

The Village Courier



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FERMILAB PIONEER CEMETERY A LINK WITH HISTORY

A tiny cemetery on the Fermilab site preserves the grave of Thompson Mead, a general in the War of 1812. His grave is one of 18 identifiable burials in the small plot on old Batavia Road, south of Wilson Road, west of the Meson Area.

Newspaper stories before Fermilab entered its present location report that the tiny cemetery was at one time completely abandoned. Through the efforts of two Batavia residents, Ernest Lundine and August Meier, the Kane County Veterans of Foreign Wars began, in 1958, to unearth the tombstones, including that of General Mead. The earliest burial was found to be 1839; the latest recorded burial in the plot was in 1871.

In September, 1972 the VFW re-dedicated the plot, raising a flag from the White House. "The feeling was that this soldier's grave should be preserved just as other soldiers' graves are preserved in military cemeteries throughout the United States," the VFW noted. Fermilab has agreed to continue perpetual care of the cemetery.

Thompson Mead was born February 26, 1774 in Dutchess County, New York, the son of a Revolutionary War soldier. Following the outbreak of the War of 1812, he answered a call to military service on September 1, 1812 and was ordered into active duty as Lieutenant Colonel of the 17th Regiment of the New York State militia. On September 20th, he was chosen commander of the regiment, and he had marched his 400 troops to Queenston Heights on the American side of the Niagara River by early October. An intense battle was fought on both sides of the river during the next fortnight, the British troops reinforced by Indians, ending in capitulation by the Americans. The records indicate Colonel Mead "behaved in battle with great coolness and determination." Some time later he was given the title of General in the New York State militia.

In his latter years, because of ill health, the general and his wife moved to Batavia, Illinois, where their youngest son, Dr. Thompson Mead, Jr., had located. The general purchased about 20 acres of land in 1845 at a location known most recently as the Phillips Farm, where he lived until he died in 1851. He and his wife and three of their grandchildren are buried in the cemetery which was part of their farm. A descendant, Miss Ora Mead, resides in Batavia at the present time.



...Grave of General Thompson Mead, in Fermilab's Pioneer Cemetery...

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FRONTIERS OF SCIENCE

ATTEMPTS IN THE 1960s TO DETECT THE ARRIVAL FROM SPACE OF THE NEUTRINO—A PARTICLE LACKING ANY ELECTRICAL CHARGE OR MASS—PROVED DISAPPOINTING.



7-8

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ATOM-SMASHING WITH NEUTRINOS - Part 1

SUCH NEUTRINO "BEAMS" OVERCAME THE PROBLEM THAT THIS PARTICLE ONLY RARELY INTERACTS WITH OTHER PARTICLES, AND THUS MADE POSSIBLE THE NEW SCIENCE OF NEUTRINO PHYSICS.



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A NEW ERA OF PHYSICS OPENED UP, HOWEVER, WITH THE DISCOVERY THAT NEUTRINOS CAN BE PRODUCED IN DENSE STREAMS BY ATOM SMASHING IN THE VERY BIGGEST PARTICLE ACCELERATORS.



NEUTRINOS ARE NOW BEING USED IN THE U.S. AND EUROPE TO PROVE SOME NUCLEAR REACTIONS WHERE PRESENT THEORIES BREAK DOWN.

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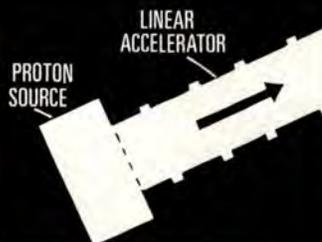
THE MOST ADVANCED WORK IN NEUTRINO PHYSICS IS BEING DONE AT THE BIG NEW PARTICLE ACCELERATOR NEAR BATAVIA, ILLINOIS, USING SEVERAL STAGES IN SUCCESSION.



7-9

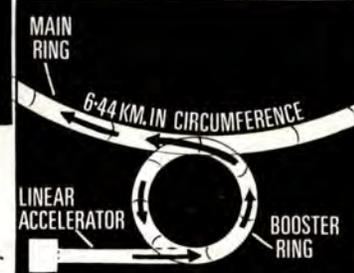
(Available in volume form from Anchor Press / Doubleday.)

ATOM-SMASHING WITH NEUTRINOS - Part 2



A LINEAR ACCELERATOR FIRST PRODUCES A BEAM OF PROTONS (POSITIVELY CHARGED PARTICLES) WITH AN ENERGY OF 200 MeV (MILLION ELECTRON VOLTS).

THE PROTONS ARE INJECTED INTO A BOOSTER RING WHICH FURTHER ACCELERATES THEM TO HIGHER ENERGIES AND THEN INJECTS THEM INTO THE 6.44 KM. MAIN RING.

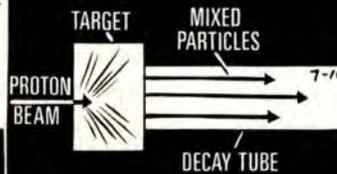
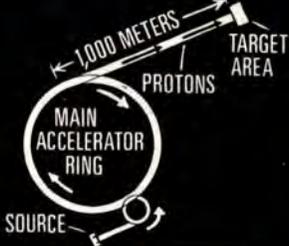


HELD IN ORBIT BY MAGNETS THE PROTONS ARE PUSHED UP TO THE ENORMOUSLY HIGH ENERGIES—AS HIGH AS 500 GeV (BILLION ELECTRON VOLTS)—NEEDED TO PRODUCE NEUTRINOS.

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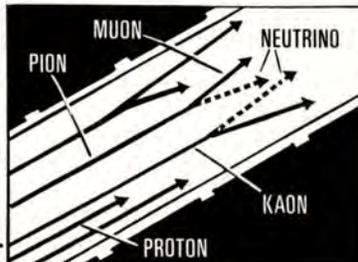
THE ILLINOIS ACCELERATOR PRODUCES NEUTRINOS BY FIRING HIGH-ENERGY PROTONS FROM ITS MAIN RING DOWN A 1,000-METER TUBE INTO A THICK METAL TARGET.



THE PROTONS SMASH INTO THE TARGET NUCLEI AND PRODUCE A SHOWER OF PARTICLES, INCLUDING PIONS AND KAONS, WHICH ARE FOCUSED DOWN ANOTHER DECAY TUBE, 400 METERS LONG.

ATOM-SMASHING WITH NEUTRINOS - Part 3

RAPIDLY DECAYING PIONS AND KAONS PRODUCE FURTHER PARTICLES, INCLUDING MUONS AND NEUTRINOS. ALL FOUR KINDS OF PARTICLES ARE NOW PROCEEDING DOWN THE TUBE.



THE PROBLEM IS TO REMOVE ALL PARTICLES EXCEPT THE CHARGELESS, MASSLESS NEUTRINOS—THIS IS DONE MOST INGENUOUSLY.

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A SHORT STORY ABOUT FERMILAB

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ATOM-SMASHING WITH NEUTRINOS - Part 4

<p>THE MIXED BEAM OF PROTONS, PIONS, KAONS, MUONS AND NEUTRINOS AT THE ILLINOIS ACCELERATOR IS FINALLY DIRECTED THROUGH A MOUND OF EARTH 1,000 METERS LONG.</p>	<p>KAON MUON PION PROTON NEUTRINO EARTH MOUND</p>	<p>EVENUALLY EVEN THE MUONS INTERACT WITH NUCLEI OF THE EARTH SHIELD, LEAVING ONLY THE STREAM OF NEUTRINOS.</p>	
<p>7-11</p>	<p>THIS EARTH SHIELD RAPIDLY ABSORBS ALL BUT THE MUONS (PARTICLES WITH A MASS 200 TIMES THAT OF ELECTRONS) AND THE NEUTRINOS.</p>	<p>MUON NEUTRINOS</p>	<p>THE NEUTRINO BEAM IS THEN AIMED INTO A BUBBLE CHAMBER, HERE, BECAUSE OF THEIR VERY NUMBERS, SOME NEUTRINOS INTERACT WITH OTHER PARTICLES, PROVIDING INFORMATION HITHERTO UNAVAILABLE TO SCIENCE.</p>

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ATOM-SMASHING WITH NEUTRINOS - Part 5

<p>BEAMS OF NEUTRINOS FIRED INTO A BUBBLE CHAMBER FILLED WITH LIQUID GAS SOMETIMES PRODUCE NEW PARTICLES WHICH (UNLIKE NEUTRINOS) MAKE TRACKS OF TINY BUBBLES THAT CAN BE PHOTOGRAPHED.</p>	<p>7-12 bubble chamber containing liquid gas neutrino enters leaving no track, then hits a nucleus tracks of new particles formed by collision</p>		<p>THIS NEWEST OF NUCLEAR "MICROSCOPES" MAY ALSO HELP TO SETTLE THE STILL UNSOLVED ARGUMENT ABOUT WHETHER OR NOT THERE IS SUCH A PARTICLE AS THE QUARK.</p>
<p>NEUTRINOS LIQUID GAS NEW PARTICLES</p>	<p>THUS THE "UNDETECTABLE" NEUTRINO IS PROVIDING SCIENCE WITH A NEW TOOL FOR THE STUDY OF THE GROWING NUMBER OF SUB-ATOMIC PARTICLES.</p>	<p>SUCH MYSTERIOUS PARTICLES AS THE "HEAVY LEPTON" AND THE "W BOSON" WHOSE EXISTENCE HAS SO FAR ONLY BEEN CONJECTURED, MAY NOW BE DETECTED WITH THE HELP OF NEUTRINOS.</p>	

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JULY 8 - 14

FESTIVAL OF NATIONS LUNCHEON

Fermilab Cafeteria
Friday, May 30, 1975
11:30 a.m. - 2 p.m.

Chinese Delicacies by Nancy Teng, Hostess

Nancy Teng was born in China, near Chun King. Her parents live in Formosa. She is the wife of Lee Teng, physicist in the Fermilab Accelerator Division who is also a native of China.

Mrs. Teng's recipes have been favorites with her friends at Fermilab since she gave a cooking class several years ago. She points out that the pork dish, Moo Shi pork with pancakes, is a dish that might be found in Northern China restaurants, while the beef with pea pods and the dessert, almond float, are typically "home cooking."

Recipes for Mrs. Teng's dishes will be available after the luncheon, and she will be in the cafeteria to answer questions about preparation.

NALWO members will display mementos of China, with explanations, during the lunch hour of the Festival of Nations day.

A lecture-recital on 20th century Chinese song will be given at Fermilab on Saturday, May 31. Dr. Shuman Yang, Associate Professor of Music, Louisiana Tech University, will present the program, with proceeds going to the benefit of the Chinese Student and Alumni Services, Chicago. The program will begin at 3 p.m. in the Auditorium; a reception will follow in the Atrium.

Dr. Yang's research has led her to the works of all leading contemporary Chinese composers whose compositions reflect the many social and political upheavals in modern Chinese history. Dr. Yang is a graduate of the National Conservatory of Music in Shanghai. She received degrees from Wheaton College, the American Conservatory of Music and George Peabody College.

The public is invited to the program; tickets are \$3.00 each.

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CLASSIFIED ADS

ATT'N. - Softball will start June 10: 1st game 5:30, 2nd game 7:00. Everyone wanting to play--be there.

FOR SALE - (4) A78-13 Belted WSW Tires, \$5 ea. R. Nelson, Ext. 3849.

FOR SALE - Tank full of home heating oil - you haul it - \$25. J. Arko, Ext. 3555, 896-4970.

FOR SALE - Irish Setter puppies, 1 female, 5 males, 11 weeks old, have shots, good lineage. \$50. Call Jim Simanton, Ext. 4042 or 469-4894.

WANTED - Pony Harness. Call Don Treece, Ext. 3555.

WANTED - 10,000 to 18,000 BTU Air Conditioner. Reasonably priced. Ext. 3808.

FOR SALE - 1972 Honda CL-100, low mileage, exc. cond., \$325. Roy Mraz, Ext. 3734.

WANTED - Person to mow lawn in Aurora, weekly this summer. Call Shirley, Ext. 3405 or 851-5128 after 5:30.

CHILD CARE - in my home - Batavia, 879-5142.

FOR SALE - 1970 Maverick 6 cyl., exc. cond., new tires-brakes, 3 spd., low mileage. \$995. Lee A. Brown, Ext. 3734, 897-1743.

FOR SALE - Men's golf clubs, 2 thru 8 irons and 1, 3, & 4 woods. Northwestern "Dick Mets." Excellent Cond. \$40. Bill Bielefeldt, Ext. 3535.



...Nancy Teng preparing bean sprouts salad in Fermilab kitchen...