

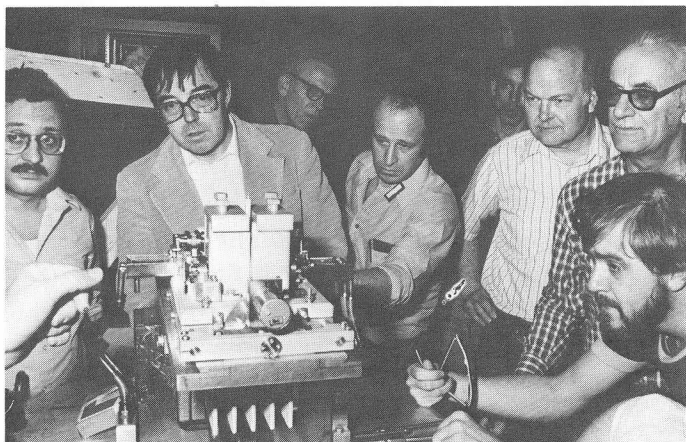
FERMILAB NEWS

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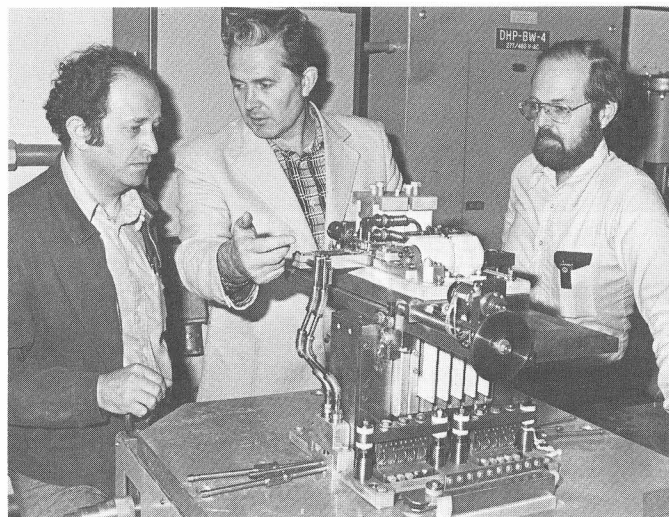
Getting a good glimpse of the lithium lens the day it arrived at Fermilab (April 17) from Novosibirsk are (l-r) Sandro Ruggiero, Tim Toohig, Larry Sobocki, Carlos Hojvat, Bill Kells, Don Young, Gianmaria Michelassi and Dave Johnson.

LITHIUM LENS PRODUCT OF FERMILAB AND NOVOSIBIRSK COLLABORATION

Scientists at Fermilab have received from the USSR equipment that is the result of collaboration between the two countries for more than two years.

Called a lithium lens, the device represents potentially important improvements for physicists whose experiments require collecting and focusing particles called antiprotons. A lithium lens is a column of solid lithium through which a large electrical current can be pulsed to develop a very strong magnetic field. It was built at the Institute for Nuclear Physics at Novosibirsk, USSR, where Soviet physicists carry out high energy physics research studies similar to the work done at Fermilab.

The Soviets were the original developers of the lithium lens, which is expected to be used for improving the collection rate of antiprotons produced from a target bombarded by high energy protons. The antiprotons that are collected and accumulated will be used at Fermilab in producing collisions and at energies of one trillion electron volts that will become available with the operation of the Tevatron, now under construction.



Russian scientist Gregory Silvestrov (center) discusses lithium lens with Carlos Hojvat (left) and Jim MacLachlan.



The crated lithium lens arrived April 16 at O'Hare Field aboard an Air France Boeing 747. Two airline employees pose with the container.

The lithium lens is one of the tangible results of scientific collaboration between this country and the USSR. Collaboration in high energy physics has been one of the successful examples of the exchange of the two nations' scientific talent.

The collaboration was outlined in a July 1979 agreement between the directors of Fermilab and the Institute for Nuclear Physics. The agreement is part of a larger collaboration pursuing many aspects (Continued on page 2)



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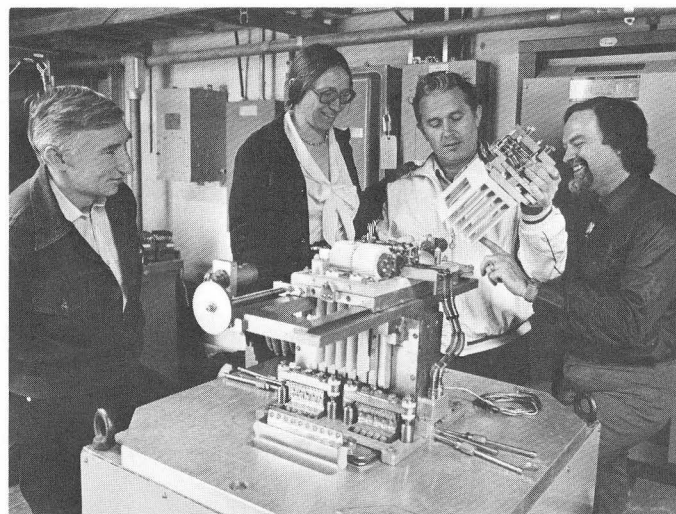
(Continued from page 1)

of colliding beam technology that also includes the Argonne National Laboratory, the Lawrence Berkeley Laboratory, and the University of Wisconsin. Each institution is responsible for a particular aspect of the project, expected to be completed in 1984 after the Tevatron begins operating.

Under the terms of the directors' agreement, visits of scientists between the two laboratories were approved for the sake of working together on items pertaining to the collaboration as well as coordinating the design and construction of the lithium lens.

Fermilab physicist James MacLachlan spent three months in Novosibirsk in the summer of 1980, working on the lens. Gilbert Nicholls, a Fermilab electrical engineer, and Judith Nicholls, a physicist and computer expert, also visited Novosibirsk in 1979, working on the power supplies and controls, and targeting of protons and the collection of antiprotons, respectively. Jeffrey Tennyson, Lawrence Berkeley Laboratory, spent time at Novosibirsk in 1980 working on colliding beam instabilities. Professor David Cline of the University of Wisconsin has made several trips helping to coordinate the activities and expedite the shipment of the lens.

Several Soviet scientists have visited Fermilab since the collaboration began. Gregory Silvestrov and Vasily Parkhomchuk have worked here on the lithium lens. Igor Meshkov, S. Popov, and Nikoli Dikanski have provided general information about the lithium lens and about an electron cooling system used for concentrating the antiprotons. Benjamin Siderov has provided



Russian scientists Igor Meshkov (left) and Gregory Silvestrov (second from right) along with Gilbert and Judith Nicholls examine the lithium lens and quick disconnect they developed in Novosibirsk. The air coupled transformer allows remote changing of the lens assemblies.

expertise on detectors used for identifying fundamental constituents of matter emanating from the proton-antiproton collisions. Prof. Alexander Skrinsky, director of the INP, visited Fermilab for general consultation.

"Scientists traditionally have been successful in pursuing common goals despite the vicissitudes of the international political climate," said Dr. Donald Young, one of the Fermilab collaborators. "We think this collaboration is in that tradition."

The lithium lens will undergo tests and studies at Fermilab by members of the collaboration, preparing it for its role in the colliding beam operation.

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PROTON DEPARTMENT TO HOLD GROUND BREAKING CEREMONY

The Proton Department will hold a ground breaking ceremony May 29 to mark the beginning of major construction and improvements in the Proton Area.

The ceremony will begin at 3 p.m. at Enclosure H.

TOOT, TOOT.....
WAS THAT AN ELECTRIC AUTO?

You bet it was, and if you're in the horse-shoe at Wilson Hall on May 23 anytime between 10 a.m. and 4 p.m., you'll see a rally and demonstration of electric and hybrid cars.

The rally is being sponsored by the Fox Valley Electric Auto Association. It's free and open to the public. Rally chairman, Dave Cosgrove, ext. 4606, encourages any creative auto enthusiast who has an electric or hybrid car (one that also has a gasoline or diesel engine), to bring it to the rally and show it off along with the members' vehicles.

Anyone impulsive enough to want to ride in an electric car--well, you can take a trip from Wilson Hall to the 15-foot Bubble Chamber and back. The purpose of the rally, explained Cosgrove, is to show the public that cars can be converted or built that will conserve fuel, yet take the driver and his family wherever they want to go. Expert advice will be available for those who are inspired enough to want to try to convert their vehicles.

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ARMS CONTROL SEMINARS

We have all been aware of the resurgence of interest in arms control and the hazards of nuclear war. Several people have asked whether we can be better informed on these highly technical issues. Such issues are discussed by the Chicago Council on Foreign Relations (726-3860).

Perhaps there should be some activity at Fermilab. If there is enough interest, we could organize a set of lectures, perhaps one a month over the next year. To do this effectively, people interested and especially those willing to work on a steering committee should contact Ray Brock, Physics Section, who has volunteered as chairman. He can be reached at ext. 4712 or 3558. Brock also suggested that employees who want to work with him on the steering committee could send him a note at mail station 122, which is the Physics Section, WH10W.

Leon Lederman
Fermilab Director

WEISSKOPF TO SPEAK HERE



Victor Weisskopf, professor of physics at the Massachusetts Institute of Technology, will speak at the Fermilab Physics Colloquium May 20.

His talk on "The Population Explosion in the Vacuum" will begin at 4 p.m. in Wilson Hall auditorium. Leon Lederman, Fermilab director, will be his host. The colloquium series is presented by the Physics Colloquium Committee to bring scientists up-to-the-minute information in a broad range of scientific disciplines.

The popular Weisskopf, one of particle physics' leading spokesmen, has been honored throughout the world for his many contributions to his discipline. He is a frequent visitor to Fermilab and has participated in major programs here.

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FERMILAB EMPLOYEES ON CREDIT UNION BOARD

Three Fermilab employees are on the 16-member Argonne Credit Union 1981 Board of Directors.

They are Carolyn Hines, Communications Services manager; Jean Plese of the Director's Office; and Jan Ryk, an electrical engineer with the Accelerator Division. Hines is serving her second term on the board; Plese, her first year; and Ryk, his second term. Among the elected officers of the union is Hines, who is serving as the membership-publicity officer.

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SINGLES TO HOLD MEETING AT FERMILAB

Anyone who is single and a member of the Fermilab community is invited to attend a singles meeting May 21. It will begin at 5 p.m. in the Users Center, Village. Literature from the recent Chicagoland singles fair and information about the area's more than 30 singles clubs will be available, including membership requirements and current activities.

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BLOOD BANK SETS NEXT BLOOD DRIVE

The Aurora Area Blood Bank will hold its next blood drive at Fermilab May 29.

Donations will be accepted from 9 a.m. to 2:30 p.m. in the conference room on the southwest side of the first floor, Wilson Hall. This time, drive officials will try something new. They will be at Fermilab the day before, May 28, from 11:30 a.m. to 1:30 p.m. to register all potential donors.

The basic qualifications for donating blood include general good health, 110 pounds or more, 17 through 65 in age. It takes about one-half hour to give a pint of blood. A donor may give once in every eight weeks without suffering any harmful effects. If you have any questions, please contact the Medical Office, ext. 3232.

The blood bank provides blood for 18 hospitals in an eight-county area and for approximately 2.5 million residents.

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NEXT MOVIE

"The Man Who Fell to Earth" will be the next movie shown by the Fermilab International Film Society.

It will roll at 8 p.m. on May 22 in Wilson Hall auditorium. A 1976 release directed by Nicholas Roeg, it is in color, rated R and runs for 118 minutes. Admission is \$2 for each adult moviegoer and 50 cents for children age 12 and younger. Season passes are still available at 33 percent discount through June 28. They may be obtained at the ticket sales desk in Wilson Hall atrium.

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SECOND RUN WITH THE COACH

Want to run a second time with Tom Burnick, one of Chicagoland's top running coaches?

He's coming back May 19 to Fermilab by popular demand to lead the Fermilab Running Club's second "Run With the Coach." The run will begin at 11:30 a.m. at AO on the Main Ring Road. Burnick will talk about shoes, style, form, interval training and other running-related matters. Beginner or advanced runners welcome.

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STOCKROOMS TO CLOSE MAY 18-22

Site stockrooms located in Wilson Hall catacombs and Site 38 warehouse will take annual audited inventories May 18-22.

The Wilson Hall stockroom will close May 18 and 19. The stockroom at Site 38 will close May 20-22.

"To maintain service continuity, one stockroom will make emergency, and I emphasize emergency, issues while the other undergoes inventory," said Gene Guyer, stores management supervisor. Call ext. 3808 for information.

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CAN HARDLY WAIT FOR MAY 23

What's going to happen May 23 at Fermilab? The swimming pool season will open that day.

If you and your family love to swim, then for \$50 you can purchase a season of swimming fun for everybody in your family. The fee for season admission for an individual is \$20 and for a couple, \$35. For the occasional swimmer, the fee is \$2 for each visit to the pool.

Swimming instructions will be provided for children by a certified water safety instructor. For additional information about the swimming hours, contact the Recreation Office, ext. 3126.

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CHEZ LEON MENUS

Wednesday, May 20 - 12:30 p.m. - \$6.00

Carribean Lunch

Sancocho
Carne mechada
Rice and beans
Avocado and tomato salad
Lime souffle

Thursday, May 21 - 7:00 p.m. - \$10.00

Crepes stuffed w/seafood
Tournedos w/bearnaise sauce
Fresh green beans
Carrots w/dill
Potato dauphine
Chestnut puree on meringue w/cream
chantilly.

For reservations, call ext. 3082.

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