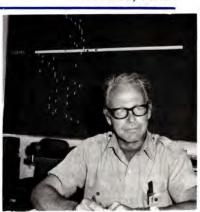
Vol. 5 No. 23 June 28, 1973

## SUMMER STUDY PLANS READY

Final plans for the 1973 Summer Study are being completed by Donald A. Edwards, chairman of the Summer Study and head of NAL's Energy Doubler Group. Impetus for the 1973 study came from a meeting of the NAL Long Range Planning Committee, a group of distinguished physicists whose counsel is frequently sought by NAL planners. The Committee recommended in November, 1972, that a study session convene in the summer of 1973 to consider four major topics, plus others that might sprout from those discussions, directions toward which NAL research might turn in long-range considerations. The four study topics are: (1) New experimental areas at NAL, or large-scale improvements to the existing areas; (2) Use of large detector arrays in NAL experimental lines; (3) The possible use of proton-proton colliding beams; (4) The possible development of electron-proton colliding beams.



... Donald A. Edwards...

With this agenda in front of them, some 50 high energy physicists will meet in concentrated sessions between July 9th and August 3rd in Aspen, Colorado. The group is uniquely qualified by interest and experience to clear the trail for the next phase of NAL development. Several hundred physicists expressed an interest in participating in the 1973 Summer Study, but only a fraction of this number could be chosen. About 80% of the physicists will be non-NAL users of the accelerator; 20% will be NAL staff. Participants will divide into four topic groups for most of the time, but strong interaction between the groups is encouraged.

Aspen has long been a favorite spot for physics' gatherings. For example, previous NAL summer studies were conducted at the Aspen Center for Physics, founded in 1960 through the gift of a wealthy benefactor interested in providing an atmosphere conducive to free interaction between many fields of physics. Free from the distractions of office routine, and enhanced by Colorado's beautiful setting, many physics-related groups use the Center each summer. It is, in fact, the largest summer industry in Aspen. Although the Center was not available for the NAL '73 study, staff of the Center assisted with NAL housing arrangements. The excellent physics library at the Center will be available to NAL participants.

"The 1973 study is a contrast to previous summer studies," Dr. Edwards notes. "They were directed toward a particular machine or facility. In 1973 we have that machine, with a capability of operating at 400 BeV. Now we're in a position to consider additional ways of making use of it beyond the scope of present Laboratory commitments."

For the next few weeks, Dr. Edwards will work with one NAL hat in each hand. He recently moved from an office in the Cross Gallery, where he was a part of the Accelerator Theory Group, to the office and laboratory in the Village where the Energy Doubler Group carries on its research. An alumnus of the University of California-Berkeley and of Cornell University, he was on the staff of Cornell during the development of a series of four synchrotrons which began in the late forties. Dr. Edwards joined the NAL staff in September, 1969. He and his wife Helen, who is also an NAL physicist, often came up with missing pieces of the puzzles involved in the NAL commissioning in 1972.

## NAL AT THE MID-AMERICAN CANOE RACE



...(L-R) R. Mirdas, B. Strauss, D. Kowalsky...



... Bob Hodge...



...Jim and Fred Falk ...

Many NAL employees participated in the 13th annual Mid-American Canoe Race held on the Fox River recently. Four 2-man NAL-related teams entered the race while several members of NALARC (NAL Amateur Radio Club) manned the St. Charles check point in the communications network that is a vital part of operating the event.

Rich Mirdas (WA9LRC), Internal Target Group; Bruce Strauss (K2SZO/9) Energy Doubler Group; Bob Hodge (WA9HQE and WB9MBJ) and Diane Kowalsky, both of the Accelerator Division are shown above at the station they operated from 8 a.m. to 4 p.m. on the day of the race. The NAL "Hams" used the repeater of the Northern Illinois Amateur Radio Club, located in Batavia, assisting in smooth operation of the race and standing ready to summon help in the event of an emergency. Similar teams of Fox Valley amateur radio operators were located at each check point of the race. Jim and Barbara Schluchter (Energy Doubler), and Kurt Kasules (K9ZW4), Accelerator Division, also aided the NALARC efforts.

Entered in the 22-mile canoe racing, which began at South Elgin and ended at North Aurora, were the teams of Dennis Augustine (Accelerator Division) and George Krafczyk (Proton Section) whose final racing time was 2 hours, 43 minutes; Harry Howe (Accelerator Division) and his partner, Roger Haas (2 hours, 53 minutes); Max Palmer and Jeff Gannon, both of the Accelerator Division (3 hours, 49 minutes); Jim Falk (Accelerator Division) and his son, Fred (3 hours, 49 minutes). The Falks are shown above as they crossed the finish line.

Jack Stiles (Vehicle Maintenance Group) served as portage chief at the North Aurora portage of the canoe contest. A lieutenant in civil defense, Jack has served as a volunteer worker for the Mid-American for the past three years.

### PROFESSORS TOUR NAL FACILITIES

Thirty-five participants in a 10-day course entitled "Frontiers in High Energy Physics," visited NAL twice in the course of their recent study. The course, funded by the National Science Foundation, was held at Northern Illinois University, DeKalb, Illinois, about 30 miles west of NAL. Dr. Carl Albright, a professor of physics at NIU, and a frequent visitor at NAL, headed the program. Members of the group came from colleges throughout the U.S., schools without a heavy concern in the large-scale research into high energy physics being done at NAL. The meetings gave these faculty members an opportunity to see first-hand the current status of high energy experiments.

On Thursday, June 7th, their visit to NAL included presentations by Edwin L. Goldwasser, NAL Deputy Director; Lee Teng (Accelerator Division); D. Jovanovic (Internal Target-Accelerator Division); R. Orr (Neutrino Section); R. Lundy (Meson Section); L. Read (Proton Section), as well as a tour of the experimental areas. On Wednesday, June 13th, the professors listened to discussions of the NAL experimental program by R. Carrigan (Monopole Search), J. Walker (Photon Search), L. Voyvodic (Proton Total Cross Sections), and representatives of Muon and Neutrino Experiments.



...L. Voyvodic (L), G. Simon (in port) describe NAL 15 ft. Bubble Chamber to visiting professors...

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### INTERNAL TARGET HEAD REPORTS PROGRESS



...Drasko Jovanovic...

Experimentalists working in NAL's Internal Target Area have completed taking data for four experiments, including the highly-successful U.S.-U.S.S.R. collaboration which opened its research in January of 1972 as the NAL machine first reached an energy of 100 BeV. According to <a href="Drasko Jovanovic">Drasko Jovanovic</a>, head of the Internal Target Group, completion of these experiments deserves special notice because they provided very early experimentation in an experimental area in the Main Accelerator before the external experimental areas were completed.

"At one point in NAL planning, such an area was thought to be potentially detrimental to the operation of the machine, primarily because of the possibility of excessive radioactivity," Jovanovic observed recently. "But now we have proved that the internal target is not only feasible but rather valuable. Experimenters have been able to utilize the wide range of energies in the Main Accelerator and to

benefit from study of the increases in energy before extraction. No small credit should be given to our Soviet collaborators who first applied the gas jet technique at Serpukhov in 1968."

Jovanovic's recent appointment as head of the Internal Target Group in NAL's Accelerator Division, comes at a point when the Group is considering its next direction, having finished Phase I of its program, so to speak. He brings in the knowledge he has gained since he became attached to the Accelerator Division development in mid-1972. For some months before that, while working for the Argonne National Laboratory, he lent his hand where needed at NAL. Tall, smiling, and energetic, Jovanovic was born in Belgrade, Yogoslavia, where his father headed the physics department at the University of Belgrade, and his mother was also in physics. The elder Jovanovic was an assistant to Marie Curie in Paris for 12 years. Drasko came to the University of Chicago on a UNESCO fellowship; he received his Ph.D. from Chicago. After crossing the U.S. thirty times between 1960 and 1962 as an experimenter at the Brookhaven National Laboratory in New York where he and his wife and family maintained residence, and at the same time serving as a faculty member at LaJolla Branch of the University of California, Drasko received a domestic ultimatum from Stanka. The solution -- live near an accelerator.

Dr. Jovanovic's long acquaintance with accelerator laboratories has given him much expertise in the problems of radioactivity. Putting this to work immediately in the Accelerator Division, he designed "the Rover," a golf cart outfitted with detection equipment. A projecting wand on the Rover records data on radiation levels, enabling one person to monitor the 4-mile Main Ring quickly and efficiently.

#### ALL STAR TICKETS ON SALE

A very limited number of tickets is available for the All Star Football Game at Soldier Field, Chicago, on Friday, July 27th. Tickets are \$10.00 each and include entry into the park, bus transportation to and from NAL, and snacks aboard the bus. Don't wait to buy! Call George Doyle, Ext. 3421.

## NALWO GOURMET GROUP MEETS JUNE 30

A Texas-style barbecue will be featured at the Saturday, June 30th meeting of the NALWO Gourmet group. There is still room for four more couples. Call Mary Otavka (969-6199) for recipes and further information. The dinner will be at the Raymond Jarema's home, 301 Montclair, Glen Ellyn, phone - 858-5225.

#### THIS IS FOR YOU

The American Red Cross will be at the National Accelerator Laboratory on August 1-2, 1973 to accept blood donations from employees. Twenty percent of our total employee population must donate approximately 200 pints in order for NAL to continue its full coverage.

NAL visiting experimenters may also donate; their donation will not be credited to the Laboratory's account but they and their families will be covered for the following year.

MAKE YOUR APPOINTMENT NOW BY CALLING, Dorothy Poll at Ext. 3232

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The National Accelerator Laboratory will observe the Independence Day Holiday on Wednesday, July 4, 1973.

## IN THE NAL AREA...

Friday, July 6, will be "Astronomy Night" in the free natural history summer series at the Roy C. Blackwell Forest Preserve near Warrenville. Beginning at sunset, three films on modern astronomy will be shown and several telescopes will be available for audience skywatching. The Blackwell Preserve is located on the west side of Winfield Road, a half-mile north of Butterfield Road. From the parking area, visitors should follow the lantern-lit path across the meadow, turning right to the amphitheater. Bring your own blanket or chair and insect repellent.

Short, intensive summer training in international affairs, designed for college and university students at large, is being offered at George Williams College, Downers Grove. George Williams faculty participates, representing many disciplines, as well as representatives from the State Department, the Institute of International Education and the United Nations. A schedule of the classes, the credit hours they carry, and tuition information may be obtained by calling Dr. Charles Rhee, 964-3100, Ext. 255.

The College of DuPage will present its fourth annual summer theater program from July 24 to August 12. The plays in the repertory program include: "Take Me Along," "You Can't Take it With You," "A Doll's House," and "The Roar of the Greasepaint, The Smell of the Crowd." Each will be presented on a rotating basis Tuesday through Saturday at 8:15 p.m. and Sundays at 7:15 p.m. in the Convocation Center located in M-building on the college's interim campus, 22nd Street and Lambert Road, Glen Ellyn. "Greasepaint.." will be offered July 24 & 29; Aug. 1,5,11; "Take Me Along," July 25,28; Aug. 3,8, & 12; "You Can't Take It With You," July 26,31; Aug. 4 & 9. ""Doll's House," July 27; Aug. 2,7, & 10. Additional ticket information can be obtained from the Office of Student Activities, 858-2800, Ext. 241. Two types of season tickets are available --season and individual performance. Individual performance tickets are \$2.00, adults; \$1.00, students on Friday and Saturday nights; \$1.50, adults, and 75¢ students, on other week nights.

## SOFTBALL LEAGUE SCORES

June 11		June 13		June 18			
Operators	15	R. F	28	Receiving	13	Been Transferred	9
Been Transferred	5	Operators	2	Been transferred	12	R. F.	7
R. F.	16	Physics Research	14	Physics Research	10 (F)	Physics Research	16
Receiving	7	Been Transferred	12	Operators	0	Receiving	13

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

# CLASSIFIED ADS

FOR SALE - Moving to Europe & must sell '71 Cougar XR-7, p/s, p/disc. brakes, automatic, factory air cond., radio, vinyl roof, radial tires, \$2800. Call Steve Ellis, Ext. 3751 or 898-7297.

FOR SALE - 1962 Chevy Wagon, bad engine, slipping transmission, but runs. Make an offer. Call George Benedetti, Ext. 3575 or 393-9195.

FOR SALE - 1970 Travel Trailer, Impala, 26 ft., 2 door, dual axle, completely self contained. Book value, \$3326, will sell for \$2995 (firm). Call J. Ticku, Ext. 3729 or 897-7519.

FOR SALE - 19" Zenith Color TV, new pic tube, \$155. Call D. Mendenhall, Ext. 3724 or 896-9308.

FOR SALE - Ward's self-defrost refrig., green, gd. cond., 9 mos. old. Call Nelson Bye, 840-3649.

FOR SALE - 2½ yr. old Wurlitzer organ, full toy box, 13 pedals, Italian Provincial style, good

condition. Call Milton Davis, 898-4226.

FOR SALE - Tube type cathode-ray oscillscope w/spare cathode tube, works fair, \$45; Testrite enlarger w/#27676 perfex color head I:4.5 F-90mm lens, \$20. Call R. Doyle, 969-2042 or beeper #270. FOR SALE - Strolee of California 3-in-1 baby's car & travel bed/buggy/stroller, 1 yr. old, excel. condition, cost \$60 - make an offer. Call David Saxon, Ext. 3187 or 231-7044.

FOR SALE - Honda 305cc Scrambler, excellent condition, electric start, just tuned, plus new battery, \$350. Call James W. Thompson, Ext. 3355 or 859-2089.

FOR SALE - 1970 Suzucki T-250 motorcycle, \$425. Call G. Davidson, Ext. 3307 or 231-7036.

FOR SALE - Tall 20 gallon stainless Aquarium with stainless hood, florescent light, piston pump, filter, gravel, \$20. Call A.D. Cook, Ext. 3595 or 727-2849.

WANTED - Family of visiting scientist needs a baby high-chair for summer. Please call Mervyn Wong, 851-2337 or Ext. 3201.

<u>FREE</u> - Beautiful white dog, loving & obedient female, 1 yr. old; <u>FOR SALE</u>: New inside flush door with hardware,  $8"x30"x1^{1}2"$  - \$12.50. Call M. Kampikas, Ext. 3377 or 879-1722.

WANTED - Used Honda XR-75 or SL-70 trail bike or equal; FOR RENT: Week or month, 2/bdrm., a/c hse. on waterfront of Pine Island, Florida near Fort Meyers. Call Art Streccius, Ext. 3788 or 392-4905.