

# The Village Crier

 fermi national accelerator laboratory

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## SCIENCE STUDENTS FINISH FOURTH SUMMER PROGRAM

Eleven physics majors, two electrical engineering students, and four math majors are among the 21 minority students in the summer program completed this week at the FermiLab. It is the fourth summer that students from colleges in the southern half of the U.S. have worked at the Laboratory in a program initiated by the Laboratory in 1970 to encourage wider participation by minorities in high energy physics careers.

Two major features were added to the 1974 format to strengthen the goals of the project. A Committee of five members of the Laboratory's professional staff has given assistance and attention to planning and organizing objectives for the 1974 summer program. Frank Cole, Gene Fisk, Fred Hornstra, Ernie Malamud, and Frank Nezrick joined the EEO staff in recruiting students at schools in the early months of the year. They were able to give students first hand answers to technical questions about the Laboratory and the work that is done here. Job descriptions for the work to be done by the students selected to come to the Laboratory were then tailored by the committee and by Laboratory supervisors to provide challenges as well as some perspective on high energy physics.

Eleven FermiLab staff members gave lectures on a bi-weekly schedule during the seven weeks of the program. Lecturers included Jim MacLachlan, Lee Teng, Jeff Gannon, Frank Cole, Cordon Kerns, Ron Walker, Dixon Bogert, Shirley Jackson, Dick Carrigan, Bruce Strauss, Ron Kammerud, and Manny Paschos. Each lecture developed a major facet of FermiLab techniques or some aspect of the experimental work carried out at FermiLab. These lectures helped students to see how a particular job relates to the organizations and goals of the whole Laboratory.

In a second move to assist the visiting students, Dr. James C. Davenport, chairman of the Department of Physics, Virginia State College, joined the FermiLab staff for the summer months as coordinator of the summer program. A professor at Virginia State, Dr. Davenport has been close to the educational needs of minority students during the ten years he has taught physics. He has been active in the FermiLab program since it began and served as a consultant in 1973.

"I am impressed with the community that is growing in the new Central Laboratory," Dr. Davenport comments. "Students can now interact with all facets of the Laboratory. They

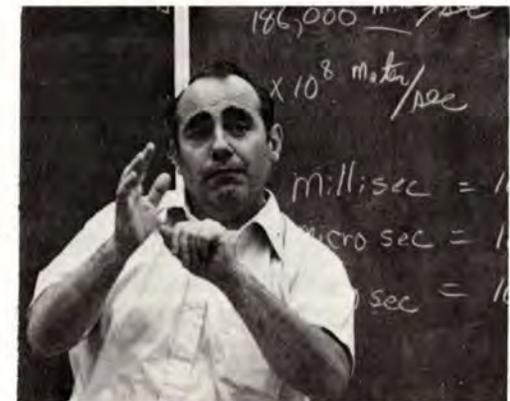
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...Summer program advisory committee: (L-R) E. Malamud, E. Fisk, F. Cole, F. Nezrick (F. Hornstra absent). Right, Coordinator James Davenport...



...Dr. Shirley Jackson, FermiLab theorist, lectures on symmetry in physics...



...Cordon Kerns, Research Services, explains fast electronics to summer visitors...



...Eugenio Gallegos, New Mexico Highlands University, Magnet Facility...



...Deborah Wilson, Spelman College, Proton Department...



...Clarence Davis, Florida A & M, Accelerator Division...

can see what a large modern research facility really looks like, how it operates. They are close to the accelerator, close to the library. For minority students, it's exposure to such an atmosphere that counts. This is what they're missing and this is what the summer program is all about."

Again this year, FermiLab's summer students lived in the dormitory facilities at Aurora College, commuting to the Laboratory by bus. A terminal of the FermiLab PDP-10 computer was connected by telephone line into the dormitory giving students a chance to use the computer in their spare time.

Under Dr. Davenport's supervision, each summer student is submitting a scientific paper on the work done this summer. Dr. Davenport says: "This has encouraged the students to write scientifically, to get a better grasp of the section they are working in and to analyze their job in relation to the whole Laboratory. We hope that many of the students will go back to their schools and give a similar report to their professors and to their fellow students."

Many of the improvements in the program over the years reflect suggestions and comments that were presented by Dr. Vicente J. Llamas, who has served as a consultant to the program. Dr. Llamas, a member of the physics faculty at New Mexico Highlands University, visited the FermiLab in July and will make recommendations on further improvements. FermiLab EEO staff members Warren Cannon, Joyce Curry, and Roy Rodriguez are also deeply involved in implementing the summer program.

Dr. Francis T. Cole, Chairman of the Staff Advisory Committee, reviews the 1974 summer program, "We believe that this summer's program has gone well, though we'll find out more from the students' evaluations. The students have, we think, gotten deeply into their assignments and really feel a part of FermiLab. Dr. Jim Davenport has done a superb job coordinating the program and deserves a large part of the credit for whatever success we're having.

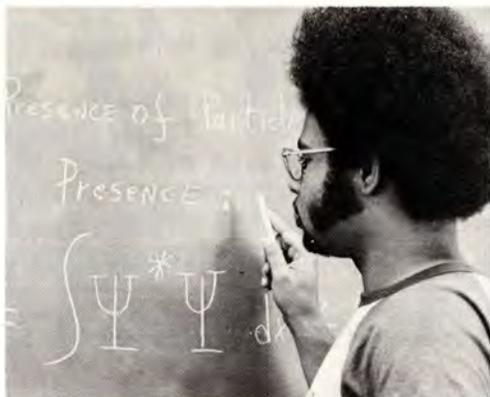
"The committee would like to think that our work in recruiting and matching students and assignments has helped, and we're now starting to think about next summer."

Participating in the 1974 summer program were:

Joe R. Baca, Las Vegas, New Mexico, who has completed his third year at New Mexico Highlands University, majoring in math, physics; John H. Baines, Newport News, Virginia, third year, Virginia State College, physics; Roderick Brown, Baltimore, third year, Norfolk State College, electrical engineering; Clarence J. Davis, first year, Florida A & M University, physics.

Daniel W. Epps, Disputanta, Virginia, second year, Virginia State College, physics; Eugenio L. Gallegos, Las Vegas, third year, New Mexico Highlands University, math; Ronnie Hines, Portsmouth, Virginia, second year, Norfolk

SCIENCE STUDENTS (Continued)



...Robert L. Jones, Norfolk State College, Neutrino Department...



...John Baines, Virginia State College, Neutrino Department...



...Ming-Chien J. Lin, Virginia State College, Accelerator Division...

State College, physics; Robert J. Jones, Portsmouth, Virginia, third year, Norfolk State College, physics.

Robert L. Jones, Portsmouth, Va., third year, Norfolk State College, physics; Calvin W. Lowe, Roanoke Rapids, N.C., second year, North Carolina A & T, physics; Carl McCalla, Cleveland, Ohio, third year, Morehouse College, physics; Margaret Phillips, Los Angeles, California, third year, Spelman College, physics.

James E. Pritchett, Bessemer, Alabama, third year, Alabama A & M, physics, math; John P. Sandoval, Santa Fe, New Mexico, third year, New Mexico State University, electrical engineering; McKenzie Thomas, Sardis, Alabama, third year, Alabama A & M University, physics; Deborah J. Wilson, El Cerrito, California third year, Spelman College, math.



...James E. Pritchett, Alabama A & M, Proton Department...

Also participating in the summer program were: Chandler M. Dennis, Jr., East Orange, New Jersey, first year graduate student at Virginia State College; Ming-Chien J. Lin, Williamsburg, Virginia, third year graduate student, Virginia State College; June M. Rooks, first year graduate student at Southern Illinois University; Pansy Sankies, fourth year graduate student at Howard University; and Dallas Scott, second year graduate student at Harvard University.



...Bottom Row (L-R): R.J. Jones, D.J. Wilson, J.H. Baines, M. Phillips, J.M. Rooks, J. Pritchett, M. Thomas. Center (L-R): C. Dennis, R.L. Jones, C. Lowe, D.W. Epps, R.K. Hines, C. Davis. Back (L-R): E. Gallegos, P. Sankies, J.P. Sandoval, D.A. Scott, R. Brown, J. Lin, J. Davenport, J. Baca. (Missing from photo is C. McCalla)...

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(Photos by Tim Fielding and Robert L. Jones)

MARK YOUR CALENDAR

- FRIDAY, August 16 ----- Folk Dancing - Village Barn - 8 p.m. - Everyone welcome. No charge.
- SUNDAY, August 18 ----- Trail Ride at FermiLab, sponsored by the Indian Creek Riding Club, starting at 8 a.m., from Club headquarters on Eola Road. Trail ride about 15 miles, returning at noon. Box lunches available at \$2.00 each. Horses available at \$15.00 for the 4-hour ride. Outdoor games and hayride after lunch, prize for capture of the greased pig. Call Paul Neeson, Ext. 3019, or Gerry Reid, Ext. 3121, to make reservations for horses and for lunch.
- WEDNESDAY, August 21 --- Happy Hour, Village Barn, 5:15 p.m. Charcoal-grilled hamburgers available at 50¢ each.
- SUNDAY, August 25 ----- Children's Swim Meet, FermiLab Pool, 1:30 p.m. Open to all children of employees and visiting experimenters, pool pass not necessary. Events as follows: 8 yrs. old and under and 9-10 years old, 25 yard free style; 11-12 years old, and 13-14 years old, 50 yard free style. All events timed finals; warm ups at 1 p.m. Call Eric Jarzab, Ext. 3397 for further information.
- Bowling season opens September 9. Sign up now - Central Laboratory 2nd floor coffee lounge, noon to 1 p.m. everyday until 60 have registered. \$12.00 registration pays for 1st, 32nd and 33rd week of season and membership in ABA, WIBC. Bowl at Warrenville Bowl, Monday nights, 6 p.m., September 9 through April 21. For further information, contact league officers, Harland Gerzevske, Helen Ecker, Barb Schluchter, Sherry Nila.
- SATURDAY, September 28 - Canoe Race - Main Ring ponds - 11 a.m. Starting in A-1 sector pond, fifteen portages, ending in F sector. Open to employees and visiting experimenters only. Call Larry Allen, Ext. 3721 or Helen Ecker, Ext. 3393, before September 23, to sign up.

SOME HEP REFERENCES

Students returning to school after working for the summer at the FermiLab frequently ask Roger Thompson, Librarian, for reference material they can use during the school year in preparing papers about the history of high energy physics and about the FermiLab. A few references on historical background are: High Energy Physics, by Harold Hellman, (Lippincott, 1968); The Nuclear Apple, by Paul T. Matthews, (St. Martin's Press, 1971); Particles and their Interactions, by J.G. Powles, (Addison-Wesley, 1968); Biography of Physics, by George Gamow, (Harper, 1961); Elementary Particles, by Enrico Fermi, (Yale University Press, 1951); World of Elementary Particles, by Kenneth W. Ford, (Blaisdell, 1963); Elementary Particles, by David H. Frisch, (Van Nostrand, 1963); Elementary Particles, a short history of some discoveries in atomic physics, by Chen U. Yang, (Princeton University Press, 1961), and Guide to Science, Chapter 6, Particles, by Isaac Asimov, (Basic Books, 1972).

The FermiLab Public Information office provides a pack of general material about the Laboratory, including reprints of "The Batavia Accelerator," by R.R. Wilson that appeared in the February, 1974 issue of Scientific American Magazine. The packs are available in the Central Laboratory, 1 W.

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!!! REMEMBER, CREDIT COST LESS AT YOUR CREDIT UNION !!!

CLASSIFIED ADS

FOR SALE - Rebuilt 1951 Air Force Jeep, eng. major overhauled, new paint/heavy duty battery/tail lights/turn signals, 4-wheel drive-\$800. See at Safety Office, Bob Adams, Ext. 3580.

FOR SALE - 1966 Galaxie Ford, 4 door, a/c, 65,000 miles, good condition, asking \$250. Call N. Christensen, Ext. 3640.

FOR SALE - Westinghouse steam iron-\$4; a hair dryer with bonnet-\$2.50; a Sunbeam 8 cup percolator, \$1.50; Encyclopedias-\$9. Call H. Hart, Ext. 3382.

LOST - Westinghouse Electrical Transmission & Distribution reference book. If found or whereabouts known, please call T.H. McGreer, 43 Feldott, Ext. 3772.

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