

# The Village Critic



fermi national accelerator laboratory  
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## FIRST INTER-LABORATORY LIQUID NEON TRANSFER

On January 21, the first transfer of liquid neon from Brookhaven for the Fermilab bubble chamber was completed. Over the preceding two weeks, two loads of liquid neon (11,000 liters total) had been trucked from Brookhaven National Laboratory to Fermilab. The transfer required a heroic effort on the part of the Fermilab drivers when they drove through some of the worst winter storms that the Eastern United States had seen this year. In addition to these monumental efforts, an important assist was given the project by the very thorough work on the part of Don Bray in the Batavia Area Office of the Energy Research and Development Administration.

Two of the Laboratory drivers -- George Benedetti and Darrell Sigmon, working with John Coulson in Site Services -- made the run with the Laboratory's 1965 tractor and a special transport trailer built by Paul Thorkelson and Larry Biggam of the Bubble Chamber staff. Benedetti and Sigmon left Fermilab on Saturday, January 17, heading east, with one ear on a threatening weather forecast, the other on their vehicle. By Youngstown, Ohio, there was two inches of snow as they stopped for the night and left their truck for repair of an electrical short while they slept. In the morning, when they hit Pennsylvania, there was six inches of snow on I-80 and only one lane open through the mountains. "We had one really close call when a car stopped right in the one open lane and we had to get around him," Darrell recalls.

They pushed through the worst storm of the winter, very glad to reach Brookhaven where their pay load waited. The 26-hour return trip was "great," by comparison, the men report -- dry and clean roads all the way. They were followed by an escort car driven by George Mulholland, head of the 15 ft. Bubble Chamber. George checked gauges every 3-4 hours on the trailer to be sure the refrigeration unit was functioning. Ronald Picinich of Brookhaven traded driving with George and the truck drivers spelled each other, napping in the escort car.

A week later, on the second run, Jack Riffell replaced Darrell and Jack and George Benedetti headed east, this time using a tractor borrowed from Argonne and the same trailer. There was no trouble on the trip east. They loaded the trailer at Brookhaven and the two-vehicle troupe headed home. Everything went well until Indiana, seventy miles east of the Illinois border. Then winter lashed out and clobbered them -- icy road, blinding snow, and wind. After a coffee stop, Jack was able to forge ahead with the traction from the heavy weight trailer, but the escort car was soon slowed to 10 mph.



...Fermilab drivers Darrell Sigmon (L), Jack Riffell. (George Benedetti missing from photo...)



...Robert Pucci filling high pressure storage tanks, once surplus railroad cars...

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Riffell was alone on the road with no one to check the gauges and near-zero visibility. In the remaining 180 miles he saw dozens of cars and trucks lying in the ditches on both sides of the road as he groped through the storm. "I decided to go right through to the Lab," he says, "and get that stuff home and just hope the other guys were OK. I looked for them in the oases and they looked for me, but we didn't see each other again until we met back at the bubble chamber on site."

Thanks to these dedicated staff members, experimenters at Fermilab will have the additional neon for an upcoming run for a Columbia-Brookhaven National Laboratory neutrino experiment and a Berkeley-Seattle anti-neutrino experiment in the 15-foot Bubble Chamber. These experiments are using a richer neon mixture than that used in the recent Wisconsin-CERN-Berkeley-Hawaii run that detected the unique  $K^0$ , positron events. The richer mixture will yield more events for neutrinos and anti-neutrinos.

"It's very exciting to think about what's just ahead in this run," says George Mulholland. "No one in the world has ever run an experiment with this much neon and we ought to see lots of statistics come from the run that will give us some of the answers we're looking for right now in high energy physics."

A special dewar trailer, significantly modified by the Fermilab Bubble Chamber Group to provide hydrogen cooling, is used to transport the liquid. The neon and deuterium are transported as liquids since a chamber fill can be held in a few truck loads as contrasted to the twenty or more when shipped as a gas in standard trailers. At the same time, a shipment of liquid minimizes the loss of gas through reduced handling.

These transfers crown many years of discussions between Fermilab, Brookhaven and Argonne. Planning began several years ago when a bubble chamber working group was established by the U.S. Atomic Energy Commission, now ERDA. The working group included Bob Watt of SLAC, Gale Pewitt of Argonne, Al Prodehl of Brookhaven National Laboratory, and Russ Huson of Fermilab. The group worked more than a year and a half on safety matters. In addition, one of the important recommendations of the working group was that the laboratories make arrangements to share their valuable and sparse liquid resources. The new arrangement permits the laboratories to share liquids worth several million dollars. Since this pool of liquid constitutes an appreciable fraction of the world's resources, only arrangements of this sort permit the flexible operation of the very large bubble chambers now in existence. For example, Russ Huson points out that Fermilab does not need to buy any deuterium under the new arrangement. Each laboratory can have unique facilities for processing specialized gases. Fermilab now has developed a neon separator which will not be needed elsewhere. Both neon and deuterium are shared. The new arrangements will require tighter scheduling of the bubble chamber facilities, but the results should be worthwhile.

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CREDIT UNION ANNUAL MEETING MARCH 17

Keep your calendar open to attend the Argonne Credit Union Annual Meeting on Wednesday, March 17, 1976 at Building 213 Cafeteria at Argonne. The exceptional rate of growth this past year in the Credit Union is an interesting story, and Fermilab members are invited to hear the details. There'll be door prizes, and news about the Credit Union. A social hour will start at 5:00 p.m., and the meeting will follow at 6:00 p.m.

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...Paul Thorkelson at controls of liquid neon/deuterium storage tank he built with Larry Biggam...

...Fred Moore (R), formerly Central Laboratory Manager, is now manager of "Facility Operations" and Gene Plant (L) is now Central Laboratory Manager. According to Site Services Director Dave Sauer, the change strengthens service to electro-mechanical facilities on the site that are not directly related to accelerator and research operations. Facility Operations also includes janitorial services site-wide. Halsey Allen, head of Operations, supervises electrical-mechanical support of accelerator, research, industrial area and utilities.



Gene and Fred are located on CL-5-SE. Fred's phone is Ext. 3862, Gene's, Ext. 3824...

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#### NALWO NEWS

Fermilab's Women's Organization (NALWO) is looking for more active members to help provide the hospitality and fellowship among women at Fermilab. NALWO is a voluntary organization of all women associated with Fermilab.

One of NALWO's most important tasks is to assist the Guest Office in welcoming the families of new staff members and visitors, especially important with the increasing number of families living in the Village.

Women who speak a second language, women with special interests and hobbies to share, and women who could take visitors on expeditions to places of interest in and around Chicago, are all needed to help newcomers to the Laboratory feel welcome and comfortable.

NALWO activities include regular pot luck suppers, teas, and a "Friday lunch" in the cafeteria at 1 p.m., all of which are open to all Fermilab women.

Contact the Guest Office, Ext. 3440 for further information about NALWO.

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#### FILM ON ARUBA TO BE SHOWN MARCH 4

NALREC will present a film on Aruba, in the Dutch Antilles, on Thursday, March 4, in CL-1W Conference Room at noon. The film is sponsored by Elkin Tours in support of NALREC's group trip to Aruba scheduled to leave May 8. The trip, which costs \$309 per person, double occupancy, includes round trip air fare, accommodations at the Divi Divi Beach Hotel and many discount coupons for dinners, chips at the casinos and optional tours.

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...Dawn Hall recently joined the Fermilab Photo Unit as a photographer. She is a graduate of Southern Illinois University, where she majored in photography. Tony Frelo heads the Photo Unit under the direction of Roger Thompson, head of Technical Information...

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## CAN YOU BELIEVE IT?

Golfers, attention! The 1976 season is fast approaching and the Fermilab Golf League officers want to pass on some information. This year there will be two nights a week of league play, starting on Tuesday, April 27 and Thursday, April 29. Each night will have a 40 person - 10 team league playing on the south and west courses at Arrowhead with the first tee time at 5:15 p.m.

Sign up will be on a first-come, first-serve basis for all players. Entry fee of \$6.00 must be paid at time of sign up. Green fees are the same as last year, \$3.50.

Sign up will begin around the first of April. Get your teams together and be ready when the time comes. If you have any questions contact one of the league officers, Bud Stanley, Ext. 3302, Hugh Christ, Ext. 3534, Bill Bielefeldt, Ext. 4050, or Ellery Cook, Ext. 3734.

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...A NEW YOGA CLASS is forming. The class will be held in the Central Lab Auditorium on Mondays and Wednesdays from 12:00 to 12:30 p.m. from March 1 through April 28. The fee for the class is \$8.00, payable on the first day of instruction.

Sign up now for the Yoga Class with Jane Theis, CL-W, Ext. 3560.

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...SIGN UP NOW for the 1976 Ping Pong Tournament with Jane Theis, CL-1W, Ext. 3560.

### KARATE DEMONSTRATION

will be given at the Users Center on Friday, February 27 at 6:00 p.m.

## CLASSIFIED ADS

FERMILAB employees, visitors, & experimenters are invited to Mass, offered by Tim Toohig, S.J., at 12:00 noon on Ash Wednesday, March 3 (ashes will be distributed) and on all the Wed. of Lent at the Cenacle Retreat House, Batavia Rd., Warrenville. Questions? Call Elsie, X3674.

FOR SALE - Sony TV, color, 12" screen, still in original carton, \$335. Doris, Ext. 4112.

FOR SALE - Homemade cakes for any occasion and homemade candies. Call Barbara Wiedaman, TW2-1619 or Art Gilbertson, Ext. 3555.

FOR SALE - Scotts Fertilizer: New super turf builder 34-5-5 (5,000 sq. ft.) \$8. Vegetable garden 5 lbs.- \$4, 20 lbs.-\$11. Delivery wk. of 3/15. Scout troop 106. J. Grimson, Ext. 3698 or 357-1436.

FOR RENT - North Aurora, 3 bedroom ranch, full basement, swim pool, attached garage, large back yard, \$250/mo., + utilities. Security deposit. Ext. 3677 or 232-6514.

FOR RENT - Geneva, main floor of older home, 2 bedroom, fireplace, close to school, shopping, available March 1. \$375, all utilities incl. 232-6035 or 232-4269.

FOR SALE - Refrigerator/freezer, portable dishwasher, washer & dryer. F. Mehring, X4048 or 232-4867.

FOR SALE - Ranger 4 & 8 track stereo tape player, 20 watt, solid state amp., full fidelity, \$35. Electroponic AM/FM multiplex solid state 8 track tape w/turn table (BSR) & air suspension speakers, \$125. Call Jeff Ruffin, Ext. 3728 or 892-3425.

FOR SALE - 1975 2 dr. hardtop 350 Chevell V-8, pwr. steering, pwr. brakes, air w/w/, \$3000, also trailer hitch. Call Ext. 3259 or 393-2458.

FOR SALE - Marantz 2010 amplifier, dual turntable, Marantz Imperial 4G speakers, \$400. Set of china & crystal, never used, service of 8, \$200. A Lane cedar chest, \$100. Must sell, call after 5 p.m., 898-6755.