

# FERMILAB NEWS

 Fermi National Accelerator Laboratory

Operated by Universities Research Association Inc.  
Under Contract with the United States Department of Energy

Vol. 1, No. 19

September 14, 1978

## TWO YEARS OF PROGRESS: CTF

Fermilab's Cancer Therapy Facility (CTF) observed its second birthday last week--with announcement of some promising results.

Dr. Lionel Cohen, CTF head, and director of the radiation department at Michael Reese Hospital, Chicago, noted two important results in the experimental program using the world's largest atom smasher. They are:

-- Almost without exception, all relatively large or radioresistant tumors have responded to the neutron beam.

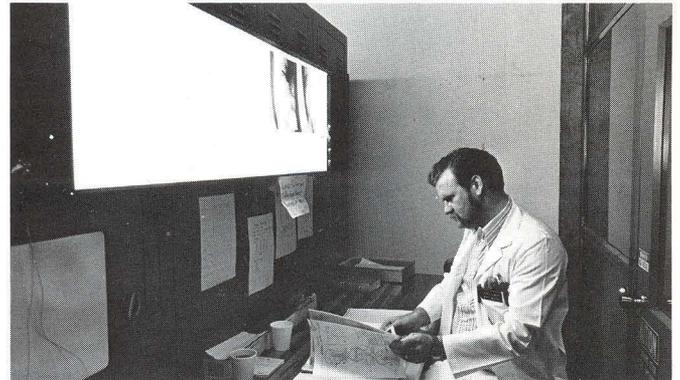
-- Acute side effects are somewhat less than what were expected.

"Local control," Dr. Cohen said, "has been strikingly successful in many tumor types. The effect of combining this treatment with chemotherapy, in order to further improve the cure rate, remains to be explored in the immediate future."

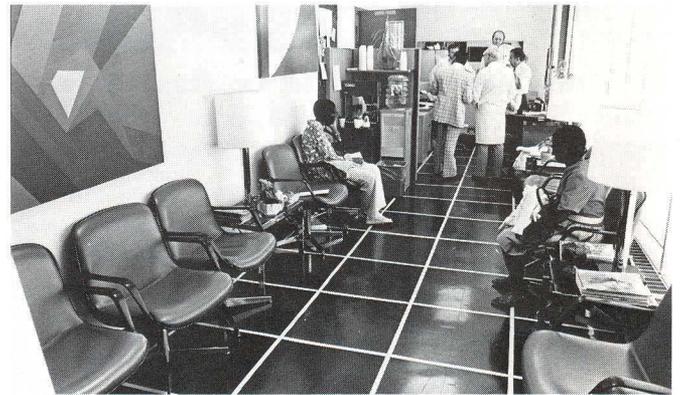
Late side effects, said Dr. Cohen, may yet become a limiting factor; but within the two-year observation period no unexpected late effects have been encountered.

As of August 31, 1978, patient statistics included:

- 303 patients were referred by cooperating physicians. (Most were advanced cases who could not have been cured by any conventional procedure.)
- 261 patients entered the CTF program.
- 205 patients completed treatment.
- 34 patients were considered unsuitable for treatment.
- 20 patients withdrew before completing treatment.



...D. Zimmer checks patient X-rays...



...CTF Reception Area: bright, functional

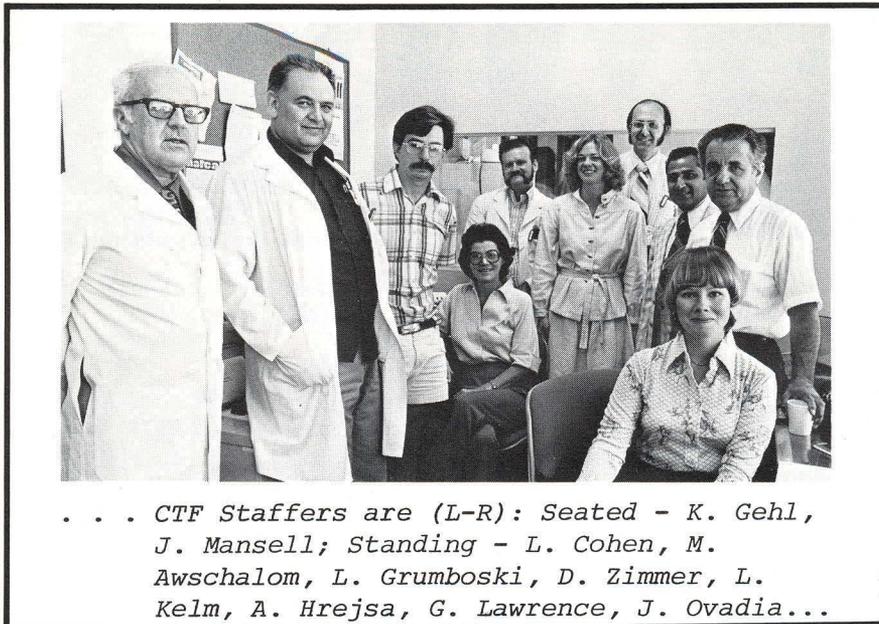
About twice as many men as women have been treated at Fermilab.

Most patients are 40 to 60 years old. A 19-year-old man was the youngest patient treated; a man age 91 was the oldest.

Chicago area/Illinois residents comprise the bulk of patients, chiefly because the CTF is an outpatient-only facility. Other patients have come from California, Florida, Indiana, Iowa, Idaho, Michigan, Minnesota, New York, Virginia and Wisconsin. Foreign patients have come from Mexico and Saudi Arabia.

Dr. Frank Hendrickson of Presbyterian-St. Luke's Hospital, Chicago, is CTF Deputy Head for medical affairs and project co-principal investigator.

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. . . CTF Staffers are (L-R): Seated - K. Gehl, J. Mansell; Standing - L. Cohen, M. Awschalom, L. Grumboski, D. Zimmer, L. Kelm, A. Hrejsa, G. Lawrence, J. Ovadia...

Tumor sites treated are: bladder, brain, cervix, esophagus, head and neck, lung, melanomas, pancreas, prostate, salivary glands, sarcomas and other selected tumors.

The first volunteer in Fermilab's research program, a woman, was treated September 7, 1976, for cancer of the tongue.

CTF researchers seek the answer to the question: "Are neutrons better than X-rays in treating some types of cancer?" Research at the CTF is conducted under national and local protocols--careful descriptions of disease and therapy for performing specified medical studies. National participation means that patient treatment results from Fermilab research will be combined with comparable data being compiled at three other national treatment centers: Cleveland (Ohio) Clinic; M.D. Anderson Hospital and Tumor Institute, Houston, Texas; and the Naval Research Laboratory, Washington, D. C.

Patients are treated on Mondays, Wednesdays, Fridays and Saturdays. Up to 30 patients can be treated daily.

Operating expenses are met from a grant from the U.S. Department of Health, Education and Welfare through the National Cancer Institute (CA-18081-04). A three-year \$2,186,953 grant was received from HEW in 1977. An initial award of \$800,000 was received in 1975. The CTF is a national resource in cancer clinical research. It is not affiliated with any medical institution.

About 50 radiotherapists have referred patients to the CTF; half of those radiotherapists have volunteered their services free of charge at the clinic. Volunteers have supervised treatment, examined patients, noted responses, and dictated clinical notes. Cooperating physicians have formed a group that meets to discuss and develop research protocols.

What is the future of neutron therapy? According to Dr. Cohen, "Particle beam irradiation is likely to be an important additional weapon in the fight against cancer--and as such will probably be incorporated in the routine medical services available to the community in the future."

Larger medical centers, close to centers of population, probably will provide routine application of particle beams Dr. Cohen said. He also mentioned development of a commercially engineered cyclotron suitable for providing neutron therapy in hospitals or cancer treatment centers.

"Experiences at Fermilab and other cooperating institutions will be invaluable in the design of such facilities. It can be anticipated that provision of neutron therapy facilities in cancer centers will permit many patients to be cured who were hitherto incurable; and many more patients to be cured without major surgery who would have had to accept disfigurement as a necessary price to pay for survival", Dr. Cohen added.



...At ribbon-cutting opening vintage farm equipment display are L-R: R. Armstrong, R. Dorner, B. Jeffries, J. McCook, P. V. Livdahl, B. Kraft, D. Shemanske, J. Kalina, C. Chandler, A. Grubba, B. Hall...

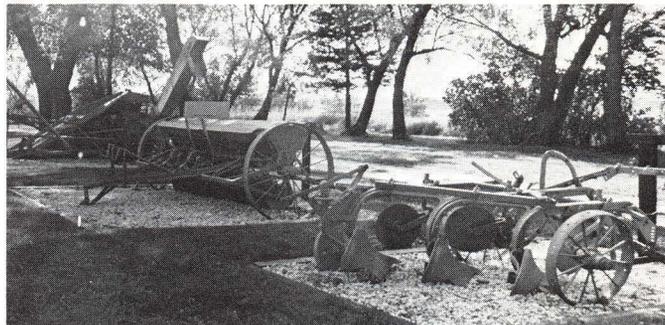
50 YEARS OF FARM MACHINERY

A half century of farm equipment may be seen in a new outdoor display at Fermilab.

Plows, corn pickers and rakes dating from 1927 to 1954 are among nine pieces exhibited. The display is on the south side of Batavia Road near the Rt. 59 gate. The paraphernalia is easy to spot in Fermilab colors of orange, yellow, blue and green. The display includes:

- International dump rake (1927)
- International side delivery rake (1936)
- John Deere steel wheeled wagon (1936)
- J.I. Case chisel plow (1936)
- J.I. Case 3 bottom 14" plow (1940)
- John Deere grain drill (1946)
- J.I. Case windrower (1950)
- Minneapolis Moline corn picker (1950)
- E-Z Flow fertilizer spreader (1954)

In a brief dedication ceremony, acting Fermilab director Philip V. Livdahl cut a ribbon to officially open the exhibit.



...L-R Corn Picker, Planting Drill, Plow...

The equipment is typical of machinery used in farm operations on land that became Fermilab. For the last 10 years, the equipment has been collected and refurbished.

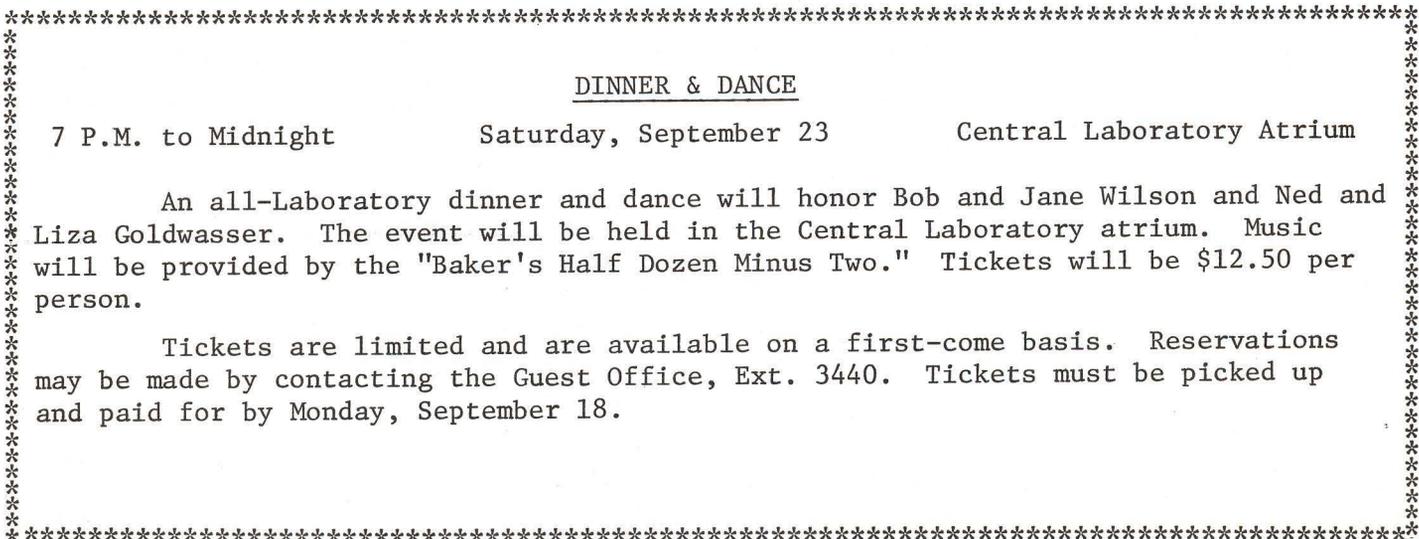
John McCook, Associate Director for Administration, said of the machinery, "It is displayed as a reminder of the heritage of the Fermilab site to present and future visitors--a tribute to those long-time residents who tilled this rich soil for so many years."

DINNER & DANCE

7 P.M. to Midnight                      Saturday, September 23                      Central Laboratory Atrium

An all-Laboratory dinner and dance will honor Bob and Jane Wilson and Ned and Liza Goldwasser. The event will be held in the Central Laboratory atrium. Music will be provided by the "Baker's Half Dozen Minus Two." Tickets will be \$12.50 per person.

Tickets are limited and are available on a first-come basis. Reservations may be made by contacting the Guest Office, Ext. 3440. Tickets must be picked up and paid for by Monday, September 18.



### POWER REDUCTION NEXT WEEK

At 7 a.m. Tuesday, September 19, a five-day power reduction will go into effect at Fermilab. John Paulk, acting Site Services manager, said all areas of the Laboratory--except the Village--will be reduced to minimum power. Normal power is expected to be restored by 5 a.m. Saturday, September 23.

Purpose of the cutback is to conduct repair of the 345 kilovolt electrical lines. The work is designed to reduce emergency shutdowns due to power failures.

Experimenters should confer with their group leaders for operating instructions. Beam will not be available and the Linac, Booster and Main Ring will not operate. Minimal air conditioning will be provided in the Footprint area: Linac, Booster, Transfer Hall and Central Laboratory. CL occupants are asked to reduce lighting to a minimum.

### FERMILAB BIKE-A-THON SUNDAY

Bicyclists will hit the Main Ring road Sunday in Fermilab's first Bike-a-thon.

Event chairman Gene Fisk, assistant head of Fermilab's Physics department, says sponsor sheets are still available. Employees, visitors and the public may participate. Bikers will pedal around the four-mile main ring road from 1 p.m. to 6 p.m. with all proceeds benefitting the South Kane-Kendall County unit of the American Cancer Society.

Cyclists have been asked to aim for at least 20 miles each. Pledges are to be collected and turned in before entrants begin their rides.

A 10-speed bike will be the top individual prize. The championship five-person team will receive a "Fermilab Challenge Cup." The cup will be up for grabs in next year's Bike-a-thon. Other

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### EMERGENCY DATA SHOULD BE UPDATED

Is your emergency information data up to date? Each employee's Personnel file contains the names of two persons to be contacted in case of emergency--illness, injury, or other mishap. It is important that the information be correct.

To update your emergency notification data, call Personnel at Ext. 3324. Request an August 1978 form and complete it for insertion in your file.

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...Batavia aldermen (L-R) B. Stanley, W. Hamilton, P. Koehler, L. Tracy and R. Ducar (Planning Commission) support Bike-A-Thon for Cancer funds...

prizes will include individual trophies, T-shirts and patches.

Sponsor sheets are available from: Fermilab physics Department, Ext. 3203.

### FERMILAB HISTORY PROJECT CONTINUES

Employees and visitors are reminded that Fermilab's "roots" are being compiled.

Lillian Hoddeson, resident archivist, says the project is still accepting documents, tape recordings and other memorabilia.

The archivist is available by appointment in the Library. Phone Ext. 3401.

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