

The Village Crier



national accelerator laboratory

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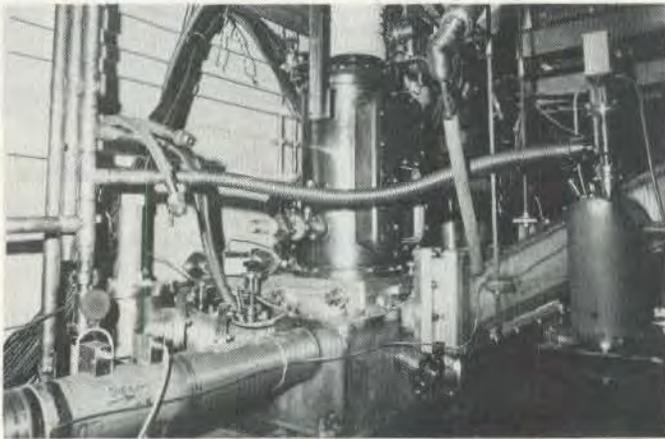
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PROGRESS REPORT - JUNE 26 through JULY 8, 1972

The Accelerator has operated principally at 100 BeV since the June shutdown, for the tuning of the muon line. The first muons were detected in the Michigan State-Cornell experiment on July 2nd at 3:05 p.m. Promising tests have been conducted on rapid cycling of the Booster.

INTERNAL TARGET SECTION EXPERIMENTS IN FULL SWING



...Jet Target assembly in NAL Main Ring, a collaboration of Soviet and American physicists...



...V. Nikitin of U.S.S.R., E. Malamud, B. Strauss of NAL in Main Ring tunnel at C-0...

On April 12, 1971, the "Internal Target Section" was added to the NAL working structure. With headquarters at 35 Shabbona in the NAL Village, the group was organized to assist and expedite the installation and operation of experiments that utilize the Main Ring vacuum chamber in a straight section located at position C-Zero (C-0) on the Ring. Now, just ten weeks later, three experiments are installed and regularly collecting data.

Headed by physicist Ernest Malamud, who has been associated with the NAL Main Ring construction and operation since January of 1968, The Internal Target Section's first assignment was to aid Experiment No. 36, a collaboration of NAL, Rockefeller University, the University of Rochester, and the U.S.S.R. (See the February 10, 1972 issue of The Village Crier.) In February of 1972, the first phase of the experiment was installed utilizing a tiny rotating target of polyethelene foil built at the University of Rochester. Beginning on March 6th, data was recorded as the proton beam struck this target. The number of protons bouncing off the target at different angles reveals the extent and characteristics of the forces between the protons. It is expected that the experiment will also reveal how the radius of the proton varies with the energy of the beam.

An exciting new phase of Experiment 36 will begin soon, now that installation of a hydrogen gas target has been completed. The assembly and installation followed more than a year of weekly communications by teletype between NAL and scientists from the Soviet Union who

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INTERNAL TARGET SECTION EXPERIMENTS (Continued from page 1)

had originated the technique of using a narrow band of tiny hydrogen ice crystals as a target for the proton beam. In regular Thursday morning teletype talks, the Soviets and NAL staff members made plans for the collaboration which provided that the jet would be built in the Dubna machine shop, brought to NAL, and joined with a vacuum box, alpha particle calibration source, rotating foil target built in the United States.

The Soviet group of seven scientists and their wives arrived for a one-year visit in the U.S. on March 5th. They brought the completed jet target, controls, electronics and detectors with them. They arrived in time to join the NAL staff on March 8th celebrating the reaching of 200 BeV design energy. The succeeding weeks have seen the gradual fulfillment of the cooperative venture as Russian and American equipment was connected together.

Members of the Russian group are Victor Bartenev, Anatole Kuznetsov, Boris Morozov, Vladimir Nikitin, Yuri Pilipenko, Vladimir Popov, Leonid Zolin.

By May 20th, the assembly and testing of the target began to yield successful results. Test runs on May 25th and June 10th were also satisfactory. In a massive 4-day effort beginning June 26th, the target was moved from the Village and installed in its final position in the Main Ring tunnel. By June 28th, the helium transfer line, approximately 100 feet long, running from the liquifier on the ground level down to the tunnel was also completed. Liquid helium started filling the dewar in the tunnel on the evening of June 29th.

Plans now call for Experiment 36 to start operation of this second phase immediately. The group had already logged 318 hours of "target in" time with their foil target. About 12 million events were collected at 80 BeV and 23 million at 200 BeV.

Experiment No. 120 will also share the target, to measure gamma rays. This experiment involves scientists from Harvard University and the University of Wisconsin.

Another group -Experiment No. 67 - which includes physicists from Rutgers University, Upsala College, and Mississippi State University, will study the protons recoiling off this target in order to learn about resonance structure of the proton.

NAL staff members of the Internal Target Section include: Jim Klen, Ernest Malamud, Joel Misek, Don Mizicko, Chuck Nila, Wally Pelczarski, Barb Perington, Ed Podschweit, Tom Rathbun, Buzz Rodewalt, Bruce Strauss, Dave Sutter, Ryuji Yamada. Bill Carter runs the staff shop used by the Internal Target and Proton Lab Sections. Jim Batek, Sharon Fleming and Verece Moore have joined the section for the summer months.



...Soviet experimenters (L to R) Y. Pilipenko, A. Kuznetsov, and V. Bartenev...



...Vertical line at left is the Hydrogen Jet as seen on screen during successful test run...



...Members of Exper. 67 crew (L to R) Felix Sannes, Michael Lieberman, Jim Mueller, George Cvijanovich...



...Ion guide built by NAL Machine Shop staff: (L to R) Jim Forrester, Walt Limbough, Jim Schmidt, Roger Hiller, Tom Butler...



...Installing apparatus for Exper. 120, John Whittaker...

NEW APPOINTMENTS ON AEC STAFF

Retirements from the staff of the U.S. Atomic Energy Commission bring several new persons as replacements in the team that has worked with the National Accelerator Laboratory.

In the Batavia Area Office, Fred Mattmueller replaces Kennedy C. Brooks as Area Manager. Mr. Mattmueller joined the AEC in 1953 as a staff member in the Budget Division of Chicago Operations Office. He previously had served as Deputy Director of the Budget Division of C.O.O. before becoming Director of Contracts Division in 1961, and had extensive experience in administrative matters with other Federal agencies before joining the Commission. He served in the U.S. Navy from March 1944 to June 1946. In 1949, he received a B.S. degree in Accounting from DePaul University. In addition, he participated in career orientation courses offered by the Civil Service Commission, Federal Executives Institute, Brookings Institute and George Washington University. He has served as Deputy Area Manager since June of 1967 when the first local NAL staff was established.



*Robert C.
Bauer*

*Fred C.
Mattmueller*

Robert H. Bauer succeeds Kenneth A. Dunbar as Manager of AEC's Chicago Operations Office. Mr. Bauer is a native of the Chicago area. He graduated from the University of Illinois in 1950 with a degree in political science and did post-graduate work in public administration at the University of Chicago. He came to the AEC in 1955 as a Budget Examiner, then transferred to the Division of Reactor Development in 1957. He was with the Budget Branch of the Division of Research from 1961 to 1966 as budget officer and later as Chief of the Budget Branch. Mr. Bauer was named Deputy Assistant Controller for Budgets in July 1966, and on March 28, 1971 was appointed Assistant Controller for Budgets.

Daniel R. Miller has been named Acting Director of the AEC's Division of Physical Research, following the retirement of Paul W. McDaniel on June 29th. Dr. Miller received his Bachelor's degree in 1941, Master's degree in 1943 in the field of Chemistry from the University of Wisconsin. He was awarded a Ph.D. from the University of California in 1948. He has been with the AEC since 1951. His office is at the AEC Headquarters, Germantown, Maryland.

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NAL BLOOD PROGRAM

The American Red Cross received 93 pints of blood during their two-day visit to the Laboratory on June 8th and 9th. NAL needs a total of 187 pints to have all employees and their families covered from September 1972 through September 1973. The Red Cross will be invited to revisit the Lab in September to pick up the remaining 94 pints. Thanks to all who donated!

* * * * *

NAL AMATEUR RADIO OPERATORS participated in the Annual Field Day exercise observed by "Hams" on June 24th and 25th. The group set up equipment at a former farm site on Eola Road. For 27 hours, they joined the world-wide test of procedures that would enable Hams to furnish communication facilities in the event of disaster emergencies.



...Ted Ulijaz...



...Bob Hodge...

* * * * *



FRIDAY LUNCHEONS POPULAR WITH NAL WOMEN

ALL visiting wives are cordially invited to join NALWO members at the informal Friday Luncheons in the NAL Cafeteria in the Village at 1 p.m. Children are also included in these get-togethers which afford visiting women an opportunity to meet and get better acquainted. Lunch may be purchased or bring your own. Pictured is a recent group at one of the popular lunch-meets.

* * * * *

WHAT DO YOU BID?

The NAL, DUSAF, AEC Duplicate Bridge Club is anxious to expand its membership. The group meets the second and fourth Thursday of each month in the lounge of the Village Barn at 8:00 p.m. You need not have played duplicate before - nor do you have to be an expert, just have an interest in the game. NAL visitors are most welcome to come when they can. The meeting nights in July are the 13th and 27th. If you need a partner, call Marv Warner, 879-2900, Ext. 264 or Helen Severance, NAL - Ext. 351.

**** MARK YOUR CALENDAR ****

Sunday, July 30th - Family night at the NAL movies, German Film, "Threepennyopera." Bring your own picnic lunch about 5:30 -- then stay for the show.

Sunday, August 20th - The NAL Annual Family Picnic.

*** Visitors welcome at both events. Further details in the Village Crier of July 27th ***

CLASSIFIED ADS

!!! REMEMBER, CREDIT COSTS LESS AT YOUR CREDIT UNION !!!

FOR SALE - 1965 Ford Truck (1/2 ton), P/U, 6 Cyl., 3 spd. Best offer. Richard Smith Ext 737.

FOR SALE - 1968 Volvo, 144-S, 4 spd., \$1275. Call Ext. 791 for Stanley Tonkin or 357-3546.

FOR SALE - Cornet w/case, new best offer. Call Homer Branch, 879-2900, Ext. 252.

RIDE NEEDED - Mon. thru Fri., from East Side of Aurora (Near E. Aurora H.S.), 8:30 to 5:00. Will share gas expense. Call Mike Diveley, Ext. 791 (614 E. Benton St., Aurora).

FOR SALE - 1965 VW Bug. Body in fair shape, engine excellent! Good tires, radio, sun roof, \$350. Call Ron - Ext. 555 or (815) 838-7085 after 5:00.

FOR SALE - '69 VW BUG - Automatic Stick, \$1250. Call Rex Reiser, 879-2900, Ext. 235.

FOR SALE - '68 Javelin, 290 Eng., A/T, PS, PB, A/C, deluxe interior, new shocks plus exhaust - \$1200. Call Ted, Ext. 729.

FOR SALE - 1971 Pontiac Lemans, 2 dr., H.T., V-8, like new. "Sell for Payments" - Call Bob Allen, Ext. 461.

LOST - Blk. ball-point pen from desk set in Ralph Wagner's office. Call Ext. 324.

WANTED - Second-hand 26" woman's bicycle in good condition. Call Loine Ext. 396.

WANTED - Used Foot Lockers. Call Ext. 449. Leave message for Tom White.

GIVE AWAY - 2 adult cats, 2 kittens (weaning age. Call Diane, NAL Switchboard.

The Village Crier is published by the Public Information Office of the National Accelerator Laboratory. Margaret M.E. Pearson, Editor. Correspondence may be directed to the address below. Telephone number of the Laboratory is 312-231-6600.

National Accelerator Laboratory
P.O. Box 500
Batavia, Illinois 60501

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