

LUNCH + LEARNING = IIT/V CONNECTION



Fermilab employees Mark Leininger, left, and Walter Knopf make good use of their noon hours by taking graduate level courses over IIT/V. Both are working on master's degrees, Mark in mechanical engineering and Walter in computer science. Being able to attend classes at Fermilab has saved both students hours in commuting time, enabling them to take two courses instead of only one, if they so desired.

Fermilab engineering physicist Mark Leininger can eat his lunch at Fermilab and go to graduate school at the same time!

Mark is just 1 of 21 employees who are presently taking a fall semester class at Fermilab via the recently installed IIT/V (Illinois Institute of Technology's off-campus educational delivery system). Mark is taking Finite Element Analysis three days a week, and he thinks it is "fantastic to be able to eat a pizza, sit with your legs up, and go to school at the same time." Mark is a veteran at taking IIT's live televised instruction; before it was instituted at Fermilab, he attended classes at a receiving site at North Central College in Naperville. Students at IIT/V receiving sites can ask questions during class via telephone, and →

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→ there is daily courier service, coordinated through Barbara Graves, WH15E, to handle getting materials to students and homework back to instructors. Mark says the time-delay in getting homework assignments back can be a bother, but the convenience in attending graduate school at Fermilab more than compensates for any communication delay. Tests are taken at Fermilab and, at the discretion of the instructor, monitored by Laboratory staff.

Fermilab's classroom is located on WH6E. There are two monitors; thus, two separate classes may be taken by two individuals at the same time just by using head sets for each audio.

Course work available via IIT/V is comprised primarily of upper division and graduate classes; a complete listing of scheduled courses is available from Ruth Christ, ext. 3793, coordinator of Fermilab's participation. IIT has a commitment to make three masters programs, Computer Science, Electrical Engineering, and Business Administration, available on IIT/V, and approximately 60 courses are broadcast each semester.

Illinois Institute of Technology is the first school in the Chicago area to broadcast instruction to off-campus sites. Its delivery system uses four special frequency TV channels and broadcasts 14 hours per day from four studio classrooms on IIT's main campus in Chicago. There are currently 23 receiving sites in a 40-mile range.

To take courses, an employee must apply for part-time undergraduate or special or regular graduate student status. Application forms are available in the Training Office, WH15E. Once admitted, a student will receive a registration packet from IIT. In addition to regular tuition, there is a sliding scale service charge based on the number of credit hours being taken at Fermilab during that semester (16-30 hours, 50% of tuition; 31-60 hours, 33-1/3% of tuition; 61-150 hours, 25% of tuition). Tuition reimbursement for employees who take IIT/V courses is handled the same as for any other college work. "Such high interest among Fermilab employees fall semester was indicative of the value of IIT's program," according to Ruth Christ, and "the response has been very positive, even though we've had to iron out some problems connected with starting a new system."

Contact with IIT/V regarding registration must be via courier service. Employees interested in taking courses spring semester 1982 (which begins in January) should begin the admissions process immediately.

NTF ON ARGENTINE TV

Miguel Awschalom, deputy head of Fermilab's Neutron Therapy Facility (NTF), was on Argentinian television recently. Sort of.

Miguel, a native of Argentina, was interviewed in September by a Buenos Aires television station for their weekly program, "60 Minutes." The subject of the discussion, which took place over the telephone, was the work being done by NTF in cancer therapy and research.

Miguel's mother, after watching (hearing ?) the 2-1/2 minute interview, remarked, "But they didn't show your picture!"

Trilling Committee Report

FOCUSES ON FUTURE FERMILAB FUNDING

A "Physics Town Meeting" was held at Fermilab on October 2, 1981, by the Fermilab Users Organization to discuss with members of the "Trilling Committee" the problems facing the high-energy physics (HEP) community.

Richard Gustafson, Fermilab Users Executive Committee Chairman, began by outlining the present HEP program and concerns within the community about funding. There is currently a crisis, with funding not keeping up with inflation, at a time when four major construction projects are underway or proposed. A new 20-member Sub-panel on Long Range Planning, chaired by George Trilling, has been appointed to assist the HEP Advisory Panel and the Department of Energy (DOE). Their charge was to develop a strategy for the U. S. HEP program over the next decade under different funding assumptions. In particular, they were to evaluate the priority of the Brookhaven National Laboratory (BNL) project, ISABELLE. Trilling remarked that recent funding of the U. S. program has not been good, and that a strength of the program up to now has been its diversity.

Robert Palmer of BNL then discussed ISABELLE, the 400x400 GeV proton-proton colliding-beam facility now under construction. BNL has had problems in the past building a suitable superconducting magnet for ISABELLE, but recently has had success with a new design using Fermilab superconducting cable. Two 5-ft long models of this new design have gone to full field (58 kilogauss). Discussion following Palmer's presentation centered on cost estimates and the impact of proceeding with ISABELLE on the remainder of the U. S. program.

Both Cornell and SLAC have proposed competitors to LEP, an electron-positron device to be built at CERN. Albert Silverman discussed Cornell's CESR II, a 50x50 GeV e^+e^- ring with 4 interaction regions. It requires the development of superconducting rf cavities. Joseph Ballam then discussed the SLAC linear collider, a plan to use the existing linac to achieve 50x50 GeV e^+e^- collisions. To obtain high col-

lision rates, the beams are compressed to a very small size at the interaction point.

Leon Lederman discussed the Fermilab program. He stated (i) the Fermilab program is unique; (ii) it stands up in world competition; (iii) it serves 60% of the U. S. users; (iv) it does not have enough money for 1982-84. Fermilab's new facilities are the Energy Saver, Tevatron I, and Tevatron II. Beyond these programs, Lederman looked to a 10x10 TeV $\bar{p}p$ antiproton-proton ring and a 10-TeV fixed-target program in the 1990's. He closed by asking, "Should the U. S. be first rate?"

Lawrence Jones of the University of Michigan summarized the general discussion. Concern was expressed that not enough young people are coming into HEP and that recent Ph.D.'s are not remaining because of the small number of experiments now being done. We have not been hit as hard financially as other fields. Nonetheless, because of the four construction initiatives, coupled with the real necessity for utilization of existing facilities, the financial picture is certainly serious.

Recent Developments

An interim report by the Trilling Committee has these recommendations:

1. The ISABELLE project should go forward and be completed during this decade, providing a minimum of \$440M (FY '82 dollars) in DOE funds for HEP is available per year; if such funds are not available, then this project cannot be continued.

2. The essential components of a U. S. program, whether or not ISABELLE is constructed, are (a) adequate utilization of existing facilities and support of user groups; (b) expeditious completion of the Energy Saver at Fermilab and initiation of the Tevatron II program; (c) completion of the Tevatron I $\bar{p}p$ collider; (d) R&D work at SLAC leading to the SLC linear collider project; (e) development work on superconducting rf cavities at Cornell; (f) accelerator R&D on high field superconducting magnets, high gradient accelerating structures, and novel methods of acceleration.

CHICAGO ENSEMBLE PERFORMS DECEMBER 5

Mozart, Brahms, Ravel, and Pierné will grace Ramsey Auditorium on Saturday, December 5, at 8 p.m., courtesy of the critically acclaimed Chicago Ensemble.

Featuring piano, strings, and flute, and joined by baritone Wayland Rogers, the Chicago Ensemble will present Mozart's "Quartet No. 1 in G Minor," Brahms' "Quartet No. 3 in C Minor, Opus 60," and Pierné's "Sonata Da Camera, Opus 48," in addition to Rogers singing Ravel's "Chansons Madecasses."

Although each of the players is an accomplished soloist, the Ensemble blends well because, as Artistic Director Gerald Rizzer notes, they "enjoy the communication among players--the give and take in ensemble playing." As a result, this fine chamber music group presents skillful, impressive programs that have attracted a loyal following.

Admission to this Arts Series program is \$5, and all seats are reserved. Tickets may be obtained at the information desk in the atrium of Wilson Hall. Reservations can be made by calling ext. 3353, but due to ticket demand, reservations not paid for within five days will be released for sale.



Four members of the Chicago Ensemble (left to right) flautist Susan Levitin, pianist Gerald Rizzer, violist Rami Solomonow, and cellist Wayne Burak.

Paramount Offers Discount

Fermilab employees and users now receive a 10% discount on one or two tickets purchased at the Paramount Arts Centre, Aurora. A few productions not staged by the Paramount itself (the forthcoming Ferrante & Teicher concert, for example) are not eligible for the discount. These, and other details concerning the discount plan, may be verified by calling the Paramount box office at 896-6666.

Anyone wishing to be on the Paramount mailing list should send this information to Randy Mortenson, Paramount Arts Centre, 11 E. Galena Blvd., Aurora, 60506.

Dance Tickets Still Available

Tickets are still available at \$15 per person for the Fermilab Annual Christmas Dinner Dance to be held December 5, at St. Andrew's Country Club in West Chicago. If you have not purchased your tickets, contact Jo Baaske, ext. 3046.

Charity Pledges Due Dec. 4

The deadline is approaching for those Fermilab Annual Charity Fund Pledge forms. Using the payroll-deduction plan, employees may make donations, totaling not less than \$12 annually, to as many as three charitable organizations. Deductions will begin on January 1, 1982, and accumulated amounts will be sent to the charities of your choice at the end of the year.

Make sure your charities are on the I.R.S. approved list if you want to claim a tax deduction. Pledges already made in 1981 will be discontinued at the end of the year unless renewed.

Space Shuttle Talk

Dr. Hans Mark, Deputy Administrator for the National Aeronautics and Space Administration, will speak about the "NASA Space Shuttle Program," with a movie on the flight of Columbia. His talk on December 2 will begin at 4 p.m. in Ramsey Auditorium.

Fermilab is operated by Universities Research Association, Inc. under contract with the U. S. Department of Energy. Fermilab is published by the Publications Office, P. O. Box 500, Batavia, IL 60510, phone (312) 840-3278.