

# The Village Crier



national accelerator laboratory

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## RRW: "ENERGY DOUBLER" APPEARS TO BE FEASIBLE CONCEPT

Robert R. Wilson, NAL Director, testified Tuesday afternoon, March 9, before members of the Joint Committee on Atomic Energy of the U.S. Congress in Washington, D.C., on the state of the Laboratory. He said, in part:

"Fortune has smiled on us at NAL since our groundbreaking on December 1, 1968. Our costs have been low enough and our construction has been rapid enough that a larger fraction of the machine is under way, or actually finished, than might otherwise have been expected. Indeed, it appears possible now that the accelerator might be in operation this coming summer."

Dr. Wilson spoke about the eventuality of NAL going to 500 BeV. He noted that the JCAE Subcommittee on Research, Development and Radiation had recommended, in 1968, that a continued study be made of the possibility of achieving a higher energy (at NAL) by the use of super-conductivity.

"It appears now that such a possibility may become feasible in the concept of what I like to call an 'energy doubler.' It is a small-bore superconducting magnet that can be mounted 'pickaback' on the present main ring magnet. If successful, it should be of modest cost and should enable us to achieve higher energies -- as much as 1,000 BeV. Just as important, though, is that operation above the 200 BeV level would cost much less using the superconducting magnet than it would using our present copper and iron magnets. In fact, a considerable fraction of the cost of the energy doubler might be recovered in the first years by savings in operating costs. It might also forestall the necessity of installing additional water cooling or of installing devices to smooth out our electrical loads on the power lines....

"....Because the bore of the new magnets would be so small, because no new tunnel or buildings would have to be constructed, we can hope to be able to build such a device for less than \$20 million, possibly even for less than \$10 million. All of these considerations, it must be emphasized, are based only on the most preliminary of studies....

"....If we have done at all well at the NAL, it is in part a reflection of the interest, the eagerness, the ability, the determination of the physicists in this country to explore the existing frontier of knowledge. I would hope that the JCAE, which has done so much to initiate this project, to bring it to this point of reality, to inspire it to over-reach the initial goal, will help it to reach an operational level that will justify what they have accomplished thus far. I would hope, too, that in living up to my commitment to the Committee not to exceed \$250,000,000 for construction, the Committee will challenge me to build as extensive experimental facilities and attain as high an energy as is possible without exceeding the Congressional authorization of \$250,000,000."

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NAL MEETING SCHEDULE: NAL Users' Organization, April 30 - May 1; NAL Program Advisory Committee, May 14-15.

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*...Arthur Theriault, Donald Getz, Bradley Bennett and West Chicago Mayor John Downs....*

Photo by Tim Fielding, NAL

Wilkening, of St. Mary's Roman Catholic church, West Chicago, and Mayor John Downs, of West Chicago.

#### FORMER MAYOR VISITS HIS "HOME TOWN"

Arthur Theriault, former Mayor of the Village of Weston, visited his former "home town" last week as a guest of the Laboratory. Theriault was a catalyst in "selling" the location of NAL in Illinois. Now a bank official in Chicago, he resides in nearby West Chicago.

Weston's formal affairs have now been officially wound up and the village has been officially dissolved.

In a brief ceremony in front of the Director's complex in the NAL Village (formerly Weston), Theriault was presented with a plastic-encased B-2 magnet outer coil as a memento of his early association with the Laboratory. In return, Theriault gave the Laboratory the original charter of incorporation for the Village of Weston, dated October 23, 1963, and the former village's corporate seal. Both will become a part of the NAL Village Exhibit Hall.

Theriault's family then toured the village and the main site. They were joined by the Rev. Henry

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*...As Spring approaches, more and more visitors are asking for tours of the NAL site. Recently, nearly 250 physicists and engineers attending the Particle Accelerator Conference in Chicago took a bus ride to NAL to spend the afternoon in the NAL Village and at the Main Site. Here, Tom Collins, NAL Associate Director, points out a focusing magnet in the Transfer Hall.*

Photo by Tony Frelo, NAL



*...Among other visitors were four cadets from neighboring Marmion Military Academy, on Butterfield Road. All are staff members of the academy newspaper, The Cadet Call. Here, the students pose with their faculty adviser, Father Peter. The group interviewed Donald R. Getz, Assistant Director, and then toured the Main Site.*

Photo by Fran Pisarek, NAL

## NAL ARTISTS PREPARE FOR THIRD ANNUAL SHOW



....Shirley Bickel stands beside her seascape: "Endurance - Whale Ship: The Charles Morgan."

Photo by Tony Frello, NAL

At the end of her busy days as Payroll Supervisor, Shirley Bickel dons her artist's smock to create originals. She is one of the accomplished artists in NAL's family. Her works will be displayed in NAL's third annual Art Show during the week of April 26.

Works of NAL, DUSAF and AEC employees will be exhibited in the NAL Village Cafeteria during this period.

Miss Bickel, who has been an NAL employee since February, 1968, is a member of the Naperville Art League and the Oak Park Art League. She has studied with Charles Vickery and John Fabian and also attended the Art Institute of Chicago. Her paintings may be found in the Campanile Galleries, the University Club, Prestige Art Gallery and The Framers. She has exhibited at the Covenant Club, the Fine Art Promenade-Oak Brook, and the Frederick Law Olmsted Society, Riverside.

Among art honors won by Miss Bickel are the Purchase Award, Northern Illinois Gas Co., 1969, and Honorable Mention, Municipal Art League, 1970.

She also has held a one-woman show at the Covenant Club of Illinois, the Civic Symphony of Oak Park, the Hawthorne Bank of Wheaton and Baird and Warner, of LaGrange.

In addition to Miss Bickel, the following already have indicated that they will take part in the NAL exhibit: Fred Wempe, Main Ring (oils); Frank Logan, DUSAF (pen and ink sketches); Calvin Palmer, DUSAF (oils); Wayne Nestander, Experimental Facilities, (wood carving); Irene Sweet, Accelerator Theory, (paintings and drawings). The Chicago Indian Village will display arts and crafts, which will be for sale. The Village group includes the American Indians who took part recently in the "Black Expo" exhibition at the International Amphitheatre in Chicago.

Mrs. Dorothy Poll, R.N., Personnel, is arranging the NAL art show. She has distributed entry forms to employees who are interested in exhibiting. The forms must be returned to her by March 24 so that accommodations may be made for hangings and displays. In addition to paintings, handcrafts and sculpture, also invited are hobby displays and photographic works. To reserve space, or for further information, please call Mrs. Poll at Ext. 232.

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## NAL SWIM NIGHT MARCH 25TH

Thursday, March 25, is the date of the next NAL Family Swim Night. It will be held at the Marmion Military Academy pool on Butterfield Road, near North Aurora. The time is 7:30 to 9:30 p.m. Spectators are welcome; girls must wear caps. Please advise Mrs. Jodi Eskey, Ext. 348, if you plan to attend.

## UNDER THE SIGN OF THE ZODIAC

The NAL Village Barn; the time, 9:00 p.m. to 1:00 a.m.; the date, Saturday, March 20. Those are the items you should place on your calendar for the "Discotheque, 1971, Under the Sign of the Zodiac." The music will be jazz, rock and the sounds of today. Refreshments will include ham, corned beef, potato salad, and cheese plate. Beer and mixes will be provided. For further information, call Jimmy Jenkins, Ext. 521.

NEW BOOKS IN THE NAL LIBRARY

The following books have been received recently by the NAL Library: Handbook of Mathematical Tables and Formulas, Burlington & May; Essays in Physics, Academic Press; An Introduction to Liquid Helium, J. Wilks; Standards Handbook for Electrical Engineers, McGraw-Hill; Advances in Cryogenic Engineering, K.D. Timmerhaus; Picture Processing by Computer, Academic.

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CHICAGO LINE ACCESS: NAL employees wishing to telephone Chicago on Laboratory phones are advised that the Chicago lines no longer can be reached by dialing the number Seven. Henceforth, Chicago line access may be obtained by dialing the two digit code 17, advises Mrs. Carolyn R. Hines, Communications.

NAL SOCIAL CALENDAR	
Saturday, March 20	"Discotheque 1971, Under the Sign of the Zodiac," in the NAL Village Barn, 9:00 p.m. - 1:00 a.m.
Wednesday, March 31	NALWO Spring Tea at the White Farm, 1:00 p.m.
Thursday, April 1	Happy Hour, NAL Village Barn from 5:00 p.m. to 6:30 p.m.
Thursday, April 15	" " "
Saturday, April 24	Monte Carlo Night
April 26 thru 30th	NAL Art Exhibit

CLASSIFIED ADS

FOR SALE - 18 ft. outboard boat, 5 yrs. old, 90 hp. Mercury, trailer, USCG requirements, full canvas, ready for water. \$2500. Call H09-4624.

FOR SALE - '65 Mustang 2-dr. HT, V-8, auto., 46,000 miles, good condition, \$750 or best offer. Plus '68 Volkswagen, excellent condition, \$1300 or best offer. Also 7'x7' Hettrick umbrella tent. Call Maureen Beach, Ext. 555 or 892-7298.

FOR SALE - '66 Mustang Hdtp., 6 cyl., 3 spd. Excellent condition both in appearance and mechanically. 25 miles per gallon. \$775. Phone 668-2659.

FOR SALE - '70 Dodge Super Bee, 383 Magnum, auto, p.s., \$2600. Call Linda on Ext. 568 or 879-1062.

TO BE GIVEN AWAY - 1 kitten. Call Gloria Beck, Ext. 346.

FOR SUB-LEASE - 1 bedroom apartment located at Marywood Apts. Available immediately. Includes swimming pool. Call Sgt. Lara, 879-5004. After 4:30, call 898-0465.

FOR SALE - Self-propelled rotary mower, 22" yardman, Briggs & Stratton engine, safety blade clutch, good condition. Contact Ed Brezina, Ext. 580.

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