

FERMINES

 **Fermi National Accelerator Laboratory**

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FERMILAB INDUSTRIAL AFFILIATES TO HOLD FIRST ANNUAL MEETING

Fermilab Industrial Affiliates (FIA) will hold its First Annual Meeting and Symposium on Technology Transfer, May 27 and 28 at the Laboratory.

The Industrial Affiliates consists of a group of companies, large and small, that participate in this new program. It was inaugurated by the Universities Research Association Board of Trustees in 1980 "to enhance the transfer to industry of the high technology developed by Fermilab in the course of its research program," said Leon Lederman, Fermilab director. "The program was also a way to encourage wide use of the technology developed at Fermilab for the ultimate benefit of the public, which provided funding support."

In inviting the affiliates to participate in this first annual meeting and symposium Lederman said, "we plan to present to you a sampling of the various technological developments that are going on in this Laboratory and among our university-based users....Our basic research mission is made possible by public funding. Our technological advances are byproducts of the research, and to the extent that U.S. industry can apply any of this, we speed up repayment of the public's investment."

John McCook of the Director's Office is coordinating the FIA and the symposium.

The first day will be primarily devoted to informal meetings, a welcome by Lederman and a tour of Wilson Hall and the Accelerator.

That evening after dinner, Dr. James E. Leiss will speak. He is the Associate Director for High Energy and Nuclear Physics, Department of Energy.

WHO ARE THE INDUSTRIAL AFFILIATES?

Members of the Industrial Affiliates include Bell Laboratories, Caterpillar Tractor Company, Chicago Bridge and Iron Company, Combustion Engineering Inc., Commonwealth Edison, Deere and Company, Digital Pathways, Inc., General Electric Corporation, The Harshaw Chemical Company, International Business Machines, International Harvester, Kinetic Systems Corporation, Lester B. Knight and Associates Inc., Litton Industries, McGraw-Edison, Nalco Chemical Company, New England Nuclear, Nuclear Data Inc., Raychem Corporation, Sargent-Welsh Scientific Company, Shell Development Company, Standard Oil Company of Indiana, State of Illinois Department of Commerce and Community Affairs, Texaco Inc., and Westinghouse Electric Corporation.

The next morning, May 28, a number of Fermilab scientists will give technical presentations. Then that afternoon, representatives from the affiliates will tour the Central Helium Liquefier Facility, magnet assembly and test facilities as well as the superconducting magnet facility and various experimental laboratories including the 15-foot bubble chamber.

Giving technical talks the morning of May 28 are Alvin Tollestrup, superconductivity; Bill Fowler, cryogenics; Al Brenner, data processing; William Sippach, hardware processors; Dixon Bogert, computer controls; Tom Droege, fast pulsed-electronics; Phil Livdahl, ion beams and sources; Gerry Tool, computer-aided design; Quentin Kerns, high power radiofrequencies; Peter Limon, Cryogenic vacuum techniques; and Tom Nash, particle detectors. (See additional story, on page 2.)

IMPRESSIVE EXAMPLES OF TECHNOLOGY

Impressive accomplishments highlight the technology transfer from Fermilab to industry.

In superconductivity, for example, the intensive research and development by particle physics laboratories in the late 60's and early 70's had a profound influence on the young superconducting alloy industry. Fermilab was responsible for one of the greatest technology transfers to industry when the Laboratory made the decision to push ahead with its Energy Saver. Subsequently, companies such as Teledyne Wah Chang Magnetic Corporation of America, Intermagnetics General Corporation, New England Electric and AirCo developed improved superconducting alloys, wire and cable.

For almost 10 years, Fermilab has worked closely with Lecroy Research Systems and other electronics industries in developing fast electronics and data acquisition. Out of this collaboration has come new modules and systems that have become standards throughout the world. These include the series of fast logic modules developed in the 70's and a data sparsifying, high density, precision analog-to-digital converter completed in 1979. More recently, however, the Laboratory can point to its in-house development of a sophisticated, extremely high speed emitter couple logic trigger processing system that has influenced and encouraged the first commercial marketing of some of its elements by Lecroy.

When it comes to the area of industrial controls, Fermilab is quite proud of the development of the World's largest standardized control system using the international CAMAC standard. This powerful advancement helped spawn several small new companies in the field. One is Kinetic Systems Inc. CAMACS, which are now used routinely by such industrial giants as General Motors, Alcoa, Westinghouse, General Electric, Corning Glass and Inland Steel, as well as by a number of other companies in the Fortune 500 group, got their primary impetus from Fermilab's massive system.

In cooperation with the U. S. Bureau of Standards, a new and quite sophisticated distributed processing system is being

developed here and at similar research laboratories. This standard, called FASTBUS, is needed to meet the high speed data acquisition and parallel processing requirements in the high energy physics experiments that will be conducted during this and the next decade.

Fermilab's work in cryogenics has had a considerable impact on the country's industrial capability in this fast advancing field. The Laboratory required expansion engines, screw compressors, turbo molecular vacuum pumps and cryogenic controls and instrumentation as part of its new superconducting accelerator, now being constructed. The new Central Helium Liquefaction Facility on site doubles the world's capacity to produce liquid helium. By working hand-in-hand with Fermilab, industry has gained appreciable knowledge in the field of cryogenics.

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NEXT COLLOQUIUM SPEAKER

Dr. Art Reingold of the Center for Disease Control in Atlanta, Georgia, will be the Physics Colloquium speaker May 27. His topic will be legionnaire's disease. The Lecture will begin at 4 p.m. in Wilson Hall auditorium. His host will be Linda Stutte. The series is presented by the Fermilab Physics Colloquium Committee. Its chairman for this year is Petros Rapidis.

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Ron Kotulak, science editor of the Chicago Tribune, interviews Leon Lederman for background for a future Tribune story.

EOO PRAISED FOR WORK WITH HANDICAPPED EMPLOYEES

Fermilab's Equal Opportunity Office has been honored by the Illinois Department of Rehabilitation Services (DRS) for its outstanding work with handicapped employees.

Two representatives from that department, Brian Maxwell and Larry Loya, presented the Laboratory with a certificate of appreciation "for the interest and spirit of cooperation given to disabled citizens of Illinois," the certificate stated. "Your employment of these handicapped persons will greatly enrich their lives and help the human dignity essential to the well-being of all people." The certificate bore the seal of the governor's office.

Maxwell is regional placement coordinator for region 5, which includes Lake County, DuPage County and the northern portion of Cook County. His office is in Chicago. Loya is a placement consultant for DuPage County. His office is in Downers Grove.

Accepting the certificate were Dianne Engram and Lauta Price-Joyner of the Equal Opportunity Office. EOO at Fermilab has the responsibility for overseeing the Affirmative Action Program for handicapped employees here.

President Reagan has designated 1981 as the Year of the Disabled in the United States in a proclamation signed in keeping with the goals of the International Year of the Disabled declared by the United Nations, explained Price-Joyner. The President has pledged the cooperation of his administration and federal agencies under his jurisdiction to expand opportunities for disabled Americans.

Loya of the DRS said he was quite impressed with the Laboratory's accommodations for and enthusiastic attitude toward handicapped employees. He and other representatives from various Department of Rehabilitation Services offices had been at Fermilab last June to participate in two seminars organized by the Equal Opportunity Office. The objective was to show agency representatives what employment opportunities the Laboratory has for handicapped people and how the Laboratory goes about implementing its extensive EOO programs.

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Accepting the certificate are Lauta Price-Joyner (left) and Dianne Engram. Presenting them with the honor are Larry Loya (second from left) and Brian Maxwell.

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FROM THE DIRECTOR'S OFFICE

Fermilab has received more than 15 responses to the announcement of the $D\bar{D}$ interaction region at the Tevatron. In order to discuss the $D\bar{D}$ area, a workshop for potential users and other interested people has been scheduled for July 12.

The primary purpose of the workshop will be to present and explain to interested physicists the constraints involved in working in $D\bar{D}$. These would include the anticipated machine parameters as well as those of money and time. The workshop will also try to establish, within the constraints, the dimensions of the $D\bar{D}$ interaction area and the support area, as well as the methods for installing and removing equipment needed for a viable experimental program.

Because all work and no play makes for a dull workshop, the workshop will include some physics discussions. We also plan to have some short talks on detector/physics ideas. We further hope that there will be significant interactions between the people interested in working in $D\bar{D}$.

The workshop will also set a deadline for formal proposals. Please contact Norman Gelfand of the Director's Office if you wish to participate in the workshop.

RUN AND DINE WITH THE DIRECTOR

Recall what June 1 is? It's the third anniversary of Leon Lederman's first day as Fermilab director. It's also the third anniversary of the now famous "Run With the Director."

Well, in a short time it will be June 1 again, and at 7 a.m. at AO on the Main Ring Road, the third annual "Run With the Director" will begin. This is not a competitive run--as our director has so heartily emphasized in the past--but rather a friendly, comfortable run with him around the Main Ring.

Afterward, everyone who has gone the route is invited for free breakfast in the cafeteria. This year, the run is co-sponsored by the Director's Office and the Fermilab Running Club.

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REMEMBER TO REGISTER FOR BLOOD DRIVE

If you plan to give blood on May 29 when the Aurora Area Blood Bank is here, remember to register the day before (May 28) from 11 a.m. to 1:30 p.m., at the desk just outside the conference room in Wilson Hall cafeteria.

Employees of the blood bank will be here from 9 a.m. to 2:30 p.m. on May 29 to accept blood. The bank serves 18 hospitals in an eight-county area and provides blood for approximately 2,500,000 residents.

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NEW PHONE NUMBER FOR USER'S OFFICE

The Users Office, WHILE, has a new phone number. It's 3111. And it's easier to remember than the old one, said Phyllis Hale of the office.

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A CHANGE OF PLANS

The renovations planned for the locker rooms in the Village Barn have been cancelled, reported Helen McCulloch, Fermilab recreation coordinator. They were cancelled because of budget considerations, she said.

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SOFTBALL LEAGUE STARTS SEASON

The Fermilab Softball League began its season May 19. Games are usually played Tuesdays and Thursdays at 5:15 and 6:45 p.m. at the softball field in the Village.

This year, the teams and their captains are Pleasure, Drue Wallace; Gamblers, Don Staley; Jedi, Rodolfo Gonzales; Bushwackers, Joe Morgan; Magic, Glenn Smith; Bubble Chamber, Larry Howlett; and PREP, Dan Fish.

For additional information, contact Helen McCulloch, recreational coordinator for the Laboratory, ext. 3126.

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TENNIS CLASSES TO BE HELD HERE

Tennis classes will be offered at Fermilab if enough employees and users express their interest, said Helen McCulloch, recreation coordinator.

They will be taught by Bob Finder, head pro at Norris Recreation Center, St. Charles. He will be assisted by Pat Morgan. Classes will begin on June 16 and will be held on Tuesdays from 6 to 7 p.m. for beginners and advanced beginners and on Thursdays from 6 to 7 p.m. for intermediate advanced players.

The fee for the eight-week course is \$25. To sign up, call Helen at ext. 3126.

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CHEZ LEON MENUS

Wednesday, May 27 - 12:30 p.m. - \$6.00

Herring plater
Selection of open sandwiches
Cucumber salad
Rhubarb compote

Thursday, May 28 - 7:00 p.m. - \$10.00

Pate de foie
Steak Dianne
Asparagus w/butter
Carrots w/dill
Potato Dauphine
Fresh green salad
Gran Marnier souffle

For reservations call ext. 3082, only.

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