geological Processes of the Atlantic Continental Shelf."

Beatrice E. Willard, Member of the Council on Environmental Quality, will address the conference at 8:30 p.m., November 11, in Berkner Hall.

A panel discussion on the adequacy of criteria for environmental impact statements, chaired by C.G. Gunnerson, National Oceanographic and Atmospheric Administration, will conclude the conference.

The panel will comprise representatives from the Nuclear Regulatory Commission, the Environmental Protection Administration, The New York Times, the Long Island Environmental Council, the U.S. Army Corps of Engineers, the Chesapeake Bay Institute, the Public Service Electric and Gas Co. and Mobil Oil Corp.



Billie Nave Masters

and the exceptional child. She taught Native American History and Culture at San Jose Community College and at the University of California, Riverside.

She served as a Native American consultant to the Santa Clara County and Cupertino School District and is currently a consultant to the Los Angeles County School District. In addition, Ms. Masters has devised and instituted numerous courses on American Indian History.

She is a member of the National Advisory Task Force of the U.S. Office of Education and Director of the First American Education Project for the National Education Association.

Eminent Historian Presents Lecture



Henry Steele Commager talks to members of the audience after his AUI Lecture in Berkner Hall on November 3. Story on Page 2

Critical View Of U.S. Universities

Henry Steele Commager, in the 17th AUI lecture at Berkner Hall Monday night, emphasized that the university should serve the needs of the global community and "those who would deflect the university from these larger and more affluent responsibilities, subvert its character and its integrity."

He called for a return to the original idea of the university as a center of dispassionate inquiry and to the, "principles that animated the Enlightenment, which was the era of the founding of the American republic."

Most American institutions are derivative of Old World schools, but in practice, he said, have been influenced by the American environment, circumstances and needs. America followed the collegiate pattern in the emphasis on sports and games, fraternities, general education, and the accent on character training rather than on professional training.

Professor Commager said that "America did not create universities, it created colleges." It had neither the resources nor the need to train students for the learned professions, but did need young men trained to serve society in any capacity.

He claimed that "the high school is the weakest link in our educational chain." Its function in America is to provide experience in growing up and training in a multitude of things such as "driver education," but does not do the job of educating as does its continental counterpart, he said.

The American universities assimilated to the college, rather than the college to the universities, he said, and when they merged, they merged on collegiate terms. The university has become a "multiversity" and differs from colleges and high schools only quantitatively, not qualitatively.

He suggested four changes to bring about the modernization of colleges and universities to accommodate to today's needs.

Shorten the college career to at least three years. It is in danger of becoming an anachronism unless it changes its character. Phase out the traditional amalgamation of the college and university, as the business of the university is professional training in scholarship and research, not semi-professional sports or the teaching of elementary courses, for example.

The cost of higher education should not be borne by the individual, any more than is the cost of elementary or secondary education, assuming that higher education is essential to the well being of our society. Other institutions can perform with less cost and greater efficiency the teaching of nursing, journalism, drama, library science and other fields of study that he does not feel properly belong in a university.

The university, "cannot be an instrument for national policy," he said, "particularly in the present era where nationalism is outmoded and dangerous. Its major contribution should be to the survival of mankind and of civilization."

Wildlife Film Feature

On Friday evening November 21, BERA, in cooperation with the National Audubon Society, will present a wildlife lecture and film program entitled "Adventure High Arctic."

"Adventure High Arctic" was five years in production and presents an over-view of this little-known land. The Northland is an intermingling of forests, tundra, and alpine country culminating in the Barren Lands of the Northwest Territories. It is a vast, sparsely populated land, beautiful and rich in wildlife. The film covers many exciting and interesting wildlife sequences on walrus, polar bear, arctic fox, the very elusive snowy owl, king eiders, and longtailed jaegers.

Edgar Jones, the narrator of the film, is a Canadian conservationist, film-maker and bush pilot, in love with the wildness of his country. He has for many years filmed the northern regions of Canada, establishing arctic Canada as a reality in the minds of his audiences.

The program will be presented at Berkner Hall, at 8:00 p.m. There will be an admission fee of \$1.00 for adults and 50¢ for children and students.



Alban Berg Quartet

String Quartet Performs

The second concert in the 1975-76 Concert Series will be given by the Alban Berg Quartet in Berkner Hall at 8:30 p.m. on Monday, November 17.

This group was founded in 1971 by four former students of the Vienna Hochschule für Musik, who chose the name with the permission of the composer's widow. The Alban Berg Quartet is the recognized successor to the famous Wiener Konzerthaus Quartet. The similar training of all four musicians is evident in the unity and empathy of their playing. "Sixteen strings, one instrument," said one enthusiastic critic.

When the group first toured the United States in the 1973-74 season, they were given an ecstatic welcome. One Southern critic probably summed up the opinion of many, when he wrote, "If there is a finer string quartet in the world then the Alban Berg Quartet, I simply do not know who it is. The sound of these four instruments was so meshed into one timbre, so perfect in its attacks and releases that they could give the illusion at one moment of being a single instrument and at another of being a small chamber orchestra."

For its appearance at Brookhaven National Laboratory, the group has chosen three Fantasies by Purcell, Berg's Lyric Suite and Mozart's Quartet in F Major, KV 590.

Admission for adults is \$3.50; for students with identification and persons over 65, \$1.75; and \$1.00 for persons under 18.

More On FTS Conversion

This coming week, 1976 FTS Telephone Users Guides will be distributed to all Laboratory offices. The guides list the new on-net numbers for FTS assistance operators and information operators for larger installations that will go into effect December 1.

Under the new system, all 10 digit FTS numbers will change to 7 digits. Brookhaven's FTS number will be 664-2123 (no area code). The present number, 516-345-2123, will continue to be used on the Bell system.

In other words, you will have two telephone numbers. Prior to December 1, you will be supplied with a new "Bull's Eye" for the center of your telephone indicating both numbers. (See sample below). The disc will have an adhesive backing and will be "do-it-yourself." You are advised to include your new FTS number in correspondence with other FTS users.

(516)
345-2550
664-2550
FTS

To call other laboratories, for example, A. Smith at Argonne, you would now reach him by dialing 8-312 (area code) - 739 (exchange) - 2286 (extension). After December 1, his FTS number will be 8-388 (new exchange) - 2286 (same extension).

A memorandum from Staff Services explaining the system will accompany the Users Guides on Monday. If you still have questions about the new procedures, personnel from Staff Services will be available to answer them from 2:30 p.m. to 4:30 p.m. in Room A, Berkner Hall, November 17 through November 20.

Dental Analysis

(Cont'd.)

We find that normal concentration for element "x" were a particular value, we still wouldn't know whether it is increasing unless we wait for 10-20 years and repeat the study. By going back in time and looking at ancient skeletons, hopefully, we might learn if element "x" used to be much lower and is now higher."

Barry Gordon, DAS, developed the equipment for producing the X-ray spectra from the prepared samples, and Manny Hillman, DAS, developed most of the computer program used to automate the analysis of each spectrum. William Sachs, a chemist who joined the DAS staff last month to devote his full time to this project, will be searching for correlations between dental composition and environmental, occupational and individual factors.



One of the ancient teeth received by Louis Stang for analysis. Many are in remarkably good condition, some are worn flat, possibly due to a gritty diet.

It's A Small World

On Wednesday, November 12, the Hospitality Committee will hold its Fall Tea and Sherry Party at the Brookhaven Center, from 3 to 6 p.m. Women who are employees and wives of employees are invited (employees are invited outside working hours). Babysitting will be available at the Gym - free of charge.

Rare and unusual dolls, doll houses and miniature accessories have been assembled for an interesting display of the small world of yesteryear.

Please come and share an interesting afternoon.

Trip To New York City

The Hospitality Committee is planning a group railroad trip to the City on Wednesday, December 10.

Departure will be at 8:59 a.m. from the LIRR station in Patchogue. The round trip fare for adults is \$2.45; children under 6 years ride free.

Sign up for the train trip by sending your payment to BNL Hospitality, P.O. Box 322, Upton, N.Y. 11973. Deadline is December 3, 1975.

Letter From Peking

The following letter from members of the Chinese Delegation who visited Brookhaven in September, was received last week by Laboratory Director George Vineyard:

Dear Dr. Vineyard:

At the kind invitation of the Committee on Scholarly Communication with the People's Republic of China, the Delegation from the Scientific and Technical Association of the People's Republic of China has paid a friendly visit to the United States of America. In the past 30 days we have been to Washington, D.C., Princeton, New York, Boston, Oak Ridge, Houston, San Diego, Los Angeles, and San Francisco. While visiting the many universities and research institutes and some company laboratories, we have met the representatives from the scientific and technological community of your country. Everywhere we went we were accorded warm welcome and hospitality.

We were very happy to have the opportunity to visit your institution and were also deeply impressed by your cordial reception and thoughtful arrangement. All of us had a wonderful time together with you and your colleagues with whom we shared experiences. Before our departure, on behalf of the Delegation of the Scientific and Technical Association of the People's Republic of China we would like to extend our sincere gratitude to you and through you to those friends who have assisted us in this visit.

May the friendship between the scientists and the peoples of the People's Republic of China and the United States of America continue to develop!

Sincerely,

周啟源
Chou Pei-yuan
Chairman

曾慶奎
Tseng Cheng-kuei
Deputy Chairman

朱永行
Chu Yung-hang
Secretary General

Washington Visitors



Merwyn C. Greer, ERDA Controller, at the Computer Center during a visit to the Laboratory on October 30.



Hunter Spillan, Senior Staff Assistant of the House Appropriations Committee, Subcommittee on Public Works, looks at the ISABELLE magnet core with Mark Barton, Accelerator Department Chairman.

BROOKHAVEN BULLETIN

Published Weekly for the Employees of Brookhaven National Laboratory

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CARL R. THIEN, Public Relations Officer

Come To A Vernissage!

Your fellow employees and members of their families will be exhibiting in the Sixth BERA Art Exhibition which opens Tuesday evening, November 11, in Berkner Hall at 8 p.m.

It will be a popular show, and you will spend a delightful evening, mixing with the artists and being impressed with the variety and quality of the works.

Thirty-three artists are showing oils, jewelry, watercolors, wood sculpture, stained glass, pottery and much more.

There will be refreshments - which makes it a vernissage no matter what your French dictionary says.

The exhibition will continue on weekdays from 11 a.m. to 2 p.m. through Friday, November 21.

— Ginnie Sayre

Cooking Exchange

The Cooking Exchange will not meet on November 12, so we can all attend the Hospitality Committee's Tea and Sherry Party.

The next meeting of the Cooking Exchange will be on Wednesday, November 19, at 12:30. We will present the "world famous" Long Island duckling.

A View Of Solar Energy Exhibit



Henry Boyd, Staff Services Division, at the Solar Energy Exhibit presented by the Environmental Technology Seminar, Inc., which drew 1000 people to the Laboratory last weekend. About 250 persons also attended the conference on Saturday.

Cafeteria Menu

Week Ending Nov. 14, 1975

Monday, November 10	
Corn Chowder	
Scrambled Eggs, Sausage & fr. fr.	1.05
Beef Liver & 1 veg.	1.05
Tuesday, November 11	
Beef Noodle Soup	
Knockwurst & Sauerkraut	1.05
Sauerbraten & Potato Pancakes	1.25
Wednesday, November 12	
Cream of Potato Soup	
Beef Chop Suey on rice	1.05
Special	
Davy Jones Fish Fry	\$1.25 plus tax
Thursday, November 13	
Chicken Vegetable Soup	
Cheese Ravioli & 1 veg.	1.00
Roast Chicken, Stuffing & 1 veg.	1.10
Friday, November 14	
Clam & Celery Soup	
Spaghetti w/Clam Sauce	1.00
Breaded Pork Chop & 1 veg.	1.25

Eat Early!

Please try to get to the cafeteria early today, Monday, Tuesday and Wednesday. Participants in two conferences are expected to crowd the lines. Save yourself some time and eat early!

Military Faculty Visits Brookhaven



Physics Faculty members of the U.S. Military Academy at the Physics Scanning Facility during the course of a tour of the Laboratory on October 31. At far right (to left) scanning supervisors are Milda Vitols, Audrey Biittner and Anne Mauro, tour guide.

Arrivals & Departures

Arrivals

Farid E. Ahmed	Biology
Mattie L. Brown	Plant Engrg.
Jiri Cizinsky	Medical
Samuel Cortes	Plant Engrg.
Juris E. Kaugerts	Accelerator
Nellie I. Kennedy	Plant Engrg.
Johannes F. Klopper	Medical
Keith F. Lewin	Applied Science
Arthur L. Lipman, Jr.	Chemistry
Charles J. Patton	Applied Science
John W. Smith	Plant Engrg.
John B. Spraggins	Applied Science
Alvin J. Vestal Jr.	Plant Engrg.
D. Dean Wheeler	Accelerator
Evarina R. Wold	Applied Science

Departures

Juanita A. Benbow	Medical
Betty L. Lutz	Physics
Mato Orhanovic	Chemistry

Official & Special Events

- Monday, November 10**
Conference on Effects of Energy Related Activities on the Atlantic Continental Shelf - Berkner Hall (November 10-12)
- Tuesday, November 11**
US Coast Guard Academy Tour
Art Show Opening - Berkner Hall - 8 p.m.
- Wednesday, November 12**
Navy Meeting
- Thursday, November 13**
Springfield Community College Tour
- Friday, November 14**
Fordham University Tour

- Monday, November 17**
Concert - Berkner Hall
- Tuesday, November 18**
Charm and Direct Lepton Production Workshop (November 18-19)
Fairleigh Dickinson University Tour
- Thursday, November 20**
Lab-wide Lecture - Billie Nave Masters - Berkner Hall - 3 p.m. and 8 p.m.
Cooper Union University Tour
Long Island Bone Metabolism Meeting

Radio Program Features Women

Starting Sunday, November 9, WALK AM and FM and WRIV in Riverhead will present a weekly public service radio program about women, women's issues and Suffolk County events of interest to women.

Called WOMEN NOW, the program will be a weekly Sunday feature on WALK and WRIV at 11:30 a.m. and is being done in cooperation with the South Shore and Mid-Suffolk Chapters of the National Organization for Women.

Elaine Hendrie, wife of Joseph Hendrie, Chairman of DAS, is the program producer.

Diners Note

The Cafeteria will be closed on Saturday and Sunday, November 8 and 9.

The Center Club will have a snack bar open from 9 a.m. to 2 p.m. on these days.

The Vending Food Service in Building 912 will be in operation continuously.

Normal business will resume at the Cafeteria on Monday, November 10.

Bowling News

Cathy Van Noy

Pink League

Going into the stretch, the "Swingers" and the "Spares" are tied for first place with the "Fiscal Assets" only two games out. High games for the evening were rolled by Betty Jellett 171, M. Stoeckel 177 and P. Oster 171. Gross pot was won by Marge Stoeckel 220.

Black N' Blue League

The "Odd Balls" have taken the lead from the "Upton Downers" with only two more weeks left in the first third. High games for the evening Fred Hohmann 213, Debbie Antonio 199, Kit D'Ambrosio 197. Pots were won by Kit D'Ambrosio 250 and Lew Jacobson 228.

Green League

The "Got-A Hit-Ums" extended their lead to sixteen points over the second place team. The "Sandbaggers" finally bagged the "Blue Jays" for eleven points. The "Phoubars" rocked the "Charley Browns" for eleven points as those two teams seem to be exchanging the bottom spots. 200 games for the night were D. Stelmashuk 212, B. Belligan 208 and N. Parrinello 202.

Red League

C. Buzzeo showed up to bowl tonight and before he left he had a 615 scratch and the best scratch game of the year to date. He has also taken over second high average. Watch out Joe Scesny! Joe also put in one of his usual fine performances and is now carrying a 185 average. 200 games for the night C. Buzzeo 233 and 200, E. Sperry 220, R. Meier 219, N. Anderson 214, W. Reams 211, J. Sheehan 209 and J. Scesny 205.

Purple and White League

The "Flounders" got away from the "Sea Gulls" winning first place with 43 wins and only 13 losses. "Congrats" to Marge and Ben Belligan and Lorraine and Jim Petro for their first place win. V. Walker rolled a nice game of 183 and now holds the high gross with a 263. High games go to Betty Roche 177, E. Sperry 198 and high average for the men, and Jon Scott 207 and a 561 series.

Runner's Corner

Those strange people you saw "running" around the Lab on October 15, were members of the LLL running club who had just completed 3014 miles in the BNL/LLL 3000-mile run.

The enthusiasm created by this cross country challenge race has inspired more than 50 people at LLL to participate.

Having finished so soon, they have decided to turn around and head back home, hoping to catch and pass their BNL opponents en route.

As of October 26, the BNL runners, approximately 20-25 strong, have completed 1300 miles and are still running.

The winner of this 3000-mile run will be determined by the actual running time. Therefore, although LLL has finished ahead of BNL, it does not necessarily mean that they have the best time.

So let's go BNL - there is still hope!

Rifle & Pistol Club News

All club members are urged to attend the November 12th meeting, at 5:15 p.m. at the apartment area recreation building. Our nominating committee will present a suggested slate of officers for 1976, and floor nominations will be entertained during this meeting.

Also, safety rules and procedures for use of the newly ready trap range are expected to be presented. Surely, you will want to hear firsthand about this great new facility, which many have worked so hard to make ready.

— Don Huszagh

Nets Discount Tickets

Tickets for game number 2 of the LIRA Group Discount Series will go on sale at the BERA Sales & Services Office on Monday, November 10. Sale deadline is Tuesday, November 18.

Nets fans - don't let this opportunity pass you by - get your \$7.00 tickets for a mere \$3.00.

The game will be played at the Nassau Coliseum on Friday, November 21, when the Nets take on Denver.

The BERA Sales & Services Office is open from 7:30 a.m. to 2:30 p.m. Monday through Friday. Telephone Ext. 3347.

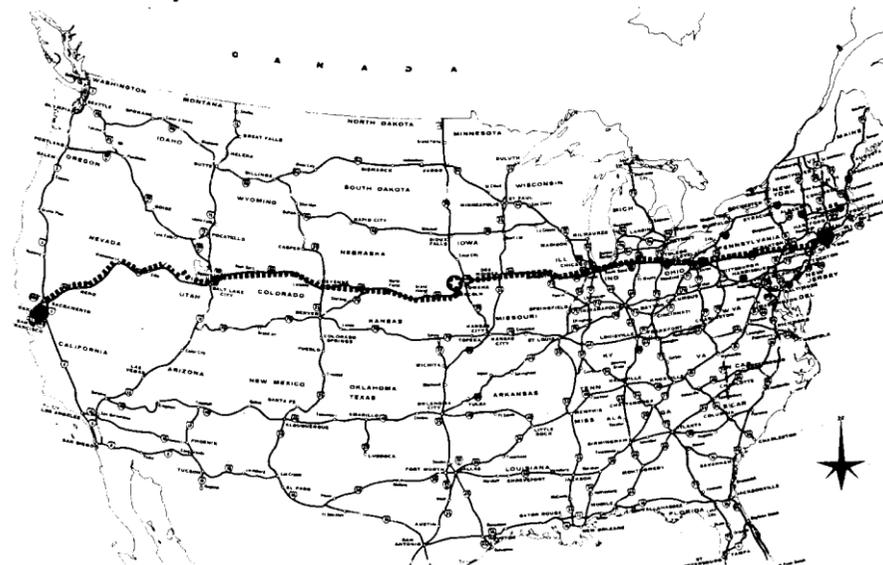
BAFFA Symphony

The BAFFA Symphony Orchestra and Chorus, under the direction of Mark Orton, will present a concert entitled "Three Faces of Brahms," Sunday, November 23, at 3:00 p.m., Our Lady of the Snow Auditorium in Blue Point.

The program includes the *Academic Festival Overture*, *Variations on a Theme by Haydn*, and *A German Requiem*. Soloists will be Daryl Naylor, Patchogue and Roger Roloff, Stony Brook. A number of Brookhaven employees and their families are involved in BAFFA Productions.

Tickets are \$1.50 if purchased before the performance and may be obtained by sending a check and stamped, self-addressed envelope to BAFFA, Box 16, Bayport, N.Y. 11705. Tickets at the door are \$3.

Cross Country Trek



The BNL runners in the 3000-mile cross-country race are near Omaha, Nebraska. So far they have tallied up 1300 miles. The LLL runners have already touched base on Long Island and are trying to overtake BNL on their unexpected return trip. The star indicates the approximate location of the BNL team.

Classified Advertisements

Placement Notices

Each week the Personnel Office lists personnel placement requisitions, currently being processed. The purpose of these listings is, first, to give notice of all non-scientific staff positions being filled and, second, to give employees an opportunity to request consideration for themselves through the Personnel Office. In filling vacancies, the Laboratory's objective is to give first consideration to present employees, as follows: employees within the immediate group having the vacancy, employees within the department or division, employees within the Laboratory as a whole.

For further information regarding a placement notice, or to request consideration for an available position, contact Supervisor, Personnel Placement & Development, extension 2874 or 2882.

251. TECHNICAL SPECIALIST - BS or the equivalent in chemistry or biology with quantitative analysis background. Biochemistry Laboratory experience desirable. Medical Department.

252. SECRETARY - AAS degree in secretarial science or the equivalent. Excellent typing skills and shorthand is desirable. Accelerator Department.

253. RESEARCH SERVICES ASSISTANT - Responsibilities involve handling glassware in cell tissue culture and virus laboratory. Biology Department.

254. CHEMISTRY ASSOCIATE - MS or the equivalent in chemistry with experience in analytical chemistry, particularly instrumental methods. Temporary position. Department of Applied Science.

255. BIOLOGY ASSOCIATE - BS or the equivalent in biology with strong background in quantitative animal ecology. Temporary position. Department of Applied Science.

256. TECHNICAL SPECIALIST - BS or the equivalent in microbiology. Hospital laboratory experience required. Occasional weekend duty. Medical Department.

257. RADIOACTIVE MATERIALS TREATMENT OPERATOR - AAS degree or the equivalent in mechanical technology. Chemical processes and nuclear experience required. Department of Applied Science.

258. EXPERIMENTAL MACHINIST - Central Shops Division. Application Deadline: November 19, 1975.

259. TOOL & INSTRUMENT MAKERS (2) - Central Shops Division. Application Deadline: November 17, 1975.

260. MACHINE MAINTENANCE MECHANICS A (3) - Central Shops Division. Application Deadline: November 17, 1975.

Autos & Auto Supplies

2 SNOW TIRES - Used, 8.25-14, Atlas weatherguards mounted on rims. \$15. Ext. 2887.

69 FORD GAL 500 - 4 dr, 8 cyl, auto. \$450. 588-1713.

73 PONTIAC RALLY II WHEELS - 4, \$100. Al Mack, Ext. 4592.

2 SNOW TIRES - Like new 520-13, 4 ply nylon Good-year. \$12. Pluta, Ext. 2957.

74 MONTE CARLO - Swivel bucket seats, ac/ps/pb, wire spoke rims, rear defogger, radials, full vinyl roof. Jim, Ext. 3840.

2 SNOW TIRES - F78-14, Town & Country, w/rims. \$20 ea. Arnie, 698-1560.

75 CAMARO - 8 cyl, ac/am/fm, auto, steel belted radials, pwr disc brakes, 3200 mi. \$900 plus payments. Maria Gatz, 929-8109.

63 CHEVY METRO - All aluminum walk-in van, rebuilt in '71, Chrysler 318 cc V8, 5 brand new tires, good cond, great potential. Sacrifice \$650. Mark, 473-6063.

ARE YOU IN NEED OF TIRES? - We have (3) 685-15" & (3) 645-13". 475-0144 after 6.

67 FORD LTD WAGON - Ps/pb/ac, good cond. Asking \$800. Ext. 4154, 286-9616 after 6.

5 TIRES - 478-15 poly-glas belted w/w. Walt Chornoma, Ext. 3254.

70 CHEVY - 4 dr, Biscayne, ps/pb, really A-1 cond. \$1050. Ext. 3593.

70 BUICK ELECTRA - Convertible, full power, new shocks, brakes & tuneup, ac, excel cond. \$1695. Ext. 3593.

62 MERC COMET - Very good running cond. \$225. Celeste, 878-2603 after 5:30.

ALUM MANIFOLD - Edelbrock street master 600, Holly carb, \$100. Bob, 281-3149.

ASSORTED RIMS - O. Booker, Ext. 4719.

67 CAMARO - Convertible, 4 spd, ps/pb, good cond. \$650 or best offer. G. Williams, Ext. 4383, 924-5622 eves.

2 SNOW TIRES - 700-13 w/rims, 5 lug 2 3/4" cc, Ford product. \$10. 981-1195, 6-8 p.m.

TONNEAU COVER - For TR 250, never used, make offer. 981-1195, 6-8 p.m.

74 MONTE CARLO - 350 cu in, black vinyl roof, ac, swivel bucket seats, steel belted radials. \$4000. Jim, Ext. 3840.

67 VOLVO 144S - 4 dr, interior excel, needs work, 87,000 mi, engine very good, best offer. 928-3951 eves.

65 PONTIAC - At/ps/pb/ac, r&h, excel transportation. \$425. 286-8119.

5 DUNE GRABBERS - 1100x15, 4 like new. 1 spare. \$150 firm. Harry, 475-5176 after 5.

69 VW BUG - Motor overhaul, good tires, new battery, Blaupunkt am/fm radio, must buy auto shift. \$650. Claire, Ext. 3655, 281-2002.

TIRES - Used & recaps, most sizes, extra rims available. Ken, 289-8212 eves, no lab calls!

72 CHEVY - Low mileage, ps/pb, ac, excel cond. \$2200. 473-0178 eves.

73 CHEVY VAN - 307 V8, 1/2 ton auto, good cond. \$2000. George, 281-7763 eves.

SNOW TIRES - L78-15, Firestone, Town & Country, like new. \$20 ea. Ext. 2014, 751-0738.

70 SUZUKI 125CC - Good cond, red w/red helmet & clear windshield. \$320. Paul, 473-7632.

4 SNOW TIRES - Low mileage, H78 Firestone on 5 lug jeep rims. \$125, without rims \$100. Harry, 475-5176 after 5.

71 DODGE - Ac/pb/ps, auto, clean. \$1100. 589-6151 after 6.

75 MERC BOBCAT - 4 cyl, auto, 7000 mi, 8 track stereo, like new. \$3000 firm. 924-4278.

68 FIAT - Fair cond, needs work, runs, 28 mpg. Ext. 4851, 732-6995.

69 OPEL KADETT WAGON - Auto shift, runs well, looks ok, avail Dec. 1. \$500. Matko, Ext. 4362.

69 FORD FALCON - Station wagon, std transmission. Asking \$650. Ext. 4122, 286-8512.

64 DODGE DART - 2 dr, 6 cyl, good running cond, must be seen. \$200. Bob, 281-6838.

70 CADDY - Coupe deVile, loaded, 60,000 mi, orig owner. \$2500. C. Hobon, 727-1334 after 5:30.

2 WHEELS - For caddy El Dorado, snows, mounted, \$35 for both. 588-0147.

70 CHEVY NOVA - Sm V8, 307, 2 dr auto, vinyl top, r&h, 47,000 mi, excel cond, no dents. 281-6652.

Boats & Marine Supplies

12' ALUMINUM BOAT - W/oars, oarlocks, flotation, will take OB to 10. \$60. 286-0497 eves.

23' PEMBROKE - Sport fisherman, complete refinish flying bridge, full canvas, d/f, extras, excel cond. Asking \$1650. Laird, Ext. 4068, 298-5092.

CLAM RAKE HEAD - 24 tooth w/4" teeth. \$25. Ext. 2043.

34' BALTZER - Twin Chrysler engines, camper back, excel fishing or family boat. 331-1718.

Miscellaneous

PINE DESK - Excel cond, secretary type w/dropped top. Ext. 2487.

HONDA MINI TRAIL - 50 cc, s spds, runs good for trails. Asking \$50, orig cost \$400. 289-0886.

LOUVER DOORS - (4) 16" wide; dinette set w/4 chairs, excel cond; make-up mirror, new; new warming dish. Ext. 2487.

BABY ITEMS - Infant seat, \$5; jump chair, \$7; back carrier, \$5. 286-3964.

TRIPOD BUMPER JACK - \$3. Ext. 2485.

CRIB - W/mattress, full size, \$20; small crib, \$10; pro hair dryer, like new. \$15. 757-2740 eves.

REFRIG/FREEZER - 2 yr old Bradford, freezer on top, excel cond, only needs recharge. Best offer. Joan, 399-2084 after 6.

FISHING REEL & ROD - Zebco, \$8. Neven, Ext. 3107 after 3.

DINNER SET - 45-piece set for 8, American ironstone. \$20. Matko, Ext. 4362.

COLOR TV - 23", console, good cond. \$125. Matko, Ext. 4362.

COBBLER'S BENCH COCKTAIL TABLE - Needs refinishing. \$5. 981-1195, 6-8 pm.

SELMER CLARINET - Golden tone 3, used very little. 981-1195, 6-8 pm.

17" B&W RCA TV - Works but needs minor repairs. \$10. 981-1195, 6-8 pm.

3 BAR STOOLS - Samsonite, black, upholstered seat & back, adjustable height. \$50. 981-1195, 6-8 pm.

METAL BED FRAME - Twin adjustable, needs paint. \$2. 981-1195, 6-8 pm.

CLOTHES DRYER - Norge electric. \$25. 981-1195, 6-8 pm.

GOLF CART - United rocket. \$5. 981-1195, 6-8 pm.

HALF KEGS - 2 stainless steel, good for mooring buoy, water tank, etc, make offer. 981-1195, 6-8 pm.

BOWLING BALL - Ladies, blue & white w/good bag. \$10. 981-1195, 6-8 pm.

DRESSER - W/mirror, white, \$20; birdseye maple dresser, \$15; student trumpet, \$30. Olness, Ext. 4581, 751-2655.

ICE SKATES - Black leather, size 2, \$5; red rubber boots, child's size 7-8 & 10-12 & 1, \$1.25 each. Olness, Ext. 4581.

DOUBLE CANOPY BED - White, Sealy mattress, box springs, \$75; complete cadette uniform set, \$12. 744-5424.

REFRIGERATOR - 4 1/2 cu ft, excel cond. \$85. Ext. 4851, 732-6995.

MEN'S SEIKO WATCHES - Electronic, day, date, silver w/blue face or all gold, new guaranteed, orig \$125-150, sell \$60. Bob, Ext. 2060.

DINING RM TABLE - W/6 chairs & 12" leaf, pad to match size, glass top server, ebony color. \$130 for both. 363-6845.

9" CRAFTSMAN BENCH SAW - Direct drive complete w/base. \$150. 588-5688 eves & weekends.

SECRETARIAL DESK - L-shaped, modular mat, chair, \$250; wedding gown, size 8 w/veil, \$75; 1.2 carat solitaire diamond ring, estate piece, appraised at \$1400, sacrifice \$950. Peg, 928-2229.

CHANDELIER - Black wrought iron, 10 arm, \$50; headboard, king size, \$30; sofa bed, danish modern, sleeps 2, \$125. 581-9199.

DRAPES - Olive green & white antique satin, cover 10' wall area, rod included, \$50. 581-9199.

FREE KITTENS - 878-0201.

KING SIZE WATER BED - W/frame & heater, excel cond. \$150. Celeste, 878-2603 after 5:30.

AIR CONDITIONER - In A-1 cond, large enough to cool dining & living rm area at one time, \$75. 588-4703.

GE ELEC RANGE - 41", 4-burner, white. \$45. George, Ext. 2434.

SONY PORTABLE RADIO - TFM 8100 WA, all weather, 3 bands, AFC, ac/battery, excel. \$35. Iwata, Ext. 4261.

SHIRTS - Men's med blue & brown, brand new. \$4 each. Ext. 3609.

COAT - Spring green, checked, size 14, good cond. \$12. 744-5871.

BABY CRIB - & mattress, \$20; coffee table, kidney shaped for sectional, beige formica. \$8. 727-1329.

HIKING BOOTS - Size 9, used once, like new, Garmisch, German, w/vibrant soles. \$20. Al, Ext. 3535, 878-4878.

STEREO AMP - Paco, 40 watt, tube type, w/extra tubes. \$35. Ext. 3593.

GAS ENGINE - 10 hp Wisconsin, 1" hor. shaft, runs good. \$40. Hank, Ext. 3848, 472-0553.

SOFA - 3-piece sectional, slipcovers, \$150; end table, round cocktail table, 2 occasional chairs. 744-9822 after 6.

DINING RM - Light walnut, 9 pieces, modern, \$290; dining table & 4 chairs, walnut, \$50. 744-2821.

TUBE TESTER - Precip Appar 612; amplifier Eico HF80, 14W; Simpson meter 260. Ext. 4349.

3 SIGNAL GENERATOR - Prec Appar E-200, Eico 360, gen electron 200, signal tracer, super inst CA-12. Ext. 4349.

ELEC RHYTHM GUITAR - & amp, 15" speaker, 2 channel, good cond. \$110 firm. 289-0753.

BABY STROLLER - Twin stroller, as new. \$25. Ext. 3828, 751-7250.

NIKON F CAMERA - W/1.4 sc lens. \$400. Mike, 878-2486.

INFANT CAR SEAT - Orig cost \$24, sell \$9. Les, Ext. 4074.

HO TRAINS - & 5x9 layout, triple power pack, 40 cars, switches galore, buildings, etc. \$250. 744-3312.

DEEP WELL HEAD - Spartan uniflow, no motor, \$15. Charlie S., Ext. 2957, 744-3312.

CAR BED - \$7.50; carriage, \$5; playpen, \$5; bouncer chair, \$2.50; backpack carrier, \$2.50. 928-4922.

COOT DECOY - 1 dozen. \$15. John, Ext. 3354.

ICE SKATES - Boy's hockey skates, size 1, good cond. \$7. 878-1731.

DIAL MATE - Auto phone dialer, up to 40 numbers in memory bank, brand new. Cost \$99.95, sell \$40. Harry, 475-5176.

HOUSEPLANTS - For sale. Lin, Ext. 3583, 878-4878.

ANTIQUES - 3-piece bedrm set, dark wood table, also blonde buffet. 878-2239.

FIREPLACE - 36" black cone type, chimney kit, ceiling support, 3 insulated chimney pipe, new, never installed, orig cost, \$330, no reasonable offer refused. Al, Ext. 4103.

SELF CLEANING ELEC STOVE - \$50, Kitchenaid portable dishwasher, \$60; new color TV antenna, \$15; wicker changing table, \$20. 744-4066.

TRAVERSE ROD - Extends 10-21", \$10; blue open weave long curtains, 4 pairs, \$10; aquarium stand, 10 gal, \$4. 744-4066.

TABLE - Leather top, mahogany pedestal, excel cond, \$40; antique rush seat chair, \$12. 589-3269 after 6.

ANTIQUE SEWING MACH BASE - \$15; love seat in fine cond., \$25. 589-3269 after 6.

25" RALEIGH GRAND PRIX - 10 spd racer, clincher tires, quick release hubs, simplex gear changer, center pull brakes, like new. \$125. 473-0178 eves.

SYNTHETIC FUR COAT - Black w/sable trim, never worn, size 10. \$35. 281-8497.

ORGAN - Conn delux, model 312. \$1000. Ext. 2014, 751-0738.

BUNK BED - 30" W, solid wood, built by previous owner, 4" foam mattresses, fitted sheets. \$15. 744-2836.

2 STROLLERS - W/wind breakers, good cond, \$10 each; 16" child's trike, good cond. \$5. 289-1242 after 5.

CAMPING STOVE - 2 burner primus, \$15; tent attaches, side of van or free standing, \$100. 473-9180.

ANTIQUES - 3 Windsor chairs, good cond. \$25 ea; walnut rocker cane seat, \$30. 744-2836.

EXCESS ITEMS - Just moved, organ, furniture, etc. 589-6151 after 6.

BEDRM FURNITURE - 2 dressers w/mirror, bookcase headboard, all solid wood. Richie, Ext. 4254, 734-7342.

TRANSMITTER TUBES - #829, all new, in carton, surplus. \$5. Richie, Ext. 4254, 734-7342.

BICYCLE - Men's 26" Schwinn. \$25. 744-0979.

Real Estate

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

For Sale

CATSKILLS - Delaware Co, 10 acres, panoramic view, spring, open & wooded, good hunting & fishing, will divide. \$8900. Pete, Ext. 3297, 586-3579.

MILLER PLACE - 3 bedrm ranch, 2 baths, eat in kitchen, dining rm, living rm, full basement. \$39,500. 744-2821.

CALVERTON - 1 acre building lot, heavily wooded, high hill private road, close to LIE. \$11,000. 722-3938.

CUTCHOGUE - 1 acre building lot, water view, beach rights, near schools & shopping, asking \$15,000. G. Laird Stubbings, Ext. 4068, 298-5092.

SOUTHAVEN/BROOKHAVEN - 7 rm contemporary ranch, 1 acre adj to park, 2 1/2 baths, part finished basement, garden house, w/elec & water. \$42,000. 281-4080 after 5.

PATCHOGUE - 4 bedrm cape, dining rm, appliances, carpeting, fenced, basement, garage, \$34,900. 654-1387 after 5:30.

MORICHES - 7 rm house, 4 rms upstairs, 3 down, full cellar, garage & breezeway, h/w heat, cyclone fence, storm windows. \$29,500. 878-0237.

PATCHOGUE - Custom ranch, non-development, 7 rms, 1 1/2 baths, fireplace, in-ground pool, barbecue, patio, cabana, oversized garage, basement. \$55,000. 475-5207.

BROOKHAVEN - Colonial 4 bedrm, 2 1/2 baths, 2-car garage, full basement, fireplace in large living room, formal dining, country kitchen, den, 3/4 acre plot, Middle Island Schools. \$51,500. 286-0158.

For Rent

VERMONT VACATION - 3 bedrm mobile home, 10 acres, near fishing, golf, tennis, avail weeks or weekends. Bob, 473-8186.

MEDFORD - 2 bedrm apt, 10 mi from Lab, 1 month security required. \$285/mo incl util, all appliances. 924-7516 after 6.

MASTIC BEACH - 5 room house, pay own util. \$250/month. 281-8475.

FLORIDA - Royal Palm Beach, 2 bedrms, completely furn, condominiums, special vacation rate for employees, couples only, no children. 587-0901 after 6.

NORTH SHORE - 3 bedrm, 1 1/2 baths, partially finished cellar, knotty pine interior, fireplace, 20'x30' garage w/pit, 23,000 btu ac, appliances, 15 min to Lab, low, low taxes. 744-3312.

TO SHARE - 5 bedrm house in Medford, 7 mi to Lab, \$30/wk + 1/2 util. Jack, Ext. 4255, 289-6708.

Wanted

LEAD GUITAR - To sing & play w/rock band. Ray, 878-2486.

SERVICE MANUAL - For rollekor V camera, or disassembly info. Frank, Ext. 2410, 281-7113 eves.

CAMPBELL'S LABELS - Soup & bean, send to F. Chandler, Bldg. T-89.

LUGGAGE - Samsonite set for man. Matko, Ext. 4362.

LOVING HOME - For healthy, likeable 15 year old boy, support included. Don David. 286-2267, Ext. 3942.

BASEBALL CARD - Accumulations prior to 1971 wanted for 2 young accumulators, will purchase, including tobacco cards. Kieth, Ext. 3385, 286-9047.

BOY'S BIKE - Suitable for pre-schoolers, reasonable. Eric, Ext. 4092.

WWI AVIATOR HELMET - Or reasonable facsimile. Hendrie, 589-1145.

BAR STOOLS - Reasonable, good cond. Cathy, 345-2456, 732-6262.

JOIN GROUP TO SEE PIPPIN - Dec 6. Cathy, Ext. 2456, 732-6262.

BABY FOOD JARS - Small & coffee cans, all sizes. Pete, Ext. 3297.

OLD KEYS & LOCKS - For hobby purposes. Charlie S. Ext. 2957, 744-3312.

ROLL TOP DESK - Good cond. Henry Henck, 281-5626.

OAK CHAIRS - Solid or cane seats, high backs, any cond considered. Jean, Ext. 2902, 727-5168 after 6.

HYDRAULIC FLOOR JACK - Min 1 1/2 ton capacity. Fred, 924-3556.