


# The Village Crier

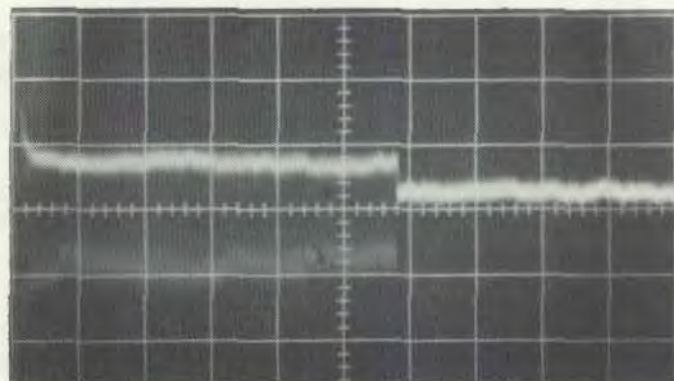
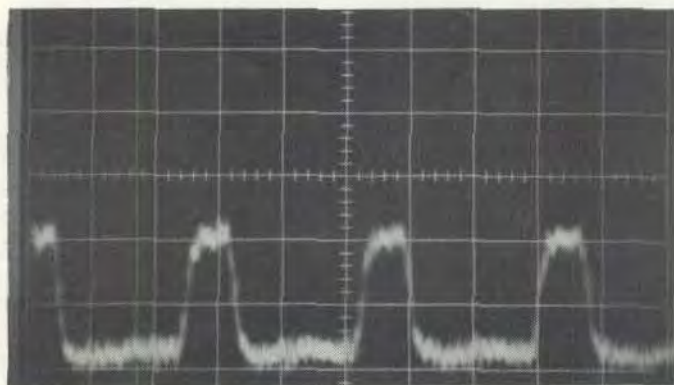
 national accelerator laboratory

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## BOOSTER GROUP MAKES SIGNIFICANT GAINS DURING FEBRUARY



....(Above) four turns of a Booster beam near the beginning of the magnet cycle.... (Right) the accelerated beam up to the time the extraction system is activated, which in this instance occurred 28 milli-

seconds after injection. The pulse height (down) is approximately 1 milliamper peak current and corresponds to an average current (up) of  $\frac{1}{4}$  to  $\frac{1}{2}$  milliamper....

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Protons were accelerated to 1 BeV in the Booster at 6:00 a.m. on Saturday, February 6, a notable milestone for both the RF and the Booster sections. The maximum energy is limited to 1 BeV only because there has not yet been time to put the East Gallery rf systems into operation. Operation continued through the month. On Friday, February 26, the 1 BeV beam was extracted from the Booster and injected into the Main Accelerator by the efforts of the Beam Transfer section. In the short time available for main accelerator beam experiments, the beam was detected as far along the main accelerator as Station A-13, approximately 1,300 feet along the accelerator. The following report on the Booster section's accomplishments was written for *The Village Crier* by Roy Billinge, Booster Section Leader:

Since the first accelerated beam in the Booster on February 6, 1971, the machine has been run regularly each week, to improve its performance, but mainly to allow the commissioning of the fast extraction system built by Beam Transfer section and the transfer of the beam over to the Main Ring.

We were particularly happy to find that corrections to the orbit were not required for acceleration, even though the Booster is at present the smallest aperture proton synchrotron in the world by almost a factor of 2.

During the acceleration cycle, the frequency of the accelerating voltage which is applied to the beam must be increased at just the correct rate to maintain the beam within the aperture of the magnet.

Here again, it was not found necessary to adjust the frequency curve in order to

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BOOSTER GROUP MAKES SIGNIFICANT GAINS DURING FEBRUARY (Continued from Page 1)

obtain the initial acceleration, although subsequently improved accelerated beam stability and intensity were achieved by making small corrections.

This all speaks well for the entire Booster Ring, but particularly for the accuracy with which the magnets have been surveyed into position. It also indicated that all 96 magnets are running together with their fields rising exactly in step.

In order to make the circulating beam more readily observable, the electrostatic chopper is used to select one microsecond of beam from the 10 microsecond linac beam pulse.



*....Rich Janes and Ed Stitts read power supply monitor for septum magnet being tested below in Booster tunnel....*



*....Jim Schluchter, with head set, and Bill Martin read data as it appears on monitor in Booster control room. Head set permits Schluchter to communicate with both Booster and Beam Transfer groups....*



*....Boyd Dean, Henry Koecher, Leonard Indykiewicz and Ed Hubbard administer power tests to septum magnet in Booster ring....*



*....Rich Howel, top, and Fred Sarver, standing, install magnet shields in RF unit in Booster tunnel....*

Photos by Tim Fielding, NAL

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NAL MEETING SCHEDULE: Fifteen-foot Bubble Chamber Workshop, March 11-12; NAL Users' Organization, April 30-May 1; Program Advisory Committee, May 14-15.

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## NAL HOUSEKEEPERS INJURED IN AUTO ACCIDENT

Kennard Williams, of the Equal Employment Opportunity Office, appealed this week for NAL employees to remember with cards and letters some of the men and women who clean their offices and laboratories. Four were injured seriously in an automobile accident last week.

"We have been especially pleased by the day-in and day-out efforts of these employees of one of our respected sub-contractors," said Williams. "I would appreciate expressions of sympathy and kindness for those injured when they were enroute to their assignments at NAL."

B&H Janitorial Services is operated by Willie Barnes and Tom Harper. Their central office is located in Maywood, Illinois. B&H is under contract with NAL to do all the cleaning services at both the Village and the Main Site.

On Wednesday, February 24, about 2:30 p.m., four B&H employees were traveling on the Dan Ryan Expressway when their automobile was forced off the road; it hit a concrete pillar. All passengers in the car were seriously injured; fortunately none was killed.

Mrs. Shirley Chatman, the driver, (and a sister of Barnes) suffered head and internal injuries. Mrs. Chatman underwent head surgery the evening of the accident. Louis McLain, sitting in the back seat, suffered a broken leg, a fractured arm, three fractured ribs and serious hand lacerations. Alfred Davis was also sitting in the back seat of the car and suffered serious head lacerations. Mrs. Laura Strawder suffered a dislocated hip and will remain in traction for several weeks.

Cards and letters may be sent to the patients at Mercy Hospital, 2520 South Martin Luther King Drive, Chicago, Illinois. Mrs. Chatman is in room 1104, Mr. McLain is in room 908 and Mrs. Strawder is in room 512. Mr. Davis has been discharged from the hospital; he resides at 6944 South Peoria Street, Chicago, Illinois.

The car is a total wreck. Mr. Barnes is "thankful that all victims of the accident survived and that none is crippled for life."

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**PROTONS END SEASON:** The NAL Protons completed their 1970-71 basketball season by losing a thrilling, see-saw game to Koller Dodge, 50-49, in the Naperville YMCA league. As a result, the Protons' record in the league for the season was three wins and 11 defeats. High-point man in the final game was Roy Justice, Physics Research, who scored 30 points. Bobby McNeal, Booster, scored 16 points.

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**TABLE TENNIS CHAMPION:** James Walker, Experimental Facilities, defeated Lee Brown, Radio Frequency, in two straight games to become NAL's 1971 Table Tennis champion in a lunch hour competition at NAL's Village Recreation Hall March 5. Bobby McNeal, Booster, was score-keeper. The scores were 21-18 and 21-14.

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### MORE BUFFALO ARRIVE AT NAL

The buffalo herd at NAL is expanding. A State of Illinois Department of Conservation truck arrived at the Laboratory last week to deliver a buffalo cow and calf. At left, Rudy Dorner, NAL Site Manager, was on hand to greet the new arrivals, which bring the herd to 18. The adoptees may be seen on the former Kammes Farm. "Both are females," said Dorner, "and we are hoping for a population explosion in the buffalo community one of these months."

The new arrivals complete the planned acquisitions from the State of Illinois.

Photo by Fran Pisarek, NAL

YOU CAN S T R E T C H YOUR MONEY  
WHEN YOU USE YOUR CREDIT UNION....

By Miguel Awschalom

John Chonko, Manager of the Argonne Credit Union, explains how to consolidate several debts into one and pay less for a loan. YOU can consolidate many little nagging bills into one big loan and save. Sometimes we all get low on cash with many small (sometimes large!) and inevitable bills (doctor, dentist, school clothing and books, car repairs) and we must seek help. Some people go to finance companies. The monthly payments to a loan company are bearable, but did YOU know that they would have been smaller if the loan had come from YOUR credit union?

Consider a loan of \$800 to be repaid in 18 months. Let us compare costs.

|                           | Loan<br>Company      | YOUR<br>Credit Union |
|---------------------------|----------------------|----------------------|
| Amount YOU borrowed       | \$800.00             | \$800.00             |
| Number of payments        | 18                   | 18                   |
| Amount of each payment    | \$ 52.81             | \$ 48.05             |
| Total of all payments     | \$950.58             | \$864.90             |
| True annual interest rate | 22%                  | 10%                  |
| Total interest YOU paid   | \$150.58             | \$ 64.90             |
| YOUR savings              | \$150.58 - \$64.90 = | <u>\$ 85.68</u>      |

CREDIT UNION TO HOLD ELECTION

NAL employees holding proxy ballots for the annual election of directors of the Argonne Credit Union may send them to Miguel Awschalom, Radiation Physics, who represents NAL on the board. Fifteen directors are to be elected from the membership. The proxy system permits a member who is not present at the election to assign his voting privileges to another member who is present at the election. Each \$5 share owned by an employee as of February 10, 1971, entitles him or her to one vote for each director to be elected, or 15 votes. The election will be held March 17.

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NAL SOCIAL CALENDAR

- Wednesday, March 17 Village Barn. Happy Hour.
- Saturday, March 20 "Discotheque 1971. Under the sign of the Zodiac," in the NAL Village Barn.
- Wednesday, March 31 NALWO Spring Tea at the White Farm.
- Saturday, April 24 Monte Carlo Night.
- April 26th thru 30th NAL Art Exhibit

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CLASSIFIED ADS

FOR RENT - 3 b.r. house in Aurora, carpeted; 2-car garage, near school and supermarket. Call 898-1957 or Darryl Porter, Ext. 250.

FOR SALE - 1 50' tri-pod tower. \$50. Call 898-1957 or Darryl Porter, Ext. 250.

FOR SALE - Chev. Impala wagon, Calif. driven. \$395.00. Also, desk drafting table combination, Hamilton, good condition \$75. Call Ext. 381.

FOR SALE - '67 Cadillac Sedan-de-ville, 31,000 miles, very good condition. Asking \$3050. Call F.C. Mattmueller, Ext. 281.

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