

The Village Courier

 national accelerator laboratory

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FIRST ENERGY DOUBLER TEST COMPLETED



...H. Van Leesten (L), W. Hanson making electrical measurements on an energy doubler magnet...



...Queñch following magnet test...



...(L-R) J. Davids, D. Sutter, and E. Ioratti during test run...

A small group of NAL staff members last week successfully tested an early preliminary model of NAL's "energy doubler" concept. The energy doubler idea rests on the possibility that a ring of superconducting magnets could be installed in the Main Ring tunnel, above the present ring, which, using the Main Ring as the injector, would then eventually give the machine the capability of accelerating protons to as high as 1,000 BeV. The successful test was made on Wednesday, January 10, of a magnet described as an "early paleolithic" model by staff members involved in the test. The test magnet reached 1485 amps, to give a magnetic field of 27 kilogauss.

Paul Reardon, formerly head of NAL's Booster section and presently director of Business Administration is heading a small group of ten people who, as part of the Accelerator Section, will pursue the testing of the prototype system for the proposed energy doubler in the Protomain in the Village. Here, a test loop with 400 feet of transfer line will be built. The Protomain, a prototype of the Main Ring, was built in 1969 to simulate Main Ring operation before construction, making it a logical site for testing energy doubler prototype. A second-hand rebuilt refrigeration unit has been purchased and has passed a minimum specification test (150 liters per hour of liquid helium).

Paul Reardon says of the test, "While the model we have built is not up to our final specifications, it was sufficient to test our preliminary concepts on current density, forces on the super-conducting wire, and our concepts for magnet fabrication." The doubler group has met twice weekly since September, all members of the group holding full-time assignments in other parts of the Laboratory. As recently as December, 1972 in a report delivered at a staff meeting, Reardon commented on the energy doubler, "It seems impossible, but if anybody can do it we can." After last week's test, he conceded, "We have moved from the impossible to the improbable."

One of the most pleasant aspects of the energy doubler work so far has been the ability of the NAL staff, now a seasoned group with many and varied talents, to carry out a project of this sort. Working without benefit of formal drawings and specifications, but knowing what had to be accomplished, machine shop personnel such as John Stull and Harry Warren and the Magnet Facility group, headed by Will Hanson, produced the unusual equipment, including the superconducting mag-

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FIRST ENERGY DOUBLER (continued)

net, for the first tests. Technicians working under Ralph Stegman in the Magnet Facility were Ernest Ioratti, Cecil Barnes, Ed Dreier, and Ron Norton. Technical Services' Director, H. Hinterberger and engineers R. McCracken and George Biallas have also contributed to the project, as have Technical Services' draftsmen Harry Barber, H. Fulton, and D. Olson.

Bruce Strauss serves as project coordinator; Dave Sutter is working on instrumentation, both are from the Internal Target Section. Don Richied of the Accelerator Section is involved with the refrigeration installation. D. Edwards and S. Snowdon of Accelerator Theory have been involved in the magnet and acceleration systems development, and W. Fowler, head of the Neutrino Section, has developed the refrigeration concepts.

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METRIC TRANSITION AID AVAILABLE

An all-purpose slide rule calculator designed to simplify the conversion of English measurements to metric units can be obtained from the Union Carbide Corporation. Made of heavy, plastic-coated, moisture-resistant cardboard, the calculator offers quick interchange among 35 different metric and conventional units. It also converts weight, liquid, and temperature measures, according to Union Carbide Details can be obtained from the Research Center, Union Carbide Corporation, Tuxedo, New York. The device is priced at \$2.50.

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A REPORT FROM THE ARGONNE CREDIT UNION

The election for the new Board of Directors of the Argonne Credit Union will take place soon. Any interested persons, or person knowing of other individuals interested in helping the ACU work for NAL employees is asked to contact Miguel Awschalom, Ext. 3461. A Board member is asked to serve a one-year term, with hopes he or she will wish to continue in that capacity for a two to three-year term...The Credit Union drawing for the prizes to be distributed among people filing applications for REDICASH, took place on January 4th. There were some 350 interested persons present. The winners were all Argonne employees: Ray Brittan, Herbert Martin, Loren Habegger and Arthur Froelich...The Credit Union reminds everyone that those who use REDICASH, instead of the easy terms offered by stores, air lines, gasoline companies, etc., win every time! So, apply for your REDICASH line of credit and use it wisely, advises the ACU.

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NALREC FAMILY SKATING PARTY...Saturday, January 27 - 1 to 4 p.m., Phillips Pond. JOIN THE FUN!

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...E. Dreier (L), C. Barnes banding an energy doubler magnet...



...H. Warren machined model of support system...



...The Christmas House Decorating Contest in the NAL Village was won by the Film Analysis Facility at 34 Shabbona. Standing in front of the doorway are (L-R): Judy Dill, Dawn Chartrand, Barbara Cox, Annette Roy, and Karen Schmidt, all of FAF...

BRIAN MURPHY LENDS HELPING HAND

Brian Murphy, of the NAL Machine Shop, has lived in Batavia, on the Fox River, for fifteen of his twenty years. He knows the river well, fishes often in the warmer weather. For the most part, in the winter the river is just there in back of the garage at his house. But on Saturday, December 23, Brian heard his Dad shouting on the phone to the Batavia Fire Department, "There's a woman in the river in back of my house!"



Brian, just out of the bathtub, grabbed some clothes and ran out of the house onto the ice to Mrs. Janet Levey, up to her neck in water in a hole in the ice where she had just rescued her dog.

Brian was unable to lift Mrs. Levey by himself nor with the help of his younger sister and her friends. But he held her head and shoulders out of the water as she became faint. Before long, the Fire Department arrived; the rescue was accomplished.

...Brian Murphy...

"I haven't heard from the lady since," says Brian, "but if she swelled up on her whole body like my hands did, I'll bet she was mighty uncomfortable for awhile." It was many hours before Brian could move his fingers that night.

Brian also rescued a dog from the chilly Fox water a few years ago. The grateful pooch took to guarding Brian from then on, until the dog's owner turned up, many weeks later.

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THE NAL SPIRIT...

In what is rapidly becoming tradition, NAL employees responded to the call for help with blood donations by overwhelming support. At final count at the end of two days of blood collections on Thursday, January 11, 156 people had reported to the Blood Bank; 138 pints of blood had been received. Blood Bank staff fortunately brought three extra cots, all put into service to handle the load. Many donors showed up without appointments, and donors were still appearing when the Blood Bank had to close on Thursday.

Though notice of the Blood Bank's coming was relatively short, this significant turnout indicates the thoughtful concern for human welfare that exists at NAL. Those who cannot donate or who were rejected for cause especially thank the contributors. It is no small comfort to know that the person working next to you, five days a week, cares about you and your family.

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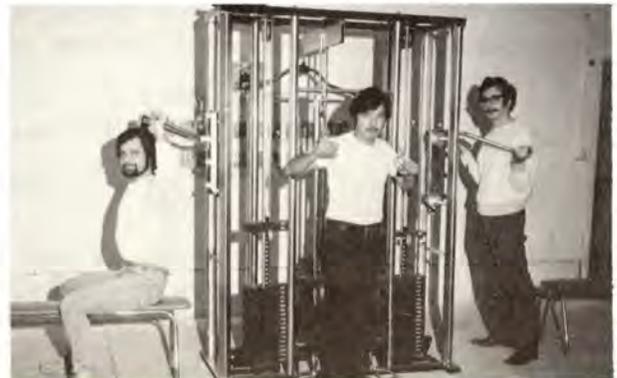
NALREC'S THEATER PARTY

NALREC is selling tickets for the Friday, February 2 performance of "No, No, Nanette," a musical production now playing at the Shubert Theater in Chicago.

The revised version of this 1925 musical includes the tunes "I Want to be Happy," "Tea for Two," "Too Many Rings Around Rosie" - among many others, and is one of the most lavish musicals to be seen in the area in many years. The production has received the approval of critics and has been responsible for a revival of tap dancing across the country. Tickets sell for \$9.00 each. Call Marilyn Paul, Ext. 3454 for tickets and further information.

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Mike Foltes, Receiving (left), Roy Rodriguez, EEO (center) and Bruce Strauss, Internal Target, try out the new 4-man master gym set located in the exercise room at the Anderson Barn. The new piece of equipment, punching bags, weights, vibrator, and other pieces are for use by NAL employees and visiting experimenters. Anyone interested in joining a Trim and Slim group, call Bruce Strauss, Ext. 3795.



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NAL NEIGHBOR NEEDS HELP

The Albright Theater in nearby Warrenville, at Second Street and Jefferson, is a relatively new playhouse in the NAL area. It needs support and assistance to become a stable, self-supporting institution that could bring good live productions close to NAL. A new play opened at the Albright on January 12 and continues each Friday and Saturday at 8 p.m. and on Sunday at 7 p.m.

The current production, "A Taste of Honey," is described as a "slice of life" of an adolescent, working-class girl, and the complex characters who breeze into and out of her life...her hard-drinking mother, the sailor who loves and leaves her, and others. It is the story of her growing up, struggling to stay afloat on the economic and emotional whirlpool she is caught in.

Margaret Hunt directs the play. Tickets are \$3.00 each; students, \$2.00. Coffee with the actors after the show is part of the format. The Albright also needs a variety of volunteer workers. Call Maria Cozzi, 325-0807 - if you are interested.

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GEORGE WILLIAMS COLLEGE OFFERS ORIGINAL OPERA

An original opera, "The Merchant's Moon," written by Donald N. Morrison, Ph.D., professor of music and creative arts at George Williams College will be performed at the college on Friday, January 19 - 8 p.m., in the Studio Theater lower level of Lowrey Center, 555 - 31st St., Downers Grove. Based on a Korean folk tale, the English-sung opera tells the story of a young bridegroom venturing to the city to buy his new bride a gift, a round mirror. When he returns to his family and shows them the gift, they each see a strange face and are disturbed, thinking he has returned with strangers. Dramatic events evolve from these circumstances. Admission will be free, and the event is open to the public.

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LAST HOCKEY TRIP THIS YEAR...Wednesday, February 21, 1973, Chicago Blackhawks against the Montreal Canadians. Bus leaves Shakey's Pizza Parlor at 6:00 p.m., SHARP! Bus will return there at approximately 11:00 p.m. The price of \$11.50 per person includes ticket, individual pizza, beer and soft drinks on the bus, and transportation.

For further information contact Peaches, Ext. 3470.

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V O'CLOCK BREAK - Village Barn - 5:15 p.m. - Tuesday, January 23, 1973.

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CLASSIFIED ADS

FOR SALE - Sherwood stereo amplifier, M-S5500 II-64 watt, and Stereo tuner, M-S3000 IV-FM/MX; Hi Fi Equip. Cabinet; Bausch & Lomb Slide Proj. & trays, M-655; Sears sewing machine, M-71 w/cabinet & chair. Call R.C. Niemann, Ext. 3236 or 964-3079.

FOR SALE - '69 Ford Mustang, 8 cyl., radial tires, excel. cond., \$1400; Bolex super 8 movie proj., like new-\$80; 4 drawer walnut desk + chair-\$40. Call Klaus Pretzl, 665-4756.

FOR SALE - '71 Ford Wagon 6, radio & auto, green-\$2400; '71 Pinto, radio & auto, yellow-gold, \$1700 or best offer. Call E.H. Scholefield, Ext. 3370 or 355-0561.

FOR SALE - '70 Monte Carlo, p/s, p.d.b., a.c., vinyl top. Average retail-\$2500, w/sell for \$2300. Call J. Edwards, Ext. 3435 or 879-5189.

FOR SALE - 1964 VW-Sedan, gd. cond. Asking \$300 or best offer. Call G. Christenson, Ext. 3728 or 541-6218.

FOR SALE - 1967 Olds 88, 4 door/hdtop., a/c, new/brakes/exhaust \$795. Call Frank Jasek, Ext. 3719 or Mo8-9513.

FOR SALE - Danish style walnut end-table. Excel. Cond., \$20. Call Ed Brezina, Ext. 3580 or 323-0794.

FOR RENT - 2/bdrm. apt., crpt/dishwasher/stove/refrig./garbage-disposal, 2 a/c, balcony. You pay elect. Avail. March 1-Wheaton call R. Crouch, Ext. 3776 or 653-4556.

FOR SALE - Gas Range-\$25. Call LaDaune, Ext. 3555.

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 312-840-3000.

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