

FERMILAB NEWS

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VISITING PHYSICISTS PRAISE FERMILAB'S SUMMER PROGRAM FOR MINORITY STUDENTS

Five visiting physicists had considerable praise for Fermilab's Summer Program for Minority Students, calling it one of the more successful programs of its kind in the country.

Since 1971, Fermilab has given summer employment to minority students who were interested in physics. "The objective of our program is to further whet the appetite of these students for science by showing them what life in a laboratory is like, by giving them creative people to work with and by helping them understand the challenging problems they are working on," said Frank Cole, chairman of the Summer Program Committee.

"These students also help our laboratory do its work.

"An important reason for the program's success is our laboratory people. They have been willing to spend their time and effort to help these students. They have been supervisors in the most conscientious manner."

This year, 17 students from around the country participated in the program. Fifteen are undergraduate college students, and two are graduates students.

Cole said he was pleased the panel of physicists, who were at Fermilab for three days, were impressed with the program. "This does not mean we'll keep on doing what we are doing," he said. "The program can't stand still. We will continue each year to improve it."

The visiting professors, each a physics educator with a student in the Fermilab program, were: Dr. W. Eugene Collins, Southern University and A & M College; Dr. Rufus Bruce, University of Texas at El Paso; Dr. Thomas Odom, Grambling State University; Dr. Harrison Ransom, Norfolk State College; and Dr. Carl Clark, South Carolina State University. They had been invited by Fermilab to see the students



...Leon Lederman, Fermilab director, addresses students, instructors and visiting physicists...

work and to hear their reports. The visiting physicists also evaluated the program and made recommendations where they felt they were needed.

The 1979 summer program, in essence, ended with the evaluation. During this three day period, Dr. Leon Lederman, Fermilab director, addressed the visiting physicists and students at a luncheon.

One of the requirements of the summer program is that each student prepare a scholarly written report about his or her work, doing research, if necessary, in the library to give the paper sufficient depth. The students gave oral summaries of their reports to the visiting physicists.

"It is through these oral reports that the physics educator can hear what his student has learned from his or her experience at Fermilab," said Lauta Price-Joyner, head of the Equal Opportunity Office at Fermilab. Her office is responsible for the program.

She gives considerable credit for the program's success to Dr. James C. Davenport, chairman of the physics department at Virginia State University, Petersburg, Virginia, and coordinator

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...(L-R) Odom, Sampler, Ransom and Collins listen to a presentation...



...Spriggs talks about her project...

of the Summer Program. He continuously monitored the students' progress to see that the objectives of the program are being met as well as possible. In addition, he helped the students prepare their papers, served as a counselor, and listened to their problems, Price-Joyner said.

The students are actively recruited by Fermilab from colleges and universities around the country. During their stay here, they lived in a dormitory at Aurora College.

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...Davenport addresses group...

The students, where they worked at Fermilab and their schools:

THOMAS S. BLACK (graduate student), internal target, Accelerator Division, Georgetown University;

LARRY D. BROWN, sector test, Accelerator Division, Virginia State College;

OMRI W. CREWE, electron cooling ring, Virginia State College;

THOMAS W. DAILEY, research, Meson Department, Grambling State University;

THOMAS W. GOODWYN, research, Physics Department, Norfolk State College;

SOLOMON L. LEVY, Technical Services, Magnet Facility, South Carolina State College;

MICHAEL A. MANN, Technical Services, Division Office, Norfolk State College;

RODERICK L. MILLS, Main Ring, Southern University;

SALVADOR MUNOZ, research, Physics Department, University of Texas at El Paso;

ZOLILI U. NDLELA, research, Physics Department, University of the District of Columbia;

JACQUELYN D. NELSON, controls, Accelerator Division, South Carolina State University;

HARRISON L. RANSOM JR., electron cooling ring, Virginia State College;

JOHN R. RICE, research, Proton Department, University of the District of Columbia;

HENRY P. SAMPLER, (graduate student), superconducting magnet development, Energy Doubler, Howard University;

KAREN E. SPRIGGS, research, Physics Department, Norfolk State College;

WALTER H. THOMAS, magnet measurements and quality control Energy Doubler, Florida A & M University;

CLARENCE L. WELLS, Tech.Serv., Magnet Facility, Virginia State College.

MESON TWO-WAY SPLIT RUNS SUCCESSFULLY

The Meson department made major progress in its overall upgrading program when the two-way split began running successfully last month.

Alan M. Jonckheere, meson physicist who is acting as liaison between the Accelerator Division and the Meson Department, said the historic time came "at 9:30 a.m. on Aug. 13 when we had beam in both branches of the two-way split with acceptable losses, that is, low losses. We ran for about five hours in both branches. We could have let it run forever."

Jonckheere, who helped design and implement the two-way split, also said beam had been sent through both branches before this run, but losses were higher than acceptable, and the split was not run for any extended period of time.

The two-way split works in this manner:

A single proton beam comes out of enclosure C in the Switchyard to enter the F-1 manhole, where an electrostatic septum splits it vertically into two beams. The twin beams travel through the F-2 manhole and into the F-3 manhole. There powerful Lambertson dipole magnets move the beams apart in the horizontal plane.

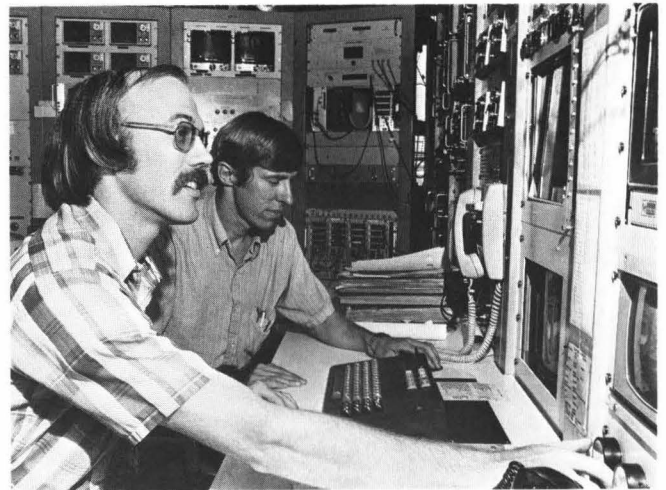
From the F-3 manhole, the two side-by-side beams enter the Meshall as independent beams. Now 14 inches apart in the horizontal direction, they are focused and strike beryllium targets. The interaction of the proton beams with the targets is the source of the secondary particles that are collected by the various secondary beam lines.

The west target (M-west) is the source of secondary beams for the M-5 and M-6 beam lines, while the center target is the source of beams for M-1, M-2, M-3 and M-4.

Built into the Meson Area is the capability in the future of splitting the M-center beam yet again to strike a third target (M-east) that would serve M-1 only.

Before the two-way split, the beam went essentially to M-center with all six secondary beam lines sharing the single target.

"The flexibility of using separate targets allows the production angle of the secondary beams to be chosen to



...Al Jonckheere (left) and Don Ljung in the main control room...

maximize the secondary flux with a minimum number of primary protons," said Jonckheere. "This split is one step in the continuing process of upgrading the original 200 GeV Meson Area to Tevatron energies."

The two-way split is the end product of months of extensive and intricate team work between the Switchyard of the Accelerator Division and the Meson Department, Jonckheere said. Those from the Meson Department who share with Jonckheere the honor of helping to bring the two-way split on line include Steve Johnston, who headed the meson portion of the installation. He was helped by Coby Richardson, Wilbur Bruce and Mick Mascione. Skip McQuire, meson operations chief, along with the entire operations crew, were involved at one time or another in the installation. Tony Glowacki, meson head engineer, was responsible for the mechanical design, and Bud Koecher and Bob Jensen built the magnet stands. Ross Doyle and the mechanical support group upgraded the cooling water system.

The team from the Switchyard and Accelerator Division includes Roger Dixon, Switchyard head; Sharon Lackey, engineering physicist who participated in the design; Don Ljung, physicist; and Bob Oberholtzer, David Hoffman, Doris Rice and Johnny Gerald, who worked on electrical components such as power supplies and hookups. Also Fil Johnson, Kent Ernsting and Theo Gordon, who provided mechanical support and worked on the vacuum system; Rich Janes and Cathy Voit, instrumentation;

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IT CAN HAPPEN...

Car pools can happen if people want them to.

While it may not be the first one at Fermilab, it is the first one the Public Information Office (PIO) has found out about. Eleanor L. LaFountain, a secretary for Site Services, and Leonard C. Sawicki, a technician with the Proton Department, have formed a car pool.

Both live about four blocks apart in Aurora and have been riding together now for about a month. She drives three days a week, and he two, then the following week its the other way around.

PIO contains a master list of persons who are interested in forming car pools and their addresses. The information, available anytime, is in a grey file box on the desk of Beverly Kaden, secretary. It's easy to spot - a sketch of a car with pink tires adorns the top of the box.

For additional information about car pools, call Kaden at Ext. 3351 or come see her in PIO, CL1-W.

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DUO-CONCERT PLANNED FOR FERMILAB

Leonard Sorkin, first violinist of the Fine Arts Quartet, and James Tocco, an upcoming gifted American pianist, will perform at Fermilab Sept. 22.

The duo-concert will begin at 8:30 p.m. in the Central Laboratory auditorium. Their performance is another in the Fermilab Arts Series, arranged by the Auditorium Committee.

The price of a reserved seat is \$4. Reservations may be made through the Guest Office, Ext. 3124.

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and Jack McCarthy, electrical engineer. Tom Dillman, Jim Walton, Tyrone Thomas and Tom Larson built the electrostatic septum. Rich Parry was responsible for accelerator safety.

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REMINDER ABOUT GED PREPARATION COURSE

Fermilab is planning to offer a course that prepares persons for the general educational development (GED) examination.

But first, Fermilab must determine if there is enough interest in a course of this nature. An individual who passes the GED test is awarded a high school equivalency certificate. The test is primarily for persons who have not completed their high school education, but who have sufficient knowledge and background to qualify for a high school equivalency certificate through the GED test.

Classes will meet three times a week for an hour, either during noon or after working hours--depending on the preference of those who have enrolled. Classes will run 12 to 14 weeks beginning this fall.

Persons who are interested have been asked to contact Ruth Christ in Personnel, CL6-E, Ext. 3324.

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DUNGEONS AND DRAGONS

They're right. It's extremely difficult to explain the game of Dungeons and Dragons in a few words.

A relatively new game, about five years old, it is gaining in popularity, particularly among persons who enjoy fantasy and science fiction and who thrive on creating new universes, the characters who live in them and the things they do--all according to rigorous guidelines.

A small group of persons at Fermilab have been playing together for about one and a half years. Dan Curtis, Ext. 3927, and Dave Johnson, Ext. 3803, want to bring more people into the fascinating realm of Dungeons and Dragons, where anything can happen--and usually does.

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DON'T FORGET THE BALL PARTY

NALREC'S ball party is the place to be on Sept. 14. From 5:15 to 9 p.m., participants can compete in a variety of ball games at the Village barn.