

# The Village Courier

 fermi national accelerator laboratory

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## 1976 SUMMER STUDY PROGRAM AT ASPEN

The scientific staff at Fermilab has completed an intense, concentrated study of plans for experiments and for upgraded facilities that will need to accompany the operation of the Energy Doubler/Saver at Fermilab. The meeting took place at Aspen, Colorado from June 28 to July 9, in the Laboratory's fourth "Summer Study." (Three previous summer studies -- in 1968, 1969, 1973 -- were also held at Aspen; the 1970 Summer Study was held in Illinois.

The scientists returned to the peaceful stimulation of the Rocky Mountains for their considerations of the world's next generation of high energy physics experiments.

If sufficient funds are available in FY78 for the Energy Doubler it should be possible to have accelerated beam by the end of 1978. During 1979 the new accelerator will be brought into full operation including supplying 1,000 BeV protons to the experimental areas. To take immediate advantage of the research possibilities that will be available with this new machine, it is necessary to study and plan for the research program in parallel with the construction of the Doubler.

Equally important is analyzing the facilities as they now exist to assess the effect of a 1,000 BeV operation on them.

The 1976 Summer Study addressed two broad subjects -- review of the Fermilab facilities and a more general consideration of the physics questions facing the high energy physics community at the moment. The use of the Doubler in the three existing experimental

(Continued on Page 2)



...Experimenter Charles Baltay speaking to study session...



...Linc Read (L), Peter Koehler with coffee and heavy conversation...



...In foreground (L-R) W. Walker (Duke U.), Joe Lach, R. Wilson (Fermilab) listen intently at Aspen Summer Study...



...Drasko Jovanovic checks aerial photos for discussion topics...



...Judy Ward (with Marilyn Paul) gave secretarial assistance to summer study participants such as Roy Rubinstein...

## SUMMER STUDY (Continued)

areas and the use of the Doubler as a colliding beam device occupied the greatest portion of the study program. The second topic was prompted by a series of experimental proposals recently submitted to the Laboratory. The proposals in turn represent the successes achieved at laboratories where colliding beam devices are in use, opening important new doors to particle research in recent years. A meeting of the Fermilab Program Advisory Committee at Aspen just before the Summer Study, where the proposals were presented, concluded with the recommendation that, "the way for Fermilab to pursue the goal of ultra-high energy at an early date is to push as hard as possible on the Energy Doubler/Saver effort and on its colliding beam applications."

Joe Lach (Proton Department), who headed the study, comments, "Summer studies to chart future physics and facility plans are a method which has been used in the past to focus the attention of both our users and staff on long range goals. It was from the summer studies of 1968, 1969 and 1970 that the ideas of most of our existing experimental areas arose. In 1973 a study was held which focussed on long ranged accelerator projects in which many of the ideas of the Energy Saver/Doubler and POPAE arose."

"It is generally agreed that the 1970 study held at Fermilab was not nearly as productive as the others mainly because it was almost impossible for people to concentrate their efforts on the topics of the study. For a Fermilab staff member to stop by his office for a 'few minutes' before working on summer study projects was just not possible. The few minutes usually stretched into a significant part of the day. As the laboratory experimental program became more active, both outside users and staff found the distractions of the laboratory too great and it became clear to us that if a summer study was to be successful it had to be away from Fermilab where a concentrated effort could be mounted on our long range problems."

The study group was limited to about 40 people at any one time, in a ratio of 15 staff people to 25 outside users. Users represented institutions and laboratories from all parts of the United States as well as two CERN representatives. The interests and the input of the participants brought together a strong cross section of the experimental work at Fermilab in recent years.

More than 100 papers will be written by the 65 participants in the Summer Study. "This impressive list of contributions shows that pleasant surroundings are indeed compatible with getting a great deal of work done," Lach notes.

"I want to take this opportunity to remind these authors that I must have their papers by August 15. Also, to announce that we will have two wine and cheese colloquia devoted to the Summer Study report -- on August 20 and September 3 at 4 p.m. Fermilab representatives will report on the highlights of the Summer Study then. The printed proceedings will be available in the early fall."



...Lofty Rockies backdrop for Fermilab's Ray Stefanski on break from Summer Study...



...A. Skuja (L), A. Melissinos (Fermilab experimenters) prepare for participation in Summer Study...

## SUMMER STAR GAZING

University of Chicago astronomers have a suggestion for you:

On one of the warm summer nights in prospect, spend a few hours watching the procession of the planets and the stars.

What would you see, stretched out on your lawn or in a lawn chair?

Almost directly overhead, a triangle of summer stars will be visible -- Vega in the constellation Lyra; Deneb in the constellation Cygnus; and farthest east, Altair in the constellation Aquila. The constellation Scorpio rises in the south and by midnight bright Arcturus in the constellation Bootes is visible in the sky's western quadrant.

There are other events enlivening this skywatch: an occasional blip of a man-made satellite, a flicker of summer aurora borealis, and meteors or meteorites. These are small particles of material left over from the tails of large comets -- those flying-gravel banks glued together by frozen minerals and gasses. In the sun's heat, these disperse in long tails of dust and gas -- all quite according to Hoyle.

The Perseid Meteors, known as the Tears of St. Laurence, appear with great reliability and are at least 40,000 years old. They stream out from a point in the constellation Perseus at a rate of perhaps 50 an hour and are visible for about 5 days with a midpoint on August 11.

The Orionids come from a point out of the top of the constellation Orion at a rate of 25 visible in an hour and last for about 8 days, with October 20 as the viewing midpoint.

"Meteors," Eugene Parker reminds us, "are cometary debris." And meteors' orbits around the sun are often associated with those of larger comets. However, Parker, head of the Department of Astronomy and Astrophysics at The University of Chicago, is really more interested in the reason there will be no aurora this year -- that is, the sunspot cycle.

Parker studies the sun's magnetic fields, the great electromagnetic activities on the surface of the sun which are responsible for the aurora borealis -- the northern lights. "It is very rare that one sees northern lights in the summer, except at more northern latitudes," says Parker.

"There is almost no solar activity now," says Parker. "This summer marks the rock bottom in the sunspot cycle," All that this means, he assures us, is that another 11-year cycle is about to begin. The summer of '76 marks a pause before the next one.

Since the waning of the sunspot cycle is associated by some scientists with dry weather, there may be good odds for many clear nights, perfect for tracking meteor showers, and the bright star Arcturus in the west.

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## SWINE FLU VACCINE ANNOUNCEMENT

The U.S. Public Health Service will be establishing centers for the distribution of "swine flu" vaccine to the general public. At this time, it appears that the only vaccine available will be provided through county public health agencies. Fermilab employees interested in being vaccinated for this disease should watch local newspapers for announcements concerning distribution centers and hours in the area. Recent new releases indicate that the problem of malpractice coverage for the manufacturers of the vaccine in the event of side-reactions has not yet been resolved and there may be further delay in administering this vaccine.

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SIGN UP NEXT WEEK  
August 9-13  
Central Laboratory - Noon Hours  
MIXED BOWLING LEAGUE  
September 76 to April 77



The first 80 people will be on teams; after that, on substitute lists. There will be 14-16 teams. Sign up must include \$12 entry fee which gives 1st, 32nd and 33rd session fees free and ABC-WIBC membership.

Bowl at Bowling Green, West Chicago. Weekly cost, \$3.75.  
Contact Marion Richardson, Ext. 3674; Al Guthke, Ext. 3174; Ed Stitts, Ext. 3734, Barb Schluchter, Ext. 3199, for further information.

DUPLICATE BRIDGE could begin again this fall if there is enough interest. Contact Marv Warner, Ext. 4430, if you are interested and indicate how often you would like such a group to meet.

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COMING TO FERMLAB

FRIDAY, AUGUST 13 - Inter/National Film Society presents *Blow-Up* - Auditorium, 8 p.m.  
Admission: \$1.50 adults, 75¢ children.

SUNDAY, AUGUST 15 - NALREC Family Picnic at the Village from 11 a.m. to 5 p.m. Watch for the Geneva Clown Club from 11:30 - 2 p.m. Open to all Fermilab, ERDA Batavia Area Office, visiting experimenters, Mutual Management and Management Safeguards personnel at Fermilab.

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RADIATION PHYSICS REMINDS YOU...that film badges should be exchanged on the first day of each month. Permanent badges can be exchanged at the permanent badge racks; temporary badges can be picked up at Radiation Physics, CL-7E or in the field at temporary badge boxes, leaving an old one when picking up a new one. For further information call Larry Coulson, Ext. 3023.

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CLASSIFIED ADS

FREE - Three little kittens, long-haired, 6 wks. old. Call 293-1534.

FOR SALE - Kawasaki 500, 4 wks. old, 500 miles, factory warranty, \$1300. Sears air compressor, 4 cyl, 3/4 hp, 160# tank, 60 psi, and 2 Binks brushes. Call Fred, Ext. 3140 or 859-0905.

WANTED - All Fermilab people interested in joining scuba diving classes. Contact D. Brazzale, Ext. 3525.

FOR SALE - 1973 Triumph Tiger, 750 cc, exc. cond., 2000 miles, asking \$1100. Call E. Hagler, Ext. 3400.

FOR SALE - '72 Pinto, exc. cond., new tires, exhaust, battery, best offer. X4145 or 964-4407.

FOR SALE - 18' swimming pool, needs liner, has deck, vacuum, chemicals, \$75 or offer. Call Ext. 3677 or 232-6514.

FOR SALE - 1973 Honda 350, 4 piston, army green, needs muffler, 6500 miles, \$700. Call Ernie, Ext. 3210.

FOR SALE - 1969 E-200 Ford Econoline Van, carpeted, 6 cyl., 3-speed stick. \$1200. Call Judy, Ext. 3935 or Gil, Ext. 4403, evenings 892-1829.

FOR SALE - 1974 Gremlin, exc. cond., 25,000 miles, new over-size steel belted radials, auto., radio, heater, undercoating. Call Leo Indykiewicz, Ext. 3677.

FOR SALE - 1974 TS100 Suzuki motorcycle, Enduro, very good cond., \$385. 1/2 carat diamond ring set in 4 prong mounting, \$550, appraised 7/76. Call Lois, Ext. 3208.