

The Village Crier



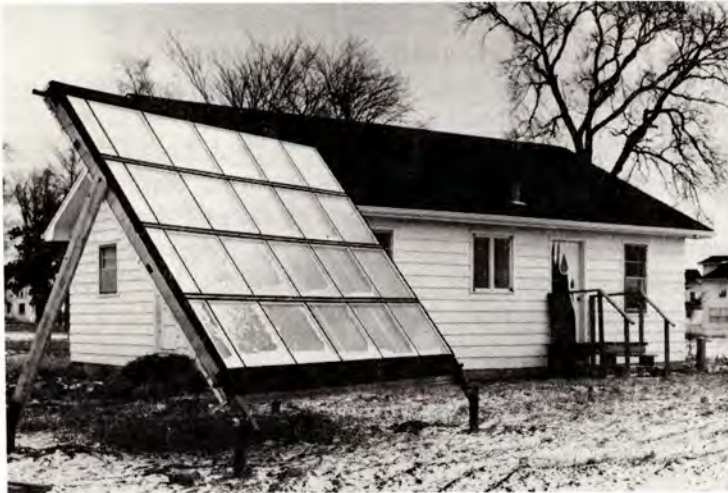
fermi national accelerator laboratory

Operated by Universities Research Association Inc.
Under Contract with the United States Atomic Energy Commission

Vol. 7 No. 4

January 23, 1975

SOLAR HEATING SYSTEM IN FERMILAB VILLAGE



...First of six collector panels in Fermilab solar heating system, tilted for winter position. House to be heated is in background...



...Solar Energy Club members (L-R) H. Hinterberger, R. Condon, H. Hart, R. Flora, W. Bosworth, J. O'Meara in working session...

The first of six collecting panels that will make up a solar heating system, has been installed at 21B Sauk Circle in the Fermilab Village. Members of the Fermilab Solar Energy Club expect to complete the system before next spring. They believe it to be one of the first installations in the Upper Midwest. It will be used not only for experimental purposes but also for the heating of a house for residential use. The house, one of the farm homes on the original Fermilab site, moved to Sauk Circle, will become a residence for visiting experimenters.

It is well-known that use of heat from the sun to replace fossil fuels is one of the most active alternatives being considered in energy research. Hank Hinterberger, Director of Technical Services at Fermilab, and Roland Winston of the University of Chicago, have collaborated on the basic design of light collectors for several years. Their work resulted from a need to improve reception of light in a Cerenkov counter being used for a high energy physics experiment at the University of Chicago. Their design of reflective funnels to focus the Cerenkov radiation was adapted to the collection of sun rays for solar collectors. In principle, such devices focus the rays into a small space, like a funnel. The concentrated rays produce temperatures well in excess of 200° F.

The Fermilab collecting array is eight feet high and 75 feet long. The array extends into the open field behind the house on Sauk Circle. Each of the six panel assemblies is mounted on a hinged frame to permit adjustments to the seasonal angles of the sun.

Addition of a series of mirrors in a line in front of the present flat panels to increase the concentration of sun rays onto the panels is being considered.

Controls to operate the solar heating system will be adaptations of those used in the

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SOLAR HEATING SYSTEM (Continued)

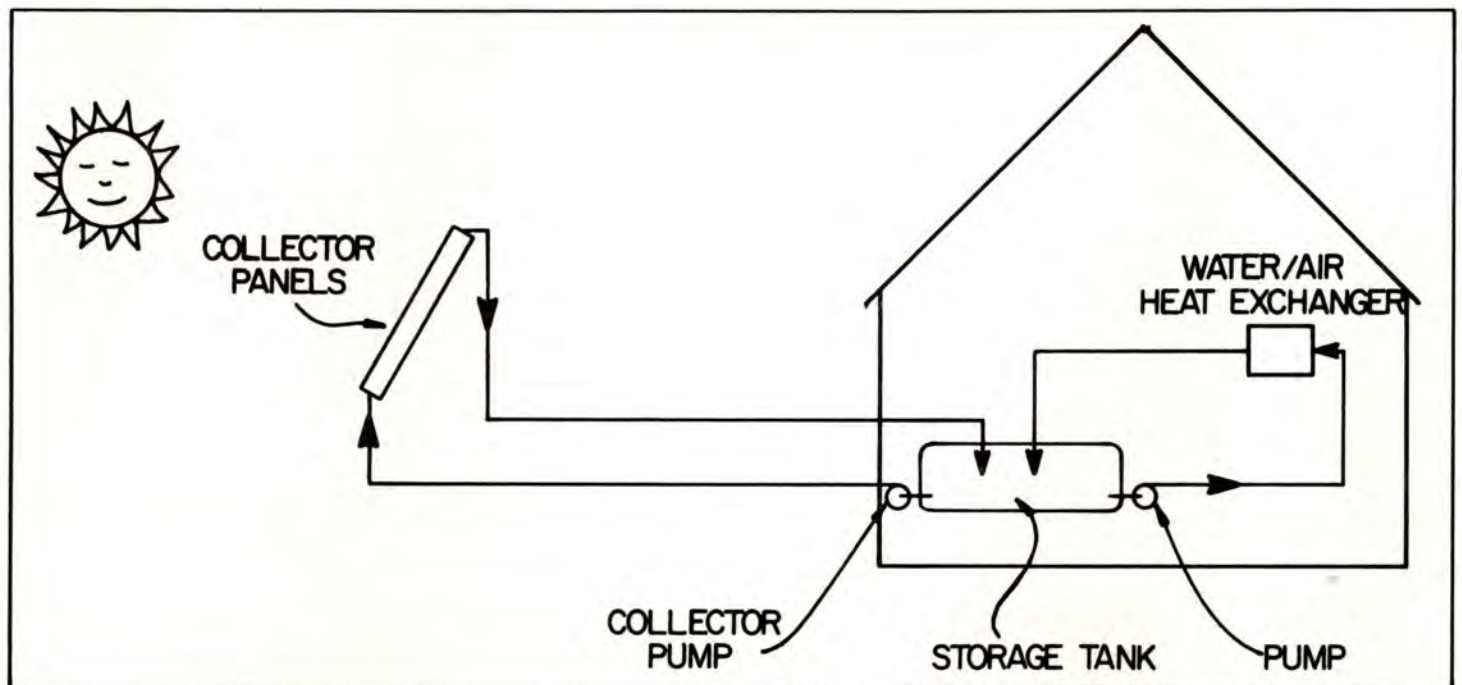
Fermilab accelerators and experiments. The instrumentation will include automatic data taking. However, the occupants of the house will use a conventional thermostat to control air temperature within the house. The solar heating is expected to provide roughly 25% of the heat requirements of the home. Addition of the mirrors may permit the system to provide hot water to "fire" an absorption type air conditioner. A two-day supply of heat can be stored under the present plan.

The research data to be collected at Fermilab will yield new data on solar energy for residential use. The Fermilab location and climate is typical of the highly populated eastern and upper midwestern parts of the country. Solar heating, to have a significant impact upon energy consumption in the nation, must be successful in such an area as this.

Members of the Fermilab Solar Energy Club who have contributed to the design and construction of the Fermilab project have included Steve Bastian, Neutrino; George Biallas, Energy Doubler; Ward Bosworth, Engineering Services; John Bobbitt, Accelerator Division; Bob Condon, Magnet Facility; Dave Cosgrove, Accelerator Division; John Carson, Architectural Services; Bob Flora, Energy Doubler; Vic Garzotto, Energy Doubler; Will Hanson, Magnet Facility; Howard Hart, Research Services; Hank Hinterberger, Technical Services; Penny Horak, Architectural Services; Ed Kneip, Engineering Services; John O'Meara, Engineering Services; Jose Poces, and Model Shop Personnel, Model Shop; Bill Stanley, PREP; H. Van Leesten, Accelerator Division, and Bill Wisniski, Architectural Services.

Solar Energy Club members have worked on this project on a volunteer basis since early November, 1974, and are now installing the solar system. Details about the project may be obtained from club members.

The following schematic illustrates the inherent simplicity of solar heating systems. The collectors face south and are tilted up at 53° to provide the best average angle for collection of solar rays during the winter. The collector is insulated on the back (north) side and covered with glass on the southern face. The aluminum "roll bond" receiver panels have integral cooling passages and are painted with high absorbtivity black paint.



...Solar House heating schematic...

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THIS WEEK AT FERMILAB

THURSDAY, January 23 - 4:00 p.m. - Curia II, CL-2W

Mrs. Robert "Giddy" Dyer of Hinsdale, Illinois State Representative, will speak to the regular women's concerns meeting. Mrs. Dyer has been one of the leaders in the Illinois legislature in seeking passage of the equal rights amendment in Illinois. She will describe the present status of the legislation and what may happen in the next few months in the Illinois legislature. Everyone is invited to the meeting. The program will be of interest to both men and women.

FRIDAY, January 24 - NALWO Pot Luck - Call reservations to Nancy Stiening, Ext. 3031, or Mary Ann Lee, 858-7177.

FRIDAY, January 24 - Cocktail Hour - 5:00-7:00 p.m. - Users Center - Special Prices.

SATURDAY, January 25 - NALREC Family Skating Party - 2:00-5:00 p.m. - Swan Lake by CL
Hot dogs and hot chocolate for the kiddies. Special beverage for the adults. Marshmallows and bonfire. Fun for everyone! No charge.

SATURDAY, January 25 - Auditorium Arts Series - 8:30 p.m. - The Fine Arts Quartet -
Performing in a style that critics have called "suave and polished" the Fine Arts Quartet will appear at the Fermilab on Saturday, January 25 at 8:30 p.m. in the Auditorium.

The Fine Arts Quartet features one of the largest repertoires of any ensemble in the world. The program will include Mozart Hunt Quartet, K458; Shostakovitch Quartet #1; and Beethoven Quartet Opus 59 #2.

The Fine Arts Quartet Concert Series at the Goodman Theater in Chicago has few parallels in success in America. For over 15 years the Fine Arts Quartet has performed new works commissioned for this series, including the 1969 Pulitzer Prize winning composition. The Fine Arts Quartet productions have appeared on Channel 11, Chicago television, and on the National Educational Television network for many years.

The Fine Arts Quartet has been the quartet in residence and permanent members of the faculty, with professorial rank, at the University of Wisconsin-Milwaukee since 1963. Members of the Quartet are: Leonard Sorkin, violin; Abram Loft, violin; Bernard Zaslav, viola; and George Sopkin, cello.

The program is one of a continuing series of cultural presentations of the Fermilab Auditorium Arts Series. Reservations may be made in advance of the concert by calling Ext. 3091. Tickets are \$3.00 for adults, \$1.50 for children, and student group rates are available. Tickets will also be sold at the door.

COMING JANUARY 31 - FESTIVAL OF NATIONS - Fermilab Cafeteria.

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ICE SKATING AT FERMILAB

Ponds which are iced over on the Fermilab Site may be used for ice skating with the following exceptions:

1. Casey's Pond - near Bubble Chamber.
2. Any pond inside the ring - including the lake area.

The Fermilab Fire Protection Department will place (with Site Patrol assistance) a red danger flag under the Stars and Stripes when ice is on ponds but unsafe for skating.

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RETIREMENT CONTRIBUTIONS MAY BE DEFERRED INCOME

Since January 1, 1975, weekly personnel at Fermilab who have participated in the TIAA-CREF retirement program for five years, have the option of participating in the program on a deferred-income basis.

This means that tax on the retirement income would be paid when it is received in retirement years, probably at a reduced income level, and therefore with less tax. Employees can now elect a salary reduction of not less than the amount normally withheld for the retirement plan (and not more than the maximum exclusion allowance permitted by the internal revenue code). The amount of the reduction will be forwarded to the TIAA-CREF retirement plan. Income tax withholding is then based on the reduced salary figure.

This option may or may not be advantageous, depending on the individual's present income tax bracket, allowable deductions, and long-range retirement objectives.

If you are eligible and want further information, contact Ralph Wagner at the Employee Benefits Office, Ext. 3395. Specific examples can be developed to illustrate the option. Once the deferred income option is in effect, it must remain in effect for one year.

All payroll deductions are now being made on a weekly basis for Fermilab weekly employees. This includes annuity, life insurance, long term disability and savings bonds. This should result in a more even distribution of deductions from paychecks. For those that have union dues withheld from paychecks, the deduction arrangement for those dues is not changed.

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SHORTS... Foreign visitors residing in the U.S. must register with the U.S. Immigration Service during the month of January each year. Forms for such registration are obtained at the Guest Office, Cl-1W, from Saundra Cox.

...Copies of the 1975 Procedures for Experimenters are to be obtained from the Users Office, CL-1W, rather than from J. Sanford's Office, as listed in last week's Village Crier.

...The Elgin Committee on Recycling is interested in aiding individuals and groups dispose of paper and metal and glass containers. Their disposal site is in the Zayre parking lot, U.S. 20 Bypass and McLean Blvd., Elgin.

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LOADING SPACES AVAILABLE AT CENTRAL LAB

Three 30-min. parking spaces are now open at the Central Laboratory West Parking Lot adjacent to the north entry to the ground floor. This is to serve users needing loading access to the basement west elevator.

An additional four spaces are marked as a loading zone - special decal only. These spaces are for Government vehicles bearing a special decal available through the Division Directors on the basis of need for continued loading/unloading access to the Central Laboratory.

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CLASSIFIED ADS

LOST - Pair men's prescript. safety glasses. Left in washroom w. corridor Cross Gallery. H. Minster, Ext. 3233 or 3711.

FOR SALE - Heavy Duty Spare Tire Front Carrier, mounts on frame. Built-in Oven with clock timer/ 4 burner counter top. Both Tappin Gas. As is make offer. H. D. Clover, Ext. 3089.

FOR SALE - Sugar Grove 3 BR. Brick Ranch. 2 baths, cent. air., finished rec. rm. w/fireplace & bar. 2 car attached garage. Many extras. Must see. R. Zych, 466-4988.

FOR SALE - Spunger Bandsaw with 11" throat, \$75., Dayton Shop Vacuum, \$15. G. Lee, Ext. 3977.

FOR SALE - 72 Nova, 30,000 mi., 2 dr. Automatic, P/B/S, A/C, AM-FM Tape in dash. Clean, \$2,200. Call Art Streccius, Ext. 3580 or 584-0712.

FOUND - Instruction booklet to build and operate the Screamin Demon turbine engine. Contact Kathy at 3453 to identify.

FOR SALE - 4-14 x 7" JJ Rot iron Rally Mag Wheels made for 1972 Gran Prix, \$60. Will fit some other models. Call Jeffrey Ruffin, Ext. 3728.