

The Village Courier



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DOUBLER/SAVER MAGNET PRODUCTION BEGINS HERE



...Don Fisher winding the 22' coil on the first production model of a superconducting Energy Doubler magnet...



...George Jugenitz inspecting the winding of the inner half shell of the first Doubler magnet...

The construction schedule for the Fermilab Energy Doubler/Saver project took a big step forward last week as the first winding of a 22 ft. superconducting magnet for the new installation got underway. Taking over Industrial Building #3 for the new production, the Receiving and Stock Rooms there have been moved to the Phillips Farm facility.

Although some refinements can be expected in the early stages of Doubler/Saver magnet production, the first coil is considered to be a major milestone in the ultimate production of 1,000 superconducting magnets. By the end of June, 1976 the production rate is expected to be one magnet per week, quickly advancing to two per week. Production rate will scale upward at frequent intervals after that to meet the goal of having all magnets produced by July, 1978.

Industrial Building #3 will become the production center for the 22 ft. magnets. Some Magnet Facility crews will be assigned to Doubler production becoming the nucleus of the staff that will ultimately be required to meet the production schedule.

Fermilab Doubler research has sharply advanced the "state of the art" of superconductor wire for the superconducting magnets. The success of the magnets has, to a large degree, depended on improvement of this wire. Interest from industrial vendors and research activity for this purpose has increased due to the need for millions of feet of superconducting multifilament wire for the project's magnets. To reduce cryogenic losses in the Doubler system, the 4,000 ampere conductor is made of 23 strands of 27 mils diameter special alloy material cabled into a conductor to give a final size of .050" x .300". This cable is then insulated and wound into approximately 110 turn coils for the magnets. Each 22 ft. dipole magnet requires about 5,000 feet of cable. It is this careful winding that was begun last week.

The "E" series represents the progress of superconducting magnet research carried on

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DOUBLER/SAVER (Continued)

in the past two years at Fermilab. This research has proceeded from the first model through the B-C-D series, each an improvement on the last. Much of the improvement has been associated with improving the insulation and with the clamping of the conductor in such a way as to prevent motion during excitation.

Alvin Tollestrup from the California Institute of Technology joined the Fermilab Superconductor group last July as part of his sabbatical leave. He and other members of the group perfected and tested the new schemes that have been incorporated in the present magnet design. Tollestrup also designed the protection system for the new magnets and confidence is high that the 22 ft. "E" series with a 3-inch bore will achieve a design field of maximum possible 45 kilogauss.



...Alvin Tollestrup (L), William Fowler, Doubler prototype in Lab 5 in the Village...

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CERN COURIER OUT THIS WEEK

The first edition of an international version of the CERN Courier magazine, is being distributed this week by Fermilab. The COURIER has been published by the European Organization for Nuclear Research (CERN), Geneva, Switzerland for some 15 years. In the last few years it has become more and more a composite of information about all institutions engaged in high energy physics -- the work going on and the relationship one to another. About a year ago agreement was reached among the leaders of the high energy physics laboratories of the world to expand the scope of the COURIER to be a genuine international forum of high energy physics. This will be accomplished by including monthly reports from correspondents at laboratories in the United States, Germany, Italy, France, the United Kingdom, Japan, and the U.S.S.R. The CERN COURIER title and format will continue. Brian Southworth, editor of the COURIER, will draw together correspondents' reports for inclusion in the final editing in Geneva. Dick Carrigan will be the Fermilab correspondent.

Copies of the COURIER for U.S. and Canadian readers will be printed and distributed by Fermilab simultaneously with production in Switzerland. Film copies of the COURIER text are sent to O'Hare Airport where a special messenger meets the flight, delivers the film to Fermilab printer and within a few hours the magazine is into the printing process, ready for mailing in just a few days.

A limited number of extra copies of the January, 1976 issue are available from the Fermilab Public Information Office. Subscription requests for the COURIER will be handled through the Public Information Office, CL-1W, P.O. Box 500, Batavia, Ill. 60510.

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LECTURE COURSE IN CRYOGENICS OFFERED

A 26-lecture course in cryogenics will be offered to interested Fermilab employees at no charge over the next three months. The series, originally given at Lawrence Livermore Laboratory by Carl Henning, is available on video tape cassette and will be given twice weekly either in the evening or during the lunch hour. The Laboratory is trying to arrange college credit for the course; a printed course outline, home work problems, and a textbook will be provided for all who attend.

The series covers all aspects of the cryogenics field including the mechanical and electrical properties of materials at low temperature, heat transfer and superconducting magnet design.

For further information on course content and scheduling, call Ruth Thorson at Ext. 3324 before February 6.

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CHOREOGRAPHERS SHOWCASE JANUARY 31

Pascual Olivera, Spanish dancer first seen in Chicago as a lead dancer in the Jose Greco Company, will appear at Fermilab with his new partner, Angela Del Moral, in the Choreographers Showcase on Saturday, January 31, at 8:30 p.m. in the Auditorium.

Olivera's first appearance at Fermilab last spring brought a standing ovation from the Fermilab audience. His colorful, rhythmic Spanish dances were among the highlights of that program. Miss Del Moral is coming from Spain where she is a member of the Festival National Ballet.

The Showcase is produced by the Ballet Guild of Chicago with support from the Illinois Arts Council. Also on the program will be Richard Arve, Marge Hobley and her group, the Joel Hall Dancers, and Anjani Ambegaokar who dances the classical Kathak of India. Arve, who teaches modern dance at the Ruth Page Foundation School in Chicago, has been a consistent winner of grants from the Illinois Arts Council and the National Endowment for the Arts. He and his group will perform a new jazz suite at Fermilab.

The Joel Hall Dancers, with their four drummers, are a newly-formed group of young Chicagoans bringing together the vitality of several ethnic backgrounds into a style that is different and interesting. Hall recently completed a show for Public Service Television.

Marge Hobley is head of the Dance Department at Northeastern Illinois University, well-known as a versatile dancer and choreographer.

Miss Ambegaokar, accompanied by a three-member ensemble, uses brass bells and spoken rhythmic syllables to accentuate her performance of the Kathak, once considered the best in India.

A buffet supper will be offered in the Fermilab cafeteria before the Choreographers Showcase, from 6:30 p.m. to 8:00 p.m. Regular cafeteria service will be open from 5:00 to 6:00 p.m. only. Reservations are necessary for the supper which will cost \$4.50 per person. Tickets for the Showcase are \$3.00 each for adults; \$2.00 for children and senior citizens. Call the Guest Office, 840-3440, or 840-3680 to make reservations or get more information.

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PARLEZ-VOUS FRANCAIS?

A lunch table in the Fermilab cafeteria has been reserved Thursday noons for French-speaking people at Fermilab. Students in the French class are anxious to stimulate their conversational ability, and they invite French natives and others to join them for lunch with this end in mind. For further information all Anne Burwell, Ext. 3028.



...Pascual Olivera...

FESTIVAL OF NATIONS LUNCHEON

Friday, January 30 - Fermilab Cafeteria

Food of the Jewish People

Sarah Rabinovichi, Hostess

Israel's street vendors sell pita, a round flat bread, stuffed with Falafel and Houmos. These will be on Friday's menu together with Jaffa chicken, egg plant salad and an Israeli Nut Torte. All for \$1.95.

There will be Israeli entertainment. Everyone welcome.

CANDLELIGHT BOWL

Reservations by January 30

\$6.00/person

includes buffet supper
& bowling fees

PRIZES

Call Barb Schluchter, Ext. 3991



...Dennis Borree, Jean Sutcliffe,
Barb Schluchter, Ralph Ovitt...

MANY THANKS...to the Fermilab Vehicle Maintenance crew for their on-the-spot first aid to many employees' automobiles during the recent cold weather...

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DOG OWNERS NOTE: Dogs living on the Fermilab site must be kept on leash. Some serious damage to wildlife has occurred in recent months from straying dogs. Dogs on the loose will now be impounded to prevent further incidents. Impounded dogs with Fermilab tags will be returned to their owners. Contact Rudy Dorner, Site Operations, Ext. 3494, for further information.

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ARGONNE NEWS...Year-end statement of accounts have been distributed by the Argonne Credit Union. If you did not receive your statement, call June Olsen, Ext. 3293. Be sure to inform the Credit Union if you transfer or change locations.

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MARK YOUR CALENDARS FOR FEBRUARY

...Folk Dancing group invites everyone to a special evening of fun Friday, February 6 at 8 p.m. in the Village Barn. Children are welcome, they may want to join in the instruction and dance of Bulgarian, Greek, Serbian dances. Village families are especially invited.

...NALREC "Family Ice Skating Party" will be held Sunday, February 8 from 2 to 5 p.m. with an alternate date of Feb. 15. Come to the Central Lab reflecting pond and enjoy hot dogs, marshmallows, hot chocolate and hot spiced wine. Children must be accompanied by adults.

...Make your reservation now...for the Indian Creek Riding Club sleigh ride Friday, February 13. Meet at the Users Center at 7 p.m., car pools to Prince Crossing Stables, Winfield. Square dance and refreshments after the sleigh ride. Call S. Rumpel, Ext. 3560 for reservations, \$6.00 per person.

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CLASSIFIED ADS

FOR SALE - Women's figure skates, CCM, 9½, all leather, brand new, \$20. P. Sanger, X3375/3420.

WANTED - Flute, either Artley or Gemeinhardt, reasonable. Call Loretta, Ext. 3470.

FOR SALE - '67 Chev. Pickup, V-8 engine good 327, exc. cond., needs tires, 3/4 ton, 3 spd. on floor. Call 897-3201, 244 E. Parker, Aurora or call Nino, Ext. 3303.

FOR SALE - Ranger 4 & 8 stereo tape player/20 watt, solid state stereo amp.-wide range full fidelity. Response, 50, 10,000 hz. \$40. or offer. Electroponic AM/FM Multiplex Solid State 8 track receiver w/turn table (BSR) & air suspension speakers, \$135 or offer. J. Ruffin, Ext. 3728 or 892-3425.

SUBLEASE - 2 bedroom apt., 1½ baths, fully carpeted, AC/ DW, garbage disposal, \$247.50/mo. Call Steve, Ext. 3165 or 882-9250.