

# FermineWS

FERMI NATIONAL ACCELERATOR LABORATORY

## Sec. O'Leary and Illinois delegation support Main Injector

*The Illinois Delegation recently sent a letter to Department of Energy Secretary Hazel R. O'Leary asking for increased FY95 funding for the Fermilab Main Injector to ensure its continued progress. Part of the text of the letter outlining the delegation's comments on behalf of Fermilab follows, as does the text from a letter to delegation members from Secretary O'Leary thanking them for their concern and expressing the department's commitment to the project.*

Dear Secretary O'Leary,

As the Department of Energy prepares its FY1995 budget submission, we would like to bring to your attention a project of special importance to the Illinois delegation: the construction of the Main Injector at Fermi National Accelerator Laboratory.

Fermilab operates the largest and most powerful particle accelerator in the world. . . . Fermilab has developed a cost-effective plan for increasing the luminosity of its Tevatron accelerator by more than a factor of five above its current capability. An integral aspect of the plan is the replacement of the 20-year-old Main Ring with the Main Injector. The construction of the Main Injector will give the Tevatron more power for discovery by increasing the number of particles that collide at high energy. The importance of the Main Injector's physics goals has been recognized by DOE's own High Energy Physics Panel, which has repeatedly ranked it as the highest priority construction project in the high-energy-physics base program.

During the Department of Energy's semi-annual review of the Main Injector project last year, Fermilab effectively demonstrated that it was prepared to obligate at least \$50 million for the project in FY1994. We urge you to include at least \$50 million for the Main Injector project in the Department's FY1995 budget submission. Department action at this funding level will ensure that the project is completed on time in early FY1998.

. . . We urge the Department of Energy to preserve

the full level of funding for Fermilab's operating and equipment budget, in order to maintain a strong program of experiments at the Laboratory in the years just ahead. Only by doing so will the Department make full and effective use of the investment in Fermilab, the nation's most active laboratory for high-energy-physics research, and the only one in the United States now equipped to work at the energy frontier of the field.

Failure to fully fund the Main Injector project and Fermilab's operating budget would seriously impede important scientific research at America's leading accelerator laboratory. Nothing less than the competitiveness of the United States in the field of high-energy physics is at stake here.

We look forward to working with you to fund this important project and the activities at this truly remarkable national laboratory.

—*The Illinois Delegation*

*In response, Secretary O'Leary sent a letter addressed to each member of the Illinois Delegation, stating,*

Thank you for your letter of September 30, 1993 concerning the fiscal year 1995 budget submission for the Fermilab Main Injector. We understand your concern and assure you that the Department is committed to building the Fermilab Main Injector. Fermilab and its accelerator are vital to the world of high-energy physics and will provide researchers the opportunity to conduct research at a cutting-edge facility.

Funding for the Fermilab Main Injector is a high priority within the high-energy physics program. The Department considered the recommendations of the Witherell subpanel of the High-Energy Physics Advisory Panel in formulating our request to the Office of Management and Budget.

We look forward to supporting this effort during the upcoming appropriations process.

—*Hazel R. O'Leary*

### inside

Letters to the Editor  
page 2



All Experimenters Meeting  
page 3



Library in the Information Age  
page 4



Golf League  
page 5



Announcements  
page 6

*FermineWS* is published by the Fermilab Publications Office. MS 107, P.O. Box 500 Batavia, IL 60510 708 840-3278 FNAL::TECHPUBS

The deadline for the Fri., January 14, 1994 issue of *FermineWS* is Wed., January 5, 1994. Please send your article submissions or ideas to the Publications Office.

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## Letters to the Editor

### What can we learn from the Supercollider's demise?

A stunned subset of the scientific community, the particle physicists, is wrestling with Congress' recent rejection of the Superconducting Supercollider. It becomes intensely important to try to understand what this episode means in the broad sweep of United States history.

Science has many fronts, each making its justifiable claim to passion and to the power to illuminate. However, the quest to discover the primary building blocks, the particles and fundamental laws of nature, has a unique objective. Although these laws are not useful to cure the common cold or understand the turbulent progress of hurricanes, they provide a solid base for the pyramid of understanding.

The U.S. grew rich by exploring and settling its frontiers. We learned that the bolder the thrust, the greater the returns. Isn't the Supercollider a sort of wagon train into the frontier of our comprehension of the universe? How could we not continue? What does this tell us about the state of America's mind? What does it augur for the future?

We cast about for reasons. Maybe we can blame our failed educational system, which produces those legislators who, looking for the approbation of their constituents, proudly announced that they lack the vaguest idea of what the Supercollider is all about. Maybe we can blame the unhelpful testimony by colleagues in other science fields, stressed as they are by their own difficulties in securing adequate research support. (In fact, we particle physicists would feel infinitely better today—in this winter of our discontent—if the money saved would ap-

pear in the other science budgets. Unfortunately, we do not believe this will happen.)

This brings us to the general state of science in the nation. Across the board, biological, medical, chemical and physical research are increasingly under stress. Young investigators are spending up to 40 percent of their time seeking research funding. Bureaucratic and regulatory requirements eat up time and research funds. Creationists, animal rights extremists and congressional fraud hunters hardly cheer up the environment in which research must flower. And there are increasing pressures from policymakers who insist that research must be more targeted to immediate goals and must not, above all, be curiosity-driven.

Superimposed on the litany of troubles is the fact that American industry is giving up on research. One after another, once proud and productive research labs are being either closed or reduced to shadows of their former splendor: GE, RCA, IBM, Bell Labs, Westinghouse, DuPont and so forth. At the same time, the great research universities are experiencing financial difficulties impacting the vigor with which their research is carried out.

Thus, the SSC decision may be viewed in the context of a national mood that is obsessed by immediacy at the expense of long-term investment. The inertia with which America is addressing the crisis in education—so intimately woven into the future of science—is surely a related issue.

The questions raised here are, of course, open. We need the benefit of perspective

and, although I identify many of the concerns we have as scientists, I remain optimistic. I cannot remember ever seeing so many bright young scientists, eager to practice their skills. The promise of science has never been greater, and I don't believe anyone seriously questions the notion that science and technology are essential to survival and evolution of humankind on this planet.

What must be understood is that vibrant and productive science is a tapestry of many threads, and each, in its proper balance, plays a vital role: applied science and engineering, basic research, big science and small science, neurophysiology and cosmology. We need to kindle the sparks of curiosity in our future scientists. Every child is a candidate, and every young aspirant is sensitive to the messages that emanate from our political and social leaders.

We are in a tough period and, incidentally, our colleagues in many other industrial nations are facing similar difficulties. We obviously need to intensify efforts at international collaboration. The federal government and Congress must establish a sane research policy so that never again will the support of three administrations and four Congresses lure thousands of young scientists, engineers and technicians into a project that can so casually be canceled.

Most important, scientists must rededicate themselves to a massive effort at raising the science literacy of the public. Only when citizens have reasonable science savvy will their congressional servants vote correctly.

—Leon M. Lederman

Text: From *The Scientist*, November 29, 1993. Copyright 1993, *The Scientist*. All rights reserved. Reprinted by permission.

### NFT patient sends thanks

Dear Fermilab Readers,

I was treated 14 years ago at the Neutron Therapy Facility for a tumor. After 14 years, I had a reoccurrence of the tumor which was near the first one, and made another trip to Fermilab from New Jersey in October 1993 with my sister-in-law accompanying me.

The nurses, doctors, technicians and

secretary were wonderful and they treated me like a very important person. They answered any questions for me no matter how small they seemed.

I would like to thank Bonnie Deke for introducing me to Marion Richardson, who works at Fermilab and is a volunteer. We had to stay at the Best Western and were really

shut in. She gave me good support. She called on the phone to talk to us, took us out to dinner and we became friends. Also, I would like to thank the taxi drivers who drove me back and forth to my treatments.

Bonnie—thanks for seeing us off at the train station.—*Mary Dombrowski*, Carteret, New Jersey

# Director calls on experimenters for Expressions of Interest

## Physicists meet to discuss the program of the future

*In the December 3, 1993 issue of Ferminews this article was incorrectly printed. The correct version follows:*

Director John Peoples called a special all experimenters' meeting on Saturday morning, November 20, to discuss with Fermilab users the recommendations of the Laboratory's Physics Advisory Committee, and to exchange ideas on what the future holds for the field of high-energy physics research and for Fermilab.

The director noted the excellence of the Fermilab physics program as it is planned, and his hopes that the Laboratory will have the resources to achieve it. "The Physics Advisory Committee is giving us excellent advice, and we have a program through the year 2000, when the goals of CDF and DØ should be accomplished," he said, adding that now is the time to plan for the Fermilab physics program for the beginning of the new century.

"Last June we asked the PAC for advice on where we should be going," the director told the audience of several hundred Fermilab experimenters. "The clear advice they gave us is that we should plan for a new round of collider detectors." He pointed out that in about 2003, CERN will begin operating a 6 TeV-on-6 TeV particle accelerator, the LHC, that will take Fermilab's place at the highest energy frontier and suggested that "we need to think about a [Fermilab] program existing at the same time as CERN's LHC."

Where might the physics of Fermilab's future lead? The director proposed *B* physics as one clear opportunity, and reiterated his support for a strong fixed-target program to take advantage of Fermilab's unique fixed-target capabilities, which no other laboratory will duplicate in the foreseeable future. He emphasized the need to explore other avenues of research as well, calling on experimenters to put forward their proposals for promising areas of exploration. He suggested that physicists look at alternative areas of research, not limiting their proposals to variations on existing experiments, but instead urging them to consider "other ways to do

high-energy physics."

In discussing the future of the field, the director gave his view that "Certainly, in the future the big accelerators will be international laboratories—I don't think anyone disagrees with that. The issue is whether the United States will be a partner. This is a very serious matter." He warned that "We shouldn't assume that people are going to shower billions of dollars on us. I think that is unrealistic in this climate. But I don't think it is crazy to assume that we could go back to a budget on the scale we had in 1990. That is at least possible. The downside would be to have a budget ten percent smaller than we have now."

Regardless of future trends, he cautioned that FY95 may be a difficult year for the U.S. high-energy physics program. He advised experimenters that "the Department of Energy's budget is down by \$1.6 billion for 1995. So we must plan positively, for a smaller, leaner enterprise."

After the director's opening presentation, Deputy Director Ken Stanfield discussed specifics of the PAC's recommendations for the Fermilab program, and the Laboratory's response.

The deputy director told experimenters that the long-range schedule published in September remains the Laboratory's plan. The schedule calls for Collider Run Ib to begin in December 1993. A fixed-target run will begin in mid-1995, continuing for about 12 months and spanning two fiscal years. In 1997, the schedule calls for a return to collider operation with Collider Run IIa, the last collider run scheduled before commissioning of the Main Injector in FY97 and early FY98. The schedule is based on the assumption that funding for FY94 and beyond will equal FY93 levels, he said.

In reality, however, Ken explained that the Laboratory expects FY94 resources to fall below FY93 funding levels, adding that "The Lab is working with experiment collaborations to try to understand the impact of the reduced FY94 budget on the schedule." He noted that the Laboratory's base budget,

## Fermilab calls for Expressions of Interest

The Laboratory is calling for Expressions of Interest for physics programs at the BØ and DØ interaction regions of the Tevatron Collider to commence with Collider Run III.

### May 1994:

Expressions of Interest due

### January 1995:

Letters of Intent due

### May 1995:

Proposals due

### April 1996:

Conceptual Design Reports due

### November 1996:

Design Report- Equipment funding to begin

### First Run:

Collider Run III

excluding funds for Main Injector construction, is lower than the budget for FY93 by \$11.4 million, before adjustment for inflation. "In terms of purchasing power or constant dollars, it means the Laboratory's base budget is down by over \$16 million," he said.

The deputy director next discussed the need to set Laboratory priorities in light of a reduced budget. He announced that the highest priority will be the operation of the Tevatron and successful completion of Collider Run Ib. He reminded users of the run's goals to capitalize on the capabilities of the new Linac to increase luminosity and deliver 75 inverse picobarns of integrated luminosity to the collider detectors, as well as to operate the collider at higher energies. He pointed out the difficulty of predicting long-term future schedules without making budget assumptions, noting that "We currently have six fixed-target experiments approved, but that was at the FY93 budget level."

Ken then turned to the discussion of Fermilab's responses to the PAC's recommendations for the Laboratory's long-range

Continued on page 4

## Future continued

program. He noted that in July 1991, the PAC recommended that high- $p_t$  physics at CDF and  $D\bar{D}$  should have priority through Run II. He reported the PAC's encouragement for Fermilab to continue R&D toward  $B$  physics and its emphasis on the importance of  $B$  physics goals for the Laboratory, and the PAC's advice to pursue vigorously the mechanisms to provide a detector and collaboration capable of observing CP violation in the early LHC era.

He told the audience that in November 1991, the PAC had again emphasized the importance of  $B$  physics. "Frankly," he said, "I think the PAC was becoming irritated with our lack of motion on their advice," but added that the PAC had acknowledged the importance of  $B$  physics advances gained from CDF and  $D\bar{D}$  in Collider Run Ia. "We began to respond to the PAC's advice in a number of ways," the deputy director said. "We participated . . . in a series of workshops that culminated in a second *Charm and Beauty Workshop* last summer. We opened a new Research Division Silicon Facility, and the Research Division participated in an electronics effort. Finally, [the director] charged the Computing Division to develop a plan for supporting new collider detector proposals."

The deputy director then summarized the PAC's recommendations from June 1993, noting their reemphasis on support for a  $B$

## What should be included in EOI

There are several steps a physicist or group of physicists must take in order to get an experiment approved. The first step is submitting an Expression of Interest. An Expression of Interest should be no longer than 10 pages and should be standardized to contain the following information:

- Physics goals of the proposed experiments, including critical comparisons with other possible experiments in the world pursuing similar objectives (e.g. pp at RHIC, fixed targets in HERA, LHC, etc.).
- The new idea or ideas that make this detector facility attractive and/or unique.
- A sketch of the detector and its major

physics program and their recommendation for future exploitation of high- $p_t$  physics, including the search for the top quark. He read the PAC's statement from their most recent meeting of November 14, 1993:

"For at least a decade, the Tevatron collider will continue to be the highest energy collider in the world and this, combined with the planned luminosity upgrades, makes this facility the centerpiece of high-energy-physics research, with very exciting possibilities."

During the PAC's November meeting, the deputy director reported, Laboratory management outlined plans for optimizing the physics output from the Collider in the Main

components, including a discussion of the ability of the detector to operate in an environment of multiple interactions per crossing.

- A rough overall cost estimate including the fraction of existing detectors that are recycled.
- Some indication of the size of the collaboration needed for the proposed experiment.
- Resources needed to turn the EOI into a Letter of Intent.
- Tentative level of effort required to complete construction of the detector in a timely fashion.
- List of people contributing to the EOI.

Injector era. He said that the PAC had strongly endorsed the plans, which call for new proposals for the  $B\bar{D}$  and  $D\bar{D}$  interaction regions after the upgraded present detectors have each collected about 0.5 inverse femtobarns of integrated luminosity.

Based on PAC recommendations and optimistic funding assumptions, Ken called on experimenters for Expressions of Interest and set in motion the planning process for future programs.

Experimenters responded to the presentations with a series of spirited and wide-ranging questions on the current state and future prospects of particle physics and the Laboratory.

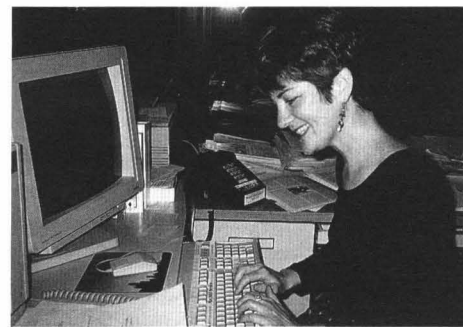
## Library: connected to the electronic information spectrum

The world of electronic information is exploding these days. With the propagation of commercial packages such as Prodigy and America Online and the increasing amount of data available over the Internet, a wealth of information from all over the world is literally at your fingertips. Becoming aware of what is available and then retrieving it efficiently, however, can be complex and tedious. To help Fermilab employees reach this information for their various research needs, the Fermilab Library can use its expertise in information retrieval.

"The days of going to a paper periodical index, such as the *Reader's Guide to Periodical Literature* or *Physics Abstracts*, are draw-

ing to a fast close," said **Paula Garrett**, Fermilab's head librarian. "There are services, some now free of charge, where you can Telnet over the Internet, look at a table of contents of a particular journal or search for a specific journal article by topic or author." Through these databases, Paula and her staff can search, for example, for all publications written by an author or conduct a citation study. Through a citation study, Paula can find for a researcher not only the list of publications by a particular author, but also a list of references that have cited that author's work.

"People can now use the Library to span the information spectrum." As more and more



Paula Garrett

information becomes available electronically, Paula encourages those employees who have research questions to come to her for help. "I can help identify and search the appropriate  
Continued on page 8

# Fox Valley Wednesday League 3-peat golf champs

With the time change past and winter in the air, it seems appropriate to acknowledge this year's golf league winners and the Fermilab champions. The season officially ended with the annual tournament and banquet held at Blackberry Oaks Country Club on September 10. The first place winners of each of the four leagues played one final match against each other. The Wednesday Night Fox Valley League consisting of Gene Dentino, Ed West, Ed Wilmsen and Eric Haggard won for the third year in a row to be declared Fermilab Champions. Their names will be placed on the trophy plaque that documents the annual winners. This trophy was dusted off and updated this year by outgoing League Representative Chairman Mike Matulik. It will soon be moved to the trophy case located in the Users Center. At the awards ceremony immediately following the banquet, trophies were awarded to the following people:

## St. Andrews Golf League:

First Place: Jim Harder, Dick Williams, Fred Walters, John Najdzion

Second Place: Rick Vidal, Steve Baginski, Jeff Gordon, Al Flowers

Third Place: Nick Rogus, Don Rogus, Bill Koncelik, Joe Morgan

Tied for most points at 33: Gordon Bagby and Rick Vidal

Lowest average at 42.35: Rick Vidal

## Prestbury Golf League:

First Place: Al Baumbaugh, Dyrrell Lewis, Ken Treptow, Rich Mahlum

Second Place: Bob Gatzke, Kevin McDowell, Craig Bradford, Anthony Rodriguez

Third Place: Mike O'Boyle, Garry Coppola, Terry Sager, Stuart Lakanen

Most Points at 31: Dyrrell Lewis

Lowest Average at 41.13: Al Baumbaugh

## Fox Valley Tuesday Golf League:

First Place: Glenn Federwitz, Steve Baginski,

Wayne Johnson, Paul Allcorn, Alt: Brian Charles

Second Place: Ron Williams, Kevin McDonough, Gary Smith, Ron Davis

Third Place: Darrell Sigmon, Mike Mascione, Dave Smiley, Monty Emmons, Alt: Brian Kramer

Most Points at 35: Ron Williams

Lowest Average at 40: Darrell Sigmon

## Fox Valley Wednesday Golf League:

First Place (3-peat champions): Gene Dentino, Ed West, Ed Wilmsen, Eric Haggard

Second Place: Mike May, Jerry Leibfritz, Tim Geirhart, Bale Flores

Third Place: Leon Straus, Herm Stredde, Danny Snee, Don Szarzynski

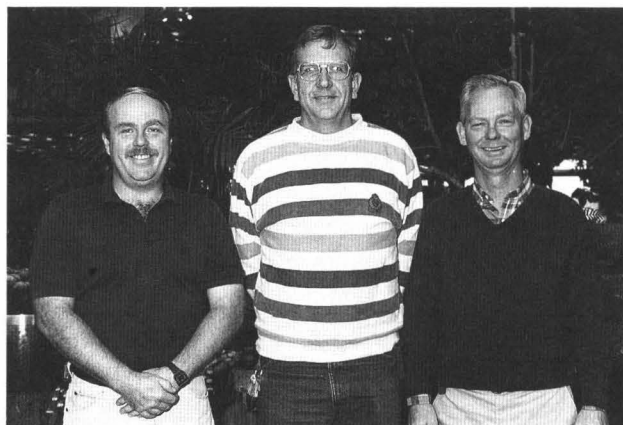
Most points at 39: Leon Straus

Lowest Average at 40.59: Darrell Sigmon

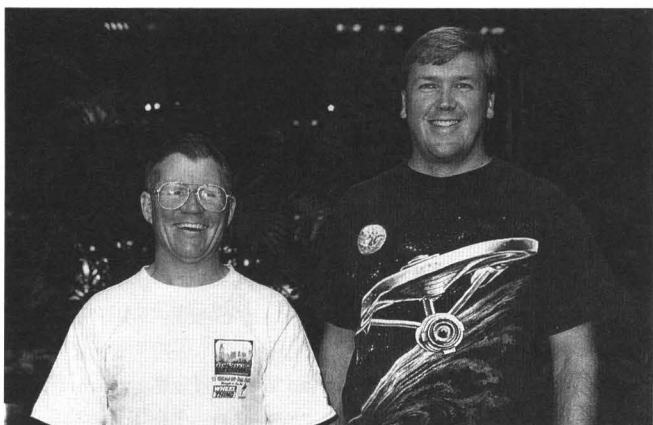
—Pat Liston



First Place Fox Valley Wednesday Golf League members (l to r) Eric Haggard, Ed West and Gene Dentino.



Winners of the St. Andrews Golf League are (l to r) John Najdzion, Fred Walters and Jim Harder.



Fox Valley Tuesday Golf League champs (l to r) Wayne Johnson and Glenn Federwitz.



Presbury Golf League winners (front, l to r) Alan Baumbaugh, Ken Treptow (back) Dyrrell Lewis and Rick Mahlum.



Deputy Director Ken Stanfield presented 25-year service awards to 36 Fermilab employees at a luncheon held November 19, 1993 at Chez Leon. The recipients were: (Row 1, l to r) Rich Andrews, Jim Lasenby, Jim Klen, Joel Misek, George Davidson, Hazel Cramer, Carol Weissert-Jagger, Gerald A. Jones, Joyce Anderson, Ed Schmidt and Art Cook. (Row 2, l to r) Ken Stanfield, Marilyn Paul, Jim Thompson, Bob Kolar, Muzaffer Atac, Frank Nezrick, Bob Peters, George Krafczyk, Howard Fulton, Andy Oleck and Don Olson. (Row 3, l to r) Barry Barnes, Lin Winterowd, Don Champion, Gus Rehbein, Bob Ducar, Bale Flores, Robley Bermel, Bob Jensen, Bob Oberholtzer, James MacLachlan, Bob Maly and James Shallenberger. (Not pictured) Dick Carrigan, John Grimson and Jack Lockwood.

## The Fermilab Lecture Series presents

### Eating Disorders —an American Epidemic

Steven Prinz, M.D., Linden Oaks Hospital;  
Ralph Orland, M.D., Loyola University  
Friday, January 7, 1994 at 8 p.m.

Eating disorders are a common, yet often unrecognized illness affecting millions of individuals. The consequences are often tragic, both emotionally and physically. Two local experts will offer insights, interventions and treatment information when they present *Eating Disorders—An American Epidemic* on Friday, January 7 at 8 p.m. in Fermilab's Ramsey Auditorium.

What are the consequences of an eating disorder, not only to the patient but to the family and friends of the individual as well? Why are eating disorders so prevalent in a society where food is plentiful? Dr. Prinz and Dr. Orland will address societal origins of the current culture of thinness and examine the tragic reactions to that pressure manifested by so many young people today. The lecture will also look at the psychologically predisposed individual and family as well as how to identify early signs of an eating disorder and what others can do to intervene and find the most effective treatment.

Dr. Prinz is the clinical director of the Eating Disorders Program at Linden Oaks Hospital and Dr. Orland is an assistant clinical Professor and supervisor at Loyola University.

Admission to the lecture is \$3. For further information or telephone reservations, call xARTS weekdays between 9 a.m. and 4 p.m.

## For the health of it

Free blood pressure checks will be given Tuesday, December 21, 1993 from 11:30 until 1 p.m. in the Wilson Hall Atrium. Come and have your pressure checked—just for the health of it.

## URA Scholarship information

Candidates for Universities Research Association scholarships are reminded that applications are due March 1. Applications are available from and should be returned to Personnel Services, WH15E, MS 124.

Scholarships are awarded on the basis of S.A.T. (Scholastic Aptitude Test) scores.

URA awards a number of scholarships to regular, full-time Fermilab employees' children who are currently high school seniors and who will begin a four-year college degree program next fall. The maximum amount of the scholarship is \$3,000 for tuition and fees and is renewable for four years if the student progresses in good academic standing.

Applicants will be notified regarding the scholarships in early April.

## White deer mystery solved

According to Dave Jacques, editor of *Argonne News*, the white deer who mysteriously appeared at Fermilab on November 2 is probably a member of Argonne National Laboratory's herd of European white fallow deer.

Prior to our sighting, the farthest recorded "roaming" of one of these deer was 12 miles—when a white fallow was spotted in New Lenox, Illinois. According to Jacques, our "visit" sets a new record. Fermilab is approximately 17 miles from Argonne's site.

## Harper's Index

Percentage of Americans who say they enjoy Christmas shopping "a great deal": 28.

Pages of forms an applicant must fill out to be considered for the position of elf at Macy's: 10.

## Nalrec news

Mark your calendars for the annual employee holiday party in the Wilson Hall Atrium on Thursday, December 23 from 5 until 9 p.m. Refreshments including Italian beef and chicken sandwiches will be on sale. The band, *Just Friends*, featuring vocals by **Carl Penson** (TS), will be performing. This is one party you won't want to miss.—*Nancy Bartlett*



*Just Friends*

## Nalwo events

The Fermilab International Folk Dancing group sponsored by Nalwo extends an invitation to everyone to attend a holiday dance party at the Village Barn tonight from 7:30 p.m. until 11 p.m. Hear the excellent music of *Jutta and the Hi-Dukes!* There will be plenty of dances for beginners, and several experienced dancers to "talk you through" the steps. Refreshments are welcome. The cost is \$4 per adult and \$1 per child. See you there!

The Nalwo coffee morning on Tuesday, December 21 has been changed to a family "Caroling and Cookies" party from 10:30 a.m. until 1 p.m. in the Users' Center. The men and women of the English classes at the Lab and other guests will gather to sing songs from many lands and taste holiday treats and cookies brought by anyone who cares to participate. Please join Nalwo for a relaxing family morning of cheer and good fellowship. Come sing during your lunch break!

The next Potluck Supper will be held Friday, January 14, 1994. Join Nalwo at the Village Barn from 5:30 until 8 p.m. Bring a dish to share or contribute \$3. Babysitting and pizza for the kids will be provided downstairs.

## Movie schedule announced

The Fermilab International Film Society presents movies at 8 p.m. Fridays in Ramsey Auditorium. All foreign films have English subtitles. Admission is \$3 for adults, \$.50 for children 12 and under.

December 17: *La Discrete*. A political speechwriter is spurned by his lover and meticulously plots revenge on the whole female sex by seducing a random young woman. Christian Vincent, dir. France, 1989. (95 min.)

January 14: *Jesus of Montreal*. A talented, but obscure actor is commissioned to revamp an annual Passion Play. A broad satire of modern society and a heartfelt tribute to theater. Denys Arcand, dir. Canada, 1989. (119 min.)

## PIO seeks information

The Public Information Office is gathering information about the sculptures on site. They are requesting anyone who knows the history of "The Tree" or "Bell Tower" in the Village to please contact Cyndi Rathbun, MS 206, x3351, WH1NE.

## Knowles receives Air Force award

**Richard N. Knowles** (BSS) was awarded the Air Force Reserve Communications Computer Systems Non-Commissioned Officer of the Year Award in November.

Rich is a Master Sergeant in the Air Force Reserves, which he joined nearly 15 years ago.

Rich's award was based on overall service performance through 1992, including special projects. The Communications Computer Systems award is one of only three awards that are given by the Air Force Reserves.

Major General, USAF, James E. Sherrard III, said "Knowles' outstanding professionalism, knowledge and dedication to the AFRES mission demonstrate that he is a team player in every sense of the word."

In October 1992, Rich was awarded the

## Del Venters retires

Del Venters has retired from the Laboratory after nearly 21 years of service. Del came to Fermilab on December 26, 1972 and worked as a Technician in the Research Division. He was working at DØ when he said good-bye October 29.

Since Del left, he has been relaxing and polishing his work as a wildlife artist. In the spring, Del expects to visit the Lab to photograph the wildlife for a possible article in a nature magazine.



## Message from the Mailroom

The Mailroom would like to remind all employees that the Fermilab mail system is to be used for official business correspondence only. Please refrain from distributing items of a personal nature such as chain letters, jokes and catalogs via the Mailroom.

Holiday hours for the Mailroom are now 12 p.m. to 4 p.m. Monday through Friday.



*Rich Knowles (r) receives the Communications Computer Systems award from Colonel Pete Sullivan, commander of the 928th Air Lift Group at O'Hare Field.*

U.S. Air Force Achievement Medal from the 928th Communications Flight Air Force Reserve Unit at O'Hare Air Reserve facility.

## New in the Library

*Lubricants and Their Applications.* Robert W. Miller. McGraw-Hill, 1993. TJ1075 .M535 1993, main.

*Medical Electron Accelerators.* C.J. Karzmark, Craig S. Nunan, Eiji Tanabe. McGraw-Hill, 1993. RC271.E43 K37 1993, locked cases.

*DOS, the Complete Reference.* Kris Jamsa. 4th ed. Osborne McGraw-Hill, 1993. QA76.8.I2594 J36 1993, locked cases.

*CDisktutor.* L. John Ribar. Osborne McGraw-Hill, 1992. QA76.73.C15 R533 1992, locked cases.

*Frontiers of Particle Beams: Intensity Limitations, 1990 Joint US-CERN School on Particle Accelerators.* Ed. by M. Dienes, M. Month, S. Turner. Springer, 1992. QC793.3.B4 F74 1992, locked cases.

*Quantum Mechanics: Foundations and Applications.* Arno Bohm. 3rd ed., revised and enlarged. Springer, 1993. QC174.12 .B63 1993, locked cases.

*McGraw-Hill Machining and Metalworking Handbook.* Ronald A. Walsh. McGraw-Hill, 1994. TJ1185 .W35 1994, reference.

*Genius in the Shadows: A Biography of Leo Szilard, the Man Behind the Bomb.* William Lanouette with Bela Silard. Scribner's, 1992. QC16.S95 L36 1992, locked cases.

*Cosmic Wormholes: The Search for Interstellar Shortcuts.* Paul Halpern. Dutton, 1992. QB461 .H24 1992, main.

*Cranks, Quarks, and the Cosmos: Writings on Science.* Jeremy Bernstein. Basic Books, 1993. Q173 .B54 1993, main.

## E-mailing search results

The PRINT command in "Search Mode" now allows you to e-mail your search results to your e-mail Internet address. From within Search Mode, FIND your desired material, issue the PRINT command and follow the directions on the screen.

## Preprints

To get a list of the most recent preprints, use the catalog's "Search Mode." Search by the latest Tuesday, e.g.: FIND PREPRINT AND CATALOGED 21-DEC-1993.

## Classified ads

### Vehicles

**1992 Chevy Cavalier**, 4 door, 40k miles w/ extended warranty 60k miles/4yr, perfect aqua teal body, A/C, PS, PB, AM/FM/cassette, new brakes, \$8,400 o.b.o. Call 708-978-1060 or x3382.

**1989 Honda Civic**, hatchback, 4 speed, A/C, excellent condition, \$4,500. Call Joe at x4103.

**1989 Hyundai Excel**, 2 doors, 67k, running without problems, \$1,300 o.b.o. Call Jan at x2263.

**1983 Ford Escort**, hatchback, good condition, AM/FM/Cassette, \$600. Call Joao or Arthur at x8343.

**1983 Mazda GLC**, 3 door hatchback, 5 sp. manual, good running condition, reliable, AM/FM. Current IL. air team, water pump, alternator, battery all replaced in past few years. A little rust, 144k miles, \$495 o.b.o. Call Bryan at x4790 or 708-393-0278.

**1982 Volvo 240**, 130k miles, rusty but very reliable, \$2,100 o.b.o. Call 708-844-2558 after 5:30 p.m.

**1977 Mercury Monarch**, 4 door, excellent condition, no rust, new tires, new radiator,

A/C, \$1,100 o.b.o. Call Steve at x3755 or 708-355-6201.

### Miscellaneous

**Kitchen cabinets**, wall & base units, best offer; **stainless steel 2-bowl sink**, \$50 o.b.o. Call 708-513-7679 evenings or leave message.

**Faux "raccoon" fur coat**, worn twice, size medium. Fur is dark brown, frosted w/white guard hairs, \$150 o.b.o.; **cross country ski boots**, all leather, good condition, fits 75mm nordic bindings, \$25 o.b.o. Call 708-985-1419 or x2309.

**Antique ice box**, butternut wood, 3 door, original hardware and wire racks, 35"x20"x46", \$300. Call Fred at x4364.

Sears Best **water softener**, \$200; **electric range**, double oven, \$50; **child carrier seat** for bicycle, \$20; **baby stroller**, \$30; **some sort of thing** that baby lies in and bounces, \$25. Call 708-844-2558 after 5:30.

**Twin size bed**, \$40; **boys bike** for 4-7 year olds, 1 year old, \$35. Call Jan at x2263.

## Library continued

avenues for providing the resources they need," said Paula. No topic is too broad or specific. "We've located geological maps needed by the accelerator physicists, found tables of science and engineering indicators available as files we transferred over the Internet, and carried out searches on a wide range of physics, engineering and computer-related topics. Come in with a topic in mind, and the Library will look it up."

The Library has access to the world's databases. Many of these contain the full text of journals and other publications, some of which are only a fax or e-mail away. "The

role of the Library today is really an organizing one; it's about navigation," said Paula. "There are resources all over the map out there. In the past, the Library has had a similar purpose, but on a more limited basis. But now that information is becoming so globally accessible and available in many different formats, it is our job to keep up with this. The Library is here to serve as a guide for the Fermilab researcher. I'll either get you the information you need or show you how to get it yourself. I welcome any research question. Call me or e-mail me. Come and challenge me."