FermiNews
October 14, 1982
FERMI NATIONAL ACCELERATOR LABORATORY

NO, IT IS NOT A NEW YELLOW WIENERMOBILE

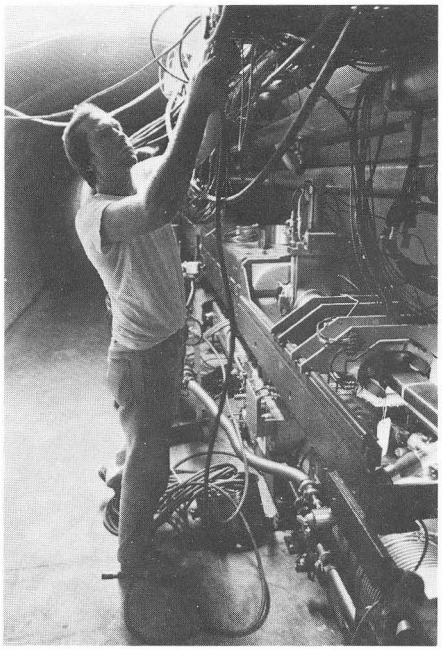
In case you are wondering about the large yellow objects lurking behind the Main-Ring shielding berm near the Central Helium Liquefier, they are not Oscar Mayer wieners (although some of Claus Rode's people were apprehended making a stealthy approach along the Main Ring Road in possession of an "Oscar Mayer" stencil). The 13 tanks will store the entire inventory of helium gas for the Energy Saver, the equivalent of 13,000 gallons of liquid helium. The delivery of the tanks after an eventful journey(s) from Texas meant one more major piece had fallen into place in preparation for the next exercise in bringing the Energy Saver into operation.

While the helium tanks are a very visible sign of progress towards the goal of a half-ring test, enormous progress has also been made out of sight in the Main-Ring tunnel and the service and refrigerator buildings. Over 60% of the full complement of superconducting dipoles and quadrupoles have been installed in the tunnel and surveyed in place within a few thousandths of an inch. In E and F sectors 4 (of 8) cryoloops, consisting of 40 magnets each, are vacuum tight. The goal is to have all 8 cryoloops in E and F sectors ready to cool down to superconducting temperatures in November.

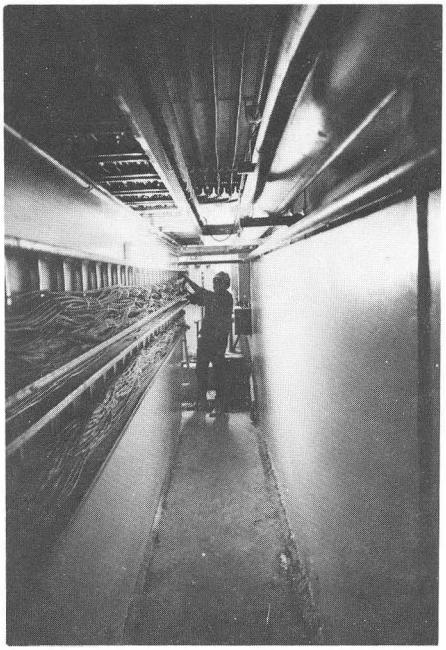
While much effort and attention focuses on the superconducting magnets, they are only one ingredient in making a superconducting accelerator. A helium transfer line delivers the liquid helium and liquid nitrogen from

(cont'd. on pg. 2)

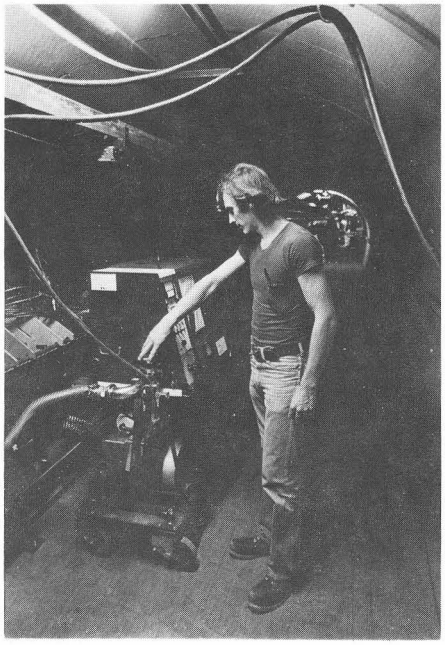
E-F SECTOR COOLDOWN "LOOKS GOOD" FOR NOVEMBER



Bruce Kling purges the pneumatic control system in the Main-Ring tunnel.



A contract electrician installs control cable at E4.



Dave Augustine adjusts a leak detector used to test Energy Saver magnets.

(cont'd. from pg. 1)
the Central Helium Liquefier (CHL) to the 24 refrigerator stations around the circumference of the Main Ring; 4-1/2 miles of transfer line from CHL around the entire ring and back to CHL are now complete and will be delivering liquid helium at 450°F below zero and liquid nitrogen at -330°F before the November target.

Hundreds of miles of cables have been installed and carefully checked for monitoring and controlling the myriad critical points of the system. One of the 8 refrigerator systems involved in the E and F sectors sends back as many data points as the entire 500-GeV conventional accelerator did. Ultimately there will be 24 such refrigeration systems. Only the expansion engines themselves, being given last minute adjustment in the Cross Gallery, remain to be installed by the target date.

To control all of this, the new VAX computer systems are being brought online. The VAX is more powerful and sophisticated than the Xerox XDS530 computers used for the accelerator control and monitoring until now. This increased power is bought at the price of a vastly more complicated programming effort. One of the major efforts in the start up of the two sectors is the programming readiness.

Finally, the November tests will involve the preliminary tests of the final power-supply configuration. Massive 2 in.× 2 in. copper bus salvaged from the Chicago Cyclotron magnet is used to bus the power supplies to the magnets. A major effort is installation of 4 complete power supply systems at E2, E3, F2, F3 service buildings. By the time the supermagnets are cold and superconducting, these systems will be ready to power the magnets. Meanwhile the injection system to transfer the proton beam from the Main Ring to the Energy Saver has been installed at E0 and successfully tested.

The Accelerator Division has been heavily supported by the Technical Division and the Research Division in all of these efforts. Once the two sector tests begin the system will be further strained as personnel struggle to master the very complicated operational systems at the same time installation work continues in B, C, D sectors to complete the entire Energy Saver complex.

It is an exciting period for the Laboratory as nearly eight years of sustained effort now moves swiftly to fruition, moving towards the goal of 1 TeV.

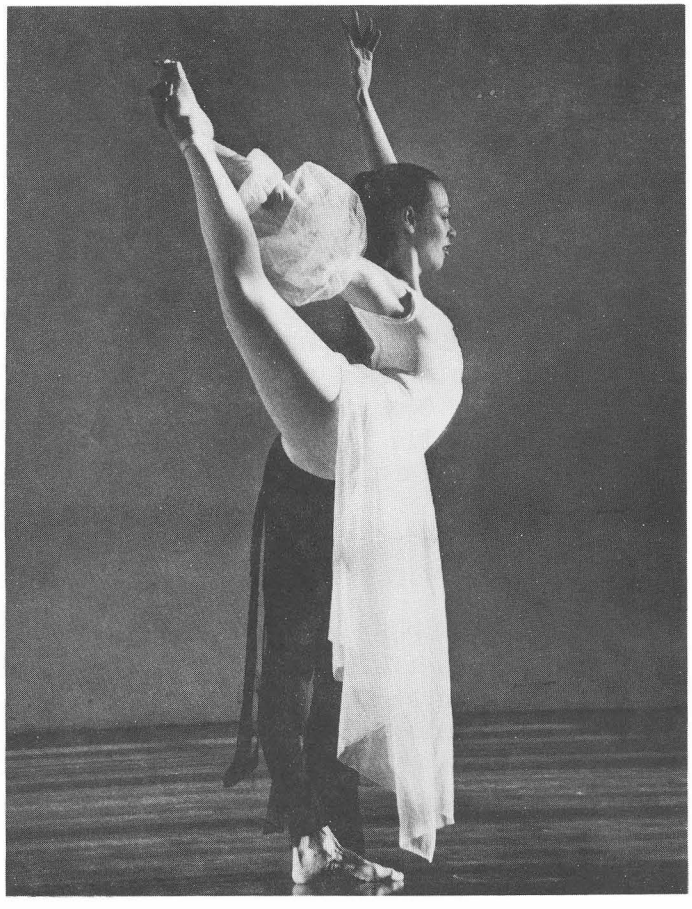
-Tim Toohig

CHICAGO DANCERS TO GRACE AUDITORIUM NEXT MONTH

by Jane Green

Jazz, ballet, and modern dance styles will all be featured in the Chicago Repertory Dance Ensemble program at Ramsey Auditorium on November 6 at 8 p.m. Warren Conover, former soloist with the American Ballet Theatre, will join the troupe for a special guest appearance. This promises to be an evening of unsurpassed dance by some of Chicago's most creative and accomplished dancers.

The Chicago Repertory Dance Ensemble was formed two years ago by its artistic director, Tara Mitton. Their debut met with rave reviews, and they have continued to delight audiences ever since. The troupe is composed of 11 of Chicago's finest dancers, and they are the city's



Anna Czajun
Chicago Repertory Dance Ensemble

only group devoted to the presentation of so many different dance styles by a variety of choreographers. The Ensemble's performance at Fermilab will feature works by New York's Paul Sanasardo as well as Chicagoans David Hough, Anna Czajun, and Mary Ward, among others.

Special guest Warren Conover has been called a "dancer's dancer." The "diminutive blonde dynamo" rose to soloist stature during his 11 years with the American Ballet Theatre. Last year he resigned to make a home on Chicago's North Side and works as a choreographer and instructor in the city. In addition, Conover makes frequent guest appearances with the Chicago Repertory Dance Ensemble and numerous other companies. He has danced in Ruth Page's "Nutcracker" at Arie Crown Theatre and is currently rehearsing for a public television production of Page's "The Merry Widow."

The Chicago Repertory Dance Ensemble's program promises to please enthusiasts of all dance styles. Admission is $5 and tickets are now available at the Information Desk in the atrium of Wilson Hall. To reserve seats call ext. 3353. Phone reservations are held for five days, but due to ticket demand, those reservations not paid for within five working days will be released for sale.

TURBULENT FLUID EXPERT TO SPEAK

Dr. Albert Libchaber, one of the most prominent workers in the experimental study of turbulent fluids, Ecole Normale Superieure, Laboratoire de Physique, Paris, will present "Routes to Chaos in Dissipative Dynamical Systems" at the Fermilab Colloquium on Wednesday, October 20, at 4 p.m., in Ramsey Auditorium.

There has been considerable progress recently in our understanding of the onset of turbulence. In this talk, the results of experiments on the onset of turbulence in fluids undergoing Rayleigh-Benard convection are presented and are compared with various theoretical pictures of "the route to chaos."

WORK CENTRAL CAN COPE, EXT. 3434

Got a plumbing problem? Electrical? Heating? Air conditioning? How about a leaking roof, broken door or window in need of touch-up painting?

For trouble calls like these and many others, call Work Central, ext. 3434.

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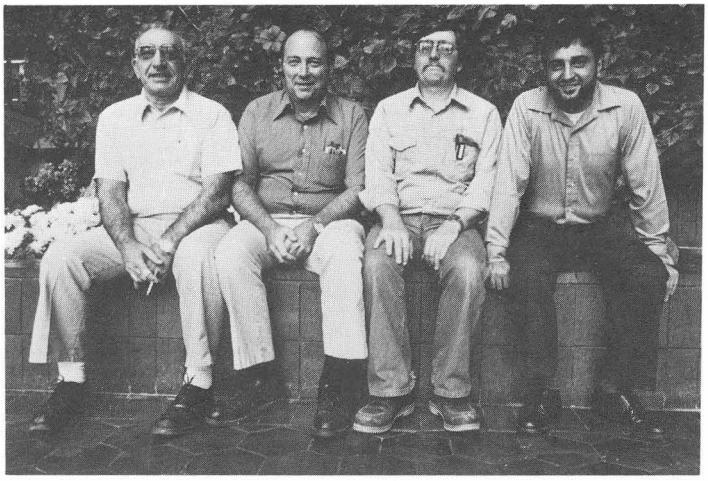
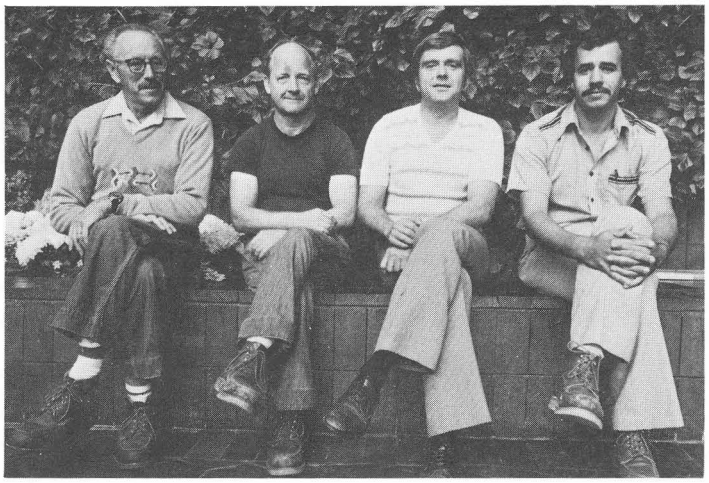
TUESDAY NIGHT GOLF LEAGUE CAPTURES CHAMPIONSHIP





Fermilab Golf League winners (left to right) 1st place Tuesday night and League champions (pictured left to right) Pete Lentini, Bob Vanecek, Bob Williams, Gene Dentino, captain; 1st place Wednesday night (left to right) Bill Froeming, Claudie King, Don Fichtel, Darrell Sigmon, captain. The 1982 committee members are Ed Wilmsen, Don Tinsley, Frank Juravic, Gene Dentino, and Dan Snee.

Prairie Harvest Schedule

Sat., October 23 and Sat., November 6	Midlothian Prairie Markham, Illinois 10 a.m. to 3 p.m.

To reach, go south on I294 to 127th and Cicero; take Cicero to 147th St. Turn east on 147th; take 147th to Kedzie; go 4 blocks south on Kedzie. Meet on west side of road between 151st and 159th Sts.

(rain date - October 24)
(rain date - November 7)

Sat., October 30 Fermilab Prairie

Enter Fermilab from either east or west, proceed to Eola Road. Turn south on Eola approx. one mile to Site 55, west side of road. Time: 10 a.m. to 3 p.m.
(rain date - October 31)

Call 840-3000 on harvest morning to verify.

BIRD HIKE SCHEDULED AT FERMILAB

Dave Carey will lead an Audubon bird outing on Sunday, October 31. Interested persons should meet at the east entrance gate at 9:30 a.m. with binoculars and a bird guide, if available. Wear clothing suitable for hiking. For more information, contact Dave, ext. 3639.

NALREC SPONSORS SPEAKEASY

Reserve Friday, October 22, from 8 p.m. to 1 a.m. for an evening of Roarin' Twenties fun. Your flapper fashions will be welcome at NALREC's Speakeasy party in the Village Barn. With the admission of $1 and the password you can be dancing to the "Chicago Hot Six" under the leadership of Roy Rubinstein. Snacks and cash bar will be available. Come and bring your favorite gangster or moll. For more information, call Mary Fray, ext. 3711, or Saundra Cox, ext. 3211.

Congratulations To. . .

Marilyn (Public Information) and Necota (Work Central) Smith on the birth of 6 lb., 9 oz. Bryan-David Marrcott on August 28 at Copley Memorial Hospital, Aurora.

Govinda and Parvathy (Neutron Therapy) Kurup on the birth of 7 lb., 11 oz. Sudhi on September 8.

Leticia and Dave Chasco (Energy Saver Power Supply Group) on the birth of 9 lb., 10 oz. Hector Domingo on September 18.

Kelly and Michael Nurczyk (Accelerator Division) on the birth of 7 lb., 9 oz. Megan Marie on September 27.

CLASSIFIED ADS TO BE DISTRIBUTED WITH FERMINEWS OCTOBER 14, 1982

FOR SALE:

CARS:

1980 "LUV" PICKUP. 4×4 fiberglass cap, 24,000 mi., like new. Call Jose Reyer, ext. 4596 or 885-2853.

1978 2-DR. BUICK CENTURY SPECIAL. V-6, auto. trans., air cond., 48,000 miles. $3500 or best offer. Call Khalil Bitar, ext. 3749, or evenings 469-8632.

1977 (1)-TON FORD SUPERCAB PICKUP W/8-ft TRUCK REAL-LITE CAMPER. Refrigerator, demand pump, self-contained, both in excellent condition. $7995. Call Dwaine Johnson, ext. 4921.

1976 PONTIAC ASTRA. 4-speed, 4-cyl. engine with new clutch, fuel pump, shocks, exhaust system, and battery; body and interior in good condition. $2095. Call E. Steigmeyer, ext. 3286.

1971 4-DR. BUICK LE SABRE. Auto. trans., air cond., power str., tilt wheel. $675 or best offer. Call A. Visser, ext. 3273, or evenings 232-4023.

BOAT:

1977 HOBY-CAT CATAMARAN. White hull sail and jib in very good condition. Will sell in the water and demonstrate for $2000. Call Hans Kautzky, ext. 4888.

MISC.:

1980 HONDA 650. Low mileage, mint condition. $900 firm. Call John Voirin, ext. 4524 after 3:30 p.m. or 851-2468.

TIRES. Duracon Premium 4-ply polyester snowtires (2), H78-15, $10 ea.; Goodyear 4-ply polyglas (4), H78-15, $10 ea. Call Dwaine Johnson, ext. 4921 or 879-3986.

TIRES. One new, black, size E78-15, Goodyear belted polygon tire, $35; two black 8.5×14 snowtires, $10 ea. or 2 for $15; two whitewall Delta radial snowtires with wheels (Pontiac), excellent condition, size FR-78-14, $25 ea. or 2 for $40. Call J. Miller, ext. 3452 or 825-6582.

FIBERGLASS RACE-CAR BED. Uses twin mattress, excellent condition, $275. Call Ruth, ext. 3281 or 355-0162.

BRADFORD FROST-FREE TOP FREEZER. Separate doors and temperature controls for freezer and frig., avacado, 65 in.×30.5 in.×25 in., excellent condition, $175. Call Deb, ext. 3721 or 844-1636.

30-FT TELESCOPING FLAG POLE. 2-1/2 in. to 2 in. galv. pipe; rope pulley and swivel, like new. $25. Call Dwaine, ext. 4921.

FOUR MAG WHEELS. To fit size 14 tires. Best offer. Call Hymie West, ext. 3611.

WESTINGHOUSE WINDOW AIR CONDITIONER. 220 volts, 13,000 B.T.U., $40. Call J. Miller, ext. 3452.

FOR SALE:
(cont.)

GIBSON CASEMENT STYLE AIR CONDITIONER. 110 VOLT, 10,000 B.T.U. $200. Call Mark, ext. 4776.

WOMEN'S 10-SPEED 24-IN. "FREE SPIRIT" BIKE. Brand new! $90. Call Jim, ext. 3314.

SKY KENNEL. Airline approved for transporting medium to large size dog. Call Mark Leininger, ext. 4776.

YOUNG FINCHES. Colorful plumage, $10 per pair. Call M. Utes, ext. 3721 or 879-8365.

SPECIALS:

WOMEN'S SAFETY WORK BOOTS. Size 9B. Free to a Fermilab employee. Call Suzanne, ext. 3109.

THREE-PARTY GRAND GARAGE SALE. In Glen Ellyn on Oct. 15 & 16. Furniture, books, clothes, and much more. Call Roy, 858-9443, for more information.

FURNITURE FOR SALE. Contemporary 94-in. couch, $150; 2 matching brown leather-look recliners, $150 ea.; wall hanging/rug, rust, 94 in.×67 in., $75; 2 cylindrical hanging lamps, $60 ea.; traditional wood cocktail table w/glass top, $200. Call Mark, ext. 4776 or 695-3263.

For the following items contact Sally Dawson, ext. 3750 or John Haggerty, ext. 4007: Sennheiser HD 420 stereo headphones, almost new, $70; Sears drill press stand, new, $25; XAM stereo amp and Olson stereo pre-amp, good cond., $20; cheese server, $5; 2 silver trivets, $10 ea.

For the following items contact Bill McCaw, ext. 3279: walnut Heathkit TV cabinet for 25-in. television, $40; Wollensak 8 mm movie camera, $30; galv. 8 in. dia. vent pipe w/5 elbows, $25; VW engine, disassemb., needs work, $30; 100,000 B.T.U. gas pool heater, $40; wheelchair, $70; Norge gas dryer, $35; Kenmore double-wall oven/range, coppertone, electric, $35.

HANDMADE CUSTOM LINGERIE AND SPORTSWEAR. Offered by the Needlebox Boutique. For more information call Hope, ext. 3242 or Mildred, ext. 3933.

WANTED:

All little witches, ghosts, and goblins between the ages of 4 and 12 years are invited to the "HAUNTED CASTLE" at the Fermilab Village Barn on Saturday, October 30, from 1 to 3 p.m. Please come in costume for the haunting, tricking, and treating. Children's Halloween Party - sponsored by NALREC.