

# The Village Crier

 national accelerator laboratory

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## A TIME FOR DEDICATION...

At the time in its history when it is to be dedicated to an official position in high energy physics research in the United States, the National Accelerator Laboratory steps into deep traditions both of scientific achievement and of American concern for human welfare.

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Enrico Fermi, for whom the Laboratory will be named on Saturday, May 11, represents the highest of scientific tradition -- the dedication, the brilliance that yields great new discoveries. Fermi's colleague, Herbert L. Anderson, described Fermi's achievement in this tribute on December 1, 1954:



*Enrico Fermi, 1901-1954*

"The eternal scholar, Fermi was always eager to learn. He was always grateful when he found out something new. What he learned he felt he should enrich. Having enriched what he learned he felt he should teach to others. Thus, he prepared the fertile ground out of which arose the new solutions and new ideas which kept his subject bright, fresh, and exciting...To explore the mysteries of nature with Enrico Fermi was always a great adventure and a thrilling experience. He had a sure way of starting off in the right direction, of setting aside the irrelevancies, of seizing all the essentials and proceeding to the core of the matter. The whole process of wresting from nature her secrets was for Fermi an exciting sport which he entered into with supreme confidence and great zest..."

Dr. Anderson, of the University of Chicago, is one of the collaborators in Experiment #98 at NAL together with experimenters from Harvard University, Oxford University, and the University of Illinois, as mentioned in the last issue of The Village Crier.

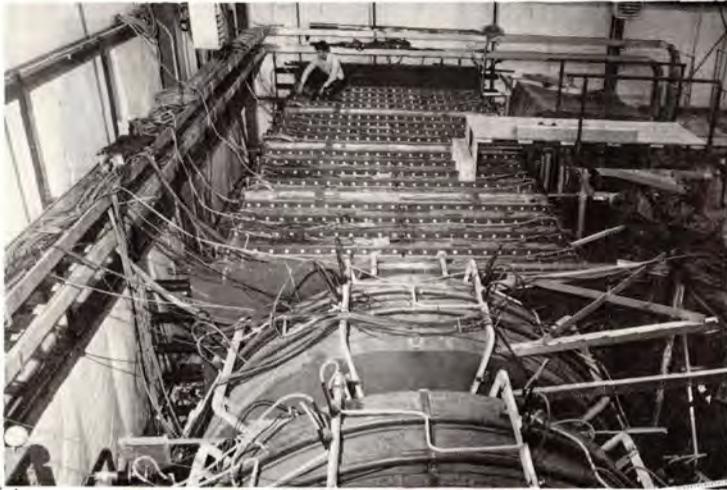
It was appropriate that another experiment, #1-A at the National Accelerator Laboratory, should study interactions of neutrinos, the particles which form the backbone of Fermi's famous work illuminating weak interactions. Fermi would no doubt be greatly enthused at the results indicating that this experiment may be opening a door comparable to the first description of electro-magnetic phenomena 100 years ago.

Experiment 1-A represents a collaboration of experimenters from Harvard University, University of Pennsylvania, University of Wisconsin, and the National Accelerator Laboratory. Writing about the experiment recently, Dr. David Cline of the University of Wisconsin, spokesman for the group, notes:

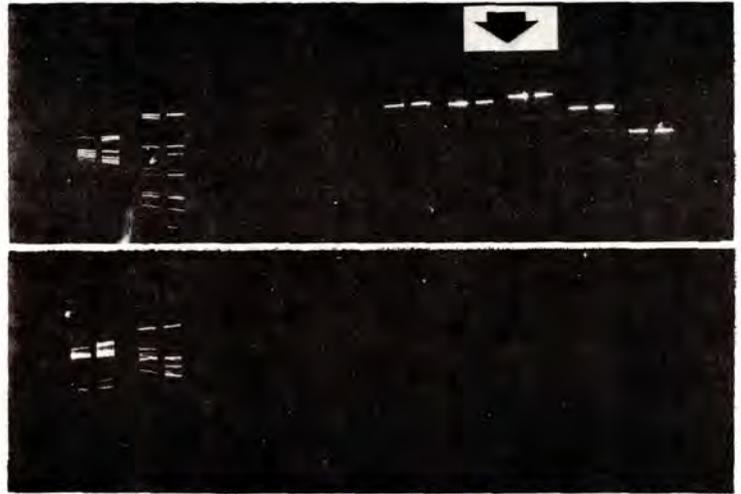
"Until the last year or so the known similarities between weak and electromagnetic interactions were of a nature that did not compel one to imagine any deep connection between these two forces. In fact, it was thought that the electric charge carried by the currents in electromagnetic interactions was always different from the electric charge of the current that controlled the weak interactions.

"Experiments at CERN and NAL in the past year or so seem to have observed a new process and have inferred that a current also mediates the weak interaction which has the same electric charge as that of the electromagnetic interaction or in other words a 'weak neutral current.' The NAL experiment has also shown that the weak force is growing stronger at high energies and it is expected that at still higher energies than available with the existing NAL machine, the weak force will become stronger than the electromagnetic force.

(Continued on Page 2)



...Experimental equipment for Experiment 1-A at NAL, located in Building C at the end of the Neutrino experimental line...



...Top, a "traditional" neutrino interaction with a muon emerging (at arrow) and, bottom, a "muon-less" event obtained by Experiment 1-A at NAL...

"With these observations two important differences between weak and electromagnetic interactions are removed and it appears more plausible that these interactions may somehow have a common origin...It is possible that the study of weak and electromagnetic interactions is now entering the analogous phase of Oerstad and Faraday in electromagnetism. Hopefully it will not take 42 years for a modern Maxwell to clarify the situation."

Dr. Benjamin W. Lee, head of NAL's Theoretical Physics department, and an authority on the search for the weak neutral current, commented recently:

"Experimental verification by one of the experiments now running at the National Accelerator Laboratory, and at CERN, of the existence of the neutral current is a cornerstone in our theoretical understanding of the workings of weak interactions. This is an extension of Fermi's original idea on beta decay. It is gratifying that the Laboratory has already accomplished this feat even before the dedication."

Other experiments in the Neutrino Area promise startling new insights into the realms being probed by Experiment 1-A. Indeed it is clear that the new energy ranges at NAL will reveal the horizons envisaged by the Joint Committee on Atomic Energy when it urged the construction of the NAL accelerator in 1965.

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Enrico Fermi came to the United States from Italy in 1939, to escape the political pressures of the time. He was warmly received by his American colleagues and the U.S. benefited greatly from his work here. About thirty years later, in 1968, leaders of the National Accelerator Laboratory (the largest atomic research facility to be built since Fermi's death) carried on the tradition of the American scientific community's concern for human welfare. Dr. Robert R. Wilson and Dr. Edwin L. Goldwasser announced that this Laboratory would operate on a basic "Policy Statement on Human Rights." The Policy stated:

"It will be the policy of the National Accelerator Laboratory to seek the achievement of its scientific goals within a framework of equal employment opportunity and of a deep dedication to the fundamental tenets of human rights and dignity."

Dr. Wilson called on employees of the Laboratory to renew their dedication to this policy in April, 1974. He said in a letter to employees:

"This is an appropriate time for us to rededicate ourselves to some of the principles that are most basic to the style of this Laboratory."

The Policy Statement on Human Rights which accompanied Dr. Wilson's letter is reprinted here in the spirit of the time at the Fermi National Accelerator Laboratory when science and men will become dedicated to the newest American scientific endeavor.

The New York Times, in an editorial after Enrico Fermi's death in 1954, noted this same combination of men and science in Fermi's life. The following appeared in the Times:

## A TIME FOR DEDICATION... (Continued)

"Much can be justly said of Dr. Fermi as a great teacher of science, as a loyal friend to his colleagues and as a source of inspiration for the generation of physicists which came after him. But for the great majority of us who are not physicists one aspect of his career deserves special attention. It was in Italy that Dr. Fermi was born and educated and there he achieved his first brilliant successes. But when he was at the height of his power, in 1938 his native land was ruled by Mussolini whose anti-Semitic campaign posed a threat which reached into Dr. Fermi's family. To escape this totalitarian oppression the Fermi family came to this land of freedom and then repaid us for that sanctuary in million fold measure.

"On this day after Dr. Fermi's death we may well meditate this lesson of his career and resolve anew to keep bright the light of freedom for all within these shores."\*

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### POLICY STATEMENT ON HUMAN RIGHTS

It will be the policy of the National Accelerator Laboratory to seek the achievement of its scientific goals within a framework of equal employment opportunity and of a deep dedication to the fundamental tenets of human rights and dignity.

We have seen the creation of NAL near Chicago in a year of social tension and urban unrest, and we have observed the destiny of our Laboratory to be linked to the long history of neglect of the problems of minority groups. We intend that the formation of the Laboratory shall be a positive force in the progress toward open housing in the vicinity of the Laboratory site. We intend that it shall also make a real contribution toward providing employment opportunities for minority groups. For this, the principle of equal opportunity is not enough. Special opportunity must be provided to the educationally deprived if they are to be able to exploit their inherent potential to contribute to, and to benefit from, the development of our Laboratory. This is a matter of personal conviction as well as of practical necessity. We expect to create conditions for special opportunity by adopting aggressive employment practices and by instituting special educational and apprentice training programs.

Prejudice has no place in the pursuit of knowledge. Perhaps this is why most scientists are sensitive to discrimination in any form. The National Accelerator Laboratory is in a position to attract to its program some of the greatest physicists, not only of this country but of other nations as well. Thus the Laboratory will be, in a very real sense, one of the windows through which the United States will be viewed by the rest of the world. Foreign visitors, laymen as well as scientists, will come to the Laboratory for short periods of time to observe, and for extended periods to participate in our work. These men will come from varied backgrounds with a variety of beliefs. It is essential that the Laboratory provide an environment in which both its staff and its visitors can live and work with pride and dignity.

In any conflict between technical expediency and human rights, we shall stand firmly on the side of human rights. This stand is taken because of, rather than in spite of, a dedication to science. However, such a conflict should never arise. Our support of the rights of members of minority groups in our Laboratory and in its environs is inextricably intertwined with our goal of creating a new center of technical and scientific excellence. The latter cannot be achieved unless we are successful in the former.

In 1968, when the Laboratory undertook to draw up a laboratory policy statement on human rights, we were moved by our concern for the rights and dignity of all human beings. The statement predated any federal requirement for an Affirmative Action Plan. It was a forerunner of what has since become a requirement that must be met by all federal contractors.

When the policy statement was written, the nation was just awakening to the need for special action to attempt to compensate for generations of cultural isolation and educational deprivation of some minority groups by taking aggressive and affirmative action to provide opportunities for them.

As the years have passed, the nation has become increasingly aware of another area requiring special attention. Women, in many cases, have been deprived of job opportunities because of biases in our society and in our culture. Biases confronting women have been somewhat different from those minorities face, but also have serious effect; careers have been artificially limited by cultural and social constraints.

Our original policy statement on human rights was, and is, addressed to the broad problem of rights for all human beings. It is the spirit of this policy that there should be no discrimination based on sex, race, color, religion or national origin. The Laboratory will make special efforts to avoid and to correct inequities in employment opportunities and practices.

DEDICATION PROGRAM  
FERMI NATIONAL ACCELERATOR LABORATORY  
Saturday, May 11, 1974 - 3:30 p.m.  
Central Laboratory

Robert F. Bacher	President, Universities Research Association
Charles H. Percy	U.S. Senator, Illinois
Melvin Price	Chairman, Joint Committee on Atomic Energy, U.S. Congress
Leon M. Lederman	Professor of Physics, Columbia University
Dixy Lee Ray	Chairman, U.S. Atomic Energy Commission
Laura Fermi	
Robert R. Wilson	Director, Fermi National Accelerator Laboratory

DEDICATION DAY NOTES...

...The formal program is expected to last more than one hour; it may not be appropriate to bring young children. The Laboratory plans to hold an Open House for FNAL families and friends in the early summer.

...A reception and luncheon for distinguished guests will be held in the Central Laboratory cafeteria before the ceremony. The Village Cafeteria will therefore be open to serve those who may be working on Dedication Day. There will be no general tours after the dedication ceremony.

...The Dedication Dance Concert in the Auditorium will be held on Friday night, May 10. Richard Arve and a group of dancers will present seven pieces in ballet, modern, character, and jazz dance. Tickets are complimentary in honor of the Dedication. Call Marilyn Paul, Ext. 3211, for your tickets.

...The usual monthly program of the NAL International Film Society, originally scheduled for Friday, May 10, has been re-scheduled for Friday, May 17, at 8 p.m.

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CLASSIFIED ADS

EXCHANGE OF HOUSES - French scientist wishes to exchange houses July and/or August w/American. Has 5 bdrms. in Gif-sur-Yvette, 15 mi. from Paris & 5 min. from French CEA laboratory at Saclay & Faculty des Sciences at Orsay. Call C. M. Stevens, Argonne, Ext. 76-2440 or 355-5147.

WANTED - Male to share apt. near Phillips Pk. in Aurora. Has 2 bdrm. on 9th fl., garage extra, swimming pool. Call Ralph Ovitt, Ext. 3719 or 896-6521 after 5:30.

FOR SALE - 1964 Pontiac Tempest Conv., 6 cyl., auto., gd. cond., \$150. Call J. Houkal, Ext. 3673.

FOR SALE - 1963 Rambler Am. Sta. Wag., 2 door, L-head, \$250. Call Larry Robinson, Ext. 3355.

FOR SALE - 1968 Renault, new tires/clutch, gd. cond., \$600. Call Glenn Smith, Ext. 3555/896-9191.

FOR SALE - Never used green/gold drapes, 7'H x 8'W, \$45. Call D. Figlik, Ext. 3281 or 584-9172.

FOR SALE - 1964 Corvair, 2 new tires, runs well, \$175. Call Antonio Wijangco, Ext. 3918/420-0091.

FOR SALE - 1970 Honda CT-70 Trail motorcycle, \$200 or best offer. Call S. Upton, Ext. 3996.

FOR SALE - '68 Yamaha DT-1 250 Endura, rebuilt, new paint-\$375 FIRM. Call B. Froemming, Ext. 3807.

FOR SALE - Sears nylon back pack tent, 6'x8', w/fiberglass tension rods & fly, wt. 14 lbs., \$75; a propane camping stove \$10. Call Howard Fulton, Ext. 3862 or 897-3262.

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