

FermineWS

FERMI NATIONAL ACCELERATOR LABORATORY

Energy retrofit increases CDF chiller efficiency

Field testing of a recent energy retrofit to three chillers at CDF has indicated significant energy reduction, and may lead to further energy savings in the future for the Laboratory.

Working with Johnson Controls and HY-Save Corp., **Steve Krstulovich**, **Al Schmitt** and **Venkat Kumar** of FESS/Engineering & Planning modified the refrigeration cycle of the chillers at CDF. This retrofit caused the power consumption of the chillers to be cut dramatically at optimal conditions during the field tests.

The retrofit included the installation of a liquid pressure amplification pump (LPA) and liquid injection superheat suppression line (LI). The installation of these two devices into the chillers now allows the chiller head pressure to decrease and the condenser to transfer heat more efficiently. It also lessens the wear and tear on the chiller compressors. The combined effect of the two devices means increased efficiency and capacity in the chillers and an overall reduction in energy consumption.

The increased capacity of the chillers is particularly important as new refrigerants with zero ozone depletion potential, such as R134a, are introduced. While R134a is more environmentally safe than chlorofluorocarbons (CFCs), it is not as efficient. However, if the new technology being applied at Fermilab can also be applied to systems using R134a, the lost capacity and efficiency can be made up by the LPA and LI systems.

CDF was an ideal application for this technology due to its year-long steady electrical load. Because of the successful field tests, FESS/Engineering & Planning and HY-Save are planning further installations on site where this technology could be more widely investigated. At this time, coordination is being sought with other Divisions and Sections to setup and run tests using this technology. The intent is to test the application of the LPA and LI systems at different locations, on different equipment configurations, and for a variety of operating conditions, said Steve. At each location, one unit will be retrofitted with the LPA and LI system and a second unit will be monitored along with the retrofitted unit to provide a



Steve Krstulovich (l) and Al Schmitt review the operation of the CDF chillers.

control. To account for cyclical weather conditions, the monitoring will be done for a full year. This will allow the development of guidelines for correct and verifiable energy-saving application of the technology, and possibly, improvements to the system itself.

As a Department of Energy site, Fermilab is committed to DOE guidelines to foster emerging energy technologies and to using energy efficiently and economically, promoting ways to meet the requirements of the Fermilab In-House Energy Management Plan, Steve added. To do this, Fermilab and HY-Save are investigating a Cooperative Research & Development Agreement or CRADA. The CRADA would allow Fermilab and HY-Save to define and address various issues pertaining to the application of this technology and to monitor the success of the technology on various sizes and types of installations on site. The test guidelines would be prepared in conjunction with recommendations from the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE).

This technology and its application may have a useful role in enhancing non-ozone depleting technologies, said Steve. "If we can recover both capacity and efficiency, I think nationally and globally, we are really doing a service."

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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 Friday, March 5 issue of *FermineWS* is Wednesday, February 24.

Please send your article submissions or ideas to the Publications Office.

Fermilab is operated by Universities Research Association, Inc. under contract with the U.S. Department of Energy.



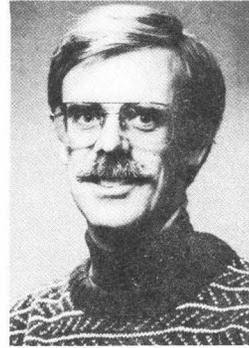
DPB elects executive committee



Helen Edwards



John Peoples



Steve Holmes



Mel Month

The American Physical Society Division of Physics of Beams has elected its 1993 Executive Committee. Currently serving on the committee are three Fermilab employees: **Helen Edwards** (Accelerator Division), Chairperson; **John Peoples** (Directorate), Divisional Chancellor and **Steve Holmes** (Accelerator Division), Member-at-large. Also serving on the committee as secretary-treasurer is **Mel Month**. Mel is actually a Brookhaven National Laboratory employee, but he spends a good portion of his time at Fermilab as Director of the USPAS Office.

The Division of Physics of Beams is the newest division of the American Physical Society. It began in 1985 when a petition carrying 250 signatures requested the formation of a topical group on beams. The APS granted the request and over the next few years the group grew to almost 1,000 members. In 1989, the topical group was upgraded by the APS Council to the status of a division. Today, the division has almost 1,500 members comprising over 3% of the total APS membership.

The division was started to foster, cultivate and unify the newly emerging field of beams and accelerator technology—a field that has pushed the frontiers of beam performance and accelerator development and opened new avenues of scientific research, new methods in medicine and new possibilities for power sources and fusion. According to Mel Month, it is a field that is limited only by our imaginations. Some examples of recent technological develop-

ments are light sources which provide new opportunities for research in material science, chemistry and biology; beams that provide new treatment and diagnostics in medicine; and free electron lasers that provide new opportunities for research and power generation.

The division carries out its mission by encouraging support activities in the field. The executive committee members develop programs to increase scholarly publications in the field, to help enhance the quality of accelerator education, to organize scientific meetings and to generally promote the field within the scientific community.

Several members of the Fermilab community are members of the DPB and over the last three decades, Fermilab has been a leader in setting new levels of beam performance and accelerator technologies.

In the early 70s, Fermilab produced the highest energy beams in the world, extending the energy by more than an order of magnitude. In the 80s, Fermilab created the first synchrotron with superconducting magnets. By the late 80s and early 90s, Fermilab was pushing the technology of antiproton production to new levels and setting record proton and antiproton luminosities. In recent years, Fermilab has begun a collaboration to be part of the new R&D in superconducting radio frequency systems and their potential in the development of future electron-positron linear colliders.

Education Office working to end gender bias in education

In the last issue of *Ferminews*, we brought you the results of a recent American Association of University Women study that revealed gender inequities in the U.S. education system. In this issue, we will present some of the initiatives that Fermilab has put in place to combat this issue.

The study revealed that girls may not be getting the same educational opportunities as boys in our public school system and are systematically, if unintentionally, discouraged from a wide range of academic pursuits. The report confirmed that U.S. Continued on page 6

Gallery features works of Himmelfarb family

The Fermilab 2nd Floor Gallery is currently exhibiting the paintings of Eleanor, Samuel and John Himmelfarb. The paintings will be on display through March 31.

Eleanor Himmelfarb is the wife of Samuel and mother of John. She studied at the Art Institute and the Institute of Design, both in Chicago, and now teaches art at the DuPage Art League, the College of DuPage, Triton College and Rosary College. Her paintings have been described as "lush abstracted landscapes." The sites of her landscapes are often the woodlands of DuPage County. Her paintings have been exhibited at One Illinois Center, the Evanston Art Center and the Bradley Gallery in Milwaukee.

Samuel Himmelfarb's work, as he described it, records "the unprogrammed, the unglorified, the causal human scene." He began his training at the Wisconsin School of Fine Arts in Milwaukee and the University of Wisconsin in Madison. He continued his arts education at the National Academy

of Design and the Art Students League in New York City. His work has been shown in the Chicago Annals and the American Exhibitions at the Art Institute of Chicago, and he is also represented in the permanent collection at the Milwaukee Art Center. He passed away in 1976.

John Himmelfarb draws and paints large whimsical pieces in which animal and human heads are hidden in gestural markings waiting to be visually discovered and pounce. The Art Institute of Chicago, Baltimore Museum of Art, Madison Art Center in Wisconsin, Minneapolis Institute of Art and the National Museum of American Art



Marilyn Rice (l) and Maxine Sneer (Directorate) enjoy the Himmelfarb paintings.

in Washington, D.C. are a few of over forty institutions that have his work in their collection. He has had one-person shows in private galleries in New York City, Chicago, Evanston, Washington, D.C. and Milwaukee.

Committee pushing for a healthier lab

Getting motivated to begin, or even continue, a fitness program is a difficult undertaking. But, as a group of about 50 lunch-time seminar attendees found out recently, this does not have to be a chore, but rather it can be a lot of fun.

The seminar, sponsored by the Fermilab Wellness Works Committee, was held on February 2 and featured Charmi Schroeder, a fitness specialist and personal trainer. Schroeder spoke on getting motivated about weight loss and maintaining your own fitness program. She gave tips on how to set realistic goals for a weight loss plan and how to exercise properly.

Schroeder, who lost over 120 pounds in two years, was called a "great speaker" and "vivacious" by many in the audience and seemed to do her job in captivating and motivating the audience. She suggested that a person trying to lose weight should not lose more than one to two pounds a week, drink at least eight glasses of water a day and maintain a goal-setting sheet. She also sug-

gested not calling a weight loss program a "diet," rather it should be a change in lifestyle.

Schroeder's presentation was one in a series of lunch-time seminars sponsored by the Wellness Works Committee. The committee is working to bring a strong program of wellness to Fermilab and plans to host at least one such noon-time wellness seminar a month throughout this winter and spring. The next "brown bagger" seminar is scheduled for March 17 and will deal with stress management.

Besides the noon-time talks, the committee also co-sponsors once-a-month Monday night seminars with Lutheran Social Services of Batavia. The seminars are held from 7 to 8:30 p.m. in Ramsey Auditorium and deal with issues for the whole family. Topics for these seminars include "Thriving and Surviving in Your Stepfamily," "Gangs" and "Substance Abuse Prevention and the Family."

Among other programs supported by the committee are yearly mammography

screenings and monthly blood pressure checks.

The 10-member committee, led by coordinator **Mae Strobel** (LS/Medical), includes **Dr. David Morrison** (LS/Medical), **Ruth Christ** (LS/Trng/Bnfts), **Karin Etter** (LS/Trng/Bnfts), **Paula Cashin** (LS/Trng/Bnfts), **Jean Guyer** (LS/Activities), **Merle Haldeman** (RD/EE), **Audrey Hopper** (AD/Safety), **Debra Wyland** (LS/Trng/Bnfts), **Bernie Dugan** (LS/EEO) and **Ronald Ward** (ES&H). In the future, they hope to use the results of their lab-wide survey to concentrate on issues that are important to employees. "We are here to promote employee awareness of health issues—issues that affect their well-being," said Mae. "We are going to give people what they want," added Audrey.

The committee encourages anyone with expertise in health issues who wants to participate (and perhaps even conduct a seminar or workshop) to contact the Wellness Works Committee.

You asked for it...

Per the requests of many of our readers, *Ferminews* will now be publishing the menu for Chez Leon once a month. Lunches are served on Wednesdays at 12:30 p.m. at a cost of \$13 per person. Dinners cost \$23.50 and are served at 7 p.m. on Thursdays. For reservations, call x4512. Please confirm your reservations the day before you plan to attend.

Lunch, February 24, 1993
Roasted garlic with walnut pasta
Catfish fillets with mustard sauce
Vegetable of the season
Pecan bourbon pie

Dinner, February 25, 1993
Asparagus parmesan souffle
Grilled tuna with orange butter
Baked stuffed yellow peppers
Sliced tomatoes with tarragon cream
Hazelnut torte

Nalrec news

Openings are still available for this weekend's ski trip to Chestnut Mountain near Galena. A deluxe motor coach will leave at 7:30 a.m. from Wilson Hall on Saturday, February 20 and return approximately at 10 p.m. Sunday, February 21. The cost for the get-away weekend is \$139 and includes games, prizes and snacks on the bus, deluxe accommodations and dinner buffet at Eagle Ridge Resort and a two-day lift ticket. Cross country skiing is also available. If you prefer not to ski, the cost is \$100. It's not too late to join the fun. Just call Dominick at x3187 to reserve your spot.

Important notice: The social hour scheduled for tonight, February 19 at the Village Barn has been cancelled.

Trophies relocated

The trophy cases located in the Cafeteria vending area are being relocated to the Users Center in the Village. Current trophies (1990-1992) and new trophies will be added to our collection. If anyone is interested in obtaining the older trophies that were exhibited in these cases, please contact Jean Guyer at x2548 or FNAL::JEANM. The trophies are being held in the Activities Office, WH15W. Deadline to pick up the trophies is March 1, 1993. The trophies will be disposed of after this date.

The way we were

Starting with this issue, *Ferminews* will begin a new feature entitled "The Way we Were." In this feature, we will be setting the "way-back machine" and taking a look at what Fermilab life was like back in the good-old days. As the basis of our trip, we will be running snippets, photos and even classified ads from past issues of *The Village Crier*, Fermilab's original employee newsletter.

From *The Village Crier*, February 19, 1976:

"1 bedroom furnished apartment in Batavia, \$175."

From *The Village Crier*, February 19, 1976:

"A reminder: All parking spaces in the horse-shoe in front of the Central Laboratory are now **one hour only** parking spaces."

Fermilab Arts Series presents

Bill Evans Dance Company to perform "Mixin' it Up"

The Bill Evans Dance Company will be swinging its way into Fermilab's Ramsey Auditorium on Saturday, February 20 at 8 p.m., accompanied by the music of the Glenn Miller Orchestra and the Bill Evans Jazz Trio.

The Bill Evans Dance Company is unique in its blending of modern, jazz and tap dance styles. Their performance at Fermilab will be primarily from Evans' jazz dance suite "Mixin' it Up" with excerpts from "Jukebox Saturday Night." This company of eight will bring a variety of American dance forms to the stage, set to some of the best American music ever produced.

Don't miss this outstanding performance on Saturday, February 20. Tickets are \$12. For further information or telephone reservations, call 708-840-ARTS weekdays from 9 a.m. to 4 p.m.

Aerobics instructor needed

The Activities Office is looking for aerobic instructors to teach classes at the Recreation Facility. You must be certified. For more information, contact Jean Guyer at x2548 or FNAL::JEANM.

We need your help

The early results of our recent survey indicate that many of you want news and stories about your co-workers. In order for us to bring you the latest information and human interest stories you requested, we need your help. We need you to "tell on" your co-workers and friends here at the Laboratory.

We encourage you to send us information you may have on a colleagues' special involvement in the community, clubs or local activities, on any awards he or she may have won, hobbies or sports he or she is involved in, or any other information that would let us know more about who we work with.

Please send your thoughts, ideas, stories, etc. to the Publications Office, MS 107, x3278 or contact us on FNAL::TECHPUBS.

Movie schedule announced

The Fermilab International Film Society presents movies from all over the world. Movies are shown at 8 p.m. Fridays in Ramsey Auditorium. Admission is \$2.



February 26: *Naked Lunch*, filmmaker David Cronenberg interprets William Burroughs' novel. Focus is on the writer's creative process with drug-induced hallucinations and bizarre imagery. Canada/Great Britain, 1991, 115 minutes.

March 12: *La Femme Nikita*, Nikita, a seemingly incorrigible criminal, is reprogrammed by an underground government agency and transformed into a political killer. Luc Besson, director, France, 1990, 117 minutes.

March 26: *Unfaithfully Yours*, directed and written by Preston Sturges, this original 1948 version stars Rex Harrison as an orchestral conductor who believes his wife is unfaithful, U.S., 105 minutes.

Reminder: URA scholarship applications due

Candidates for Universities Research Association (URA) scholarships are reminded that applications are due March 1, 1993. Applications are available from and should be returned to Personnel Services, MS 124, x4367.

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 and SSC 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.

Congratulations to

Marcy I. Morosow-Kroma and **Jeffrey J. Kroma**

(CD/DCD/DSG) on the birth of their daughter, Lauren M. Kroma. Lauren was born on January 20, 1993 at 12:20 p.m. at Northwestern Memorial Hospital. She weighed 8 pounds, 13 ounces and was 22 inches long. This is the Kroma's first child.

Stanley and **Stacey Butler** (LS/Users Support) became the proud parents of Nicholas John on January 29, 1993. Nicholas was born at 9:52 p.m. at Mercy Center Hospital in Aurora. He weighed 9 pounds, 2 ounces and was 21 1/2 inches long.



Harper's Index

Number of minutes it took an Australian man to give away the \$1 million he won in a lottery last year: 30.

Average number of steps an American adult takes each day: 9,000.

Mammography screenings offered

The Laboratory is again sponsoring the annual on-site mammography screenings for female employees, retirees and the spouses of our male employees and retirees. The screenings will be done March 15-18, 1993.

This is a convenient way for women to take preventive steps to maintain their health. When breast cancer is discovered in its earliest stages, it is nearly 100% curable. Early detection is the key to successful treatment. Even if no symptoms are present, the American Cancer Society recommends that women between the ages of 35 and 40 have an initial baseline mammogram, and that women between the ages of 40 and 49 be screened every one or two years. Women age 50 and over are advised to have a mammogram annually.

Once again, the screenings will be conducted by Delnor Community Hospital. They will set up a portable unit in the northwest conference room on the 15th floor of Wilson Hall. Portable screens are used to ensure privacy. The screening will be administered by skilled female technologists.

The cost has been lowered to \$65 this year (\$5 less than last year!) which includes the x-ray and the radiologist's interpretation. Mammograms are a covered expense under the Connecticut General Medical Plan.

All those wishing to take part in the mammography screening must register prior to the screening. A representative from Delnor Community will be in the Wilson Hall Atrium on Thursday, February 25 from 11:30 a.m. to 1:30 p.m. to schedule screenings. A table will be set up in the cafeteria where you will complete a consent form and a brief medical history. **Payment is required at the time of registration.** Payment may be made by cash, check, VISA or Mastercard.

If you would like to schedule a screening but are unable to register on February 25, please call the Benefits Office at x3395 or x4362.

Benefits notes

Healthy pregnancies – healthy babies

Between 75,000 and 100,000 low-birth-weight infants are treated annually in neonatal intensive care units.

The U.S. has the highest infant mortality rate—the rate at which infants die before their first birthday—of any industrialized nation in the world. While it is true that American children who are dying fastest are low-income black children, the tragedy of America's infant mortality is not limited to black Americans. Our nation's white infant mortality rate is ranked 10th, tied with Hong Kong, Spain and Singapore.

Beyond its tragic human dimensions, America's care for infants has significant economic repercussions. To the American employer who funds access to health care, the cost of low-birth weight babies is an enormous economic burden. In-patient hospital charges for premature babies average \$15,500 compared with \$1,000 for normal newborns. Business also pays in the loss of future workers and lost productivity among parents of critically ill babies.

To deliver healthy babies, we must have healthy mothers. To assure healthy babies, Connecticut General has established a screening program to identify high-risk pregnancies. Fermilab is included in this program.

The screening program is managed by qualified health care experts from Intracorp. The Healthy Babies Program is now available to pregnant employees and eligible dependents. The program has been developed to help expectant mothers avoid problems that may lead to complications and premature births, and to identify and manage possible risks to the mother and child. The program offers participants a complimentary book, *From Here to Maternity*, by Connie Marshall, R.N., just for participating in the maternity review screening.

Participants who call Intracorp to pre-certify the delivery of their baby will automatically be enrolled in the program. During the short phone call, a qualified health professional will guide the expectant mother to answer a few, specific questions regarding her health and medical history. The answers to these questions will ascertain

whether she is in any risk of a high-risk pregnancy or pre-term delivery. Should the screening reveal any high-risk potential, the Intracorp nurse will contact the expectant mother's physician and will monitor her progress throughout the course of her pregnancy.

It is very important that the expectant mother contact Intracorp as soon as she realizes she is pregnant. Prenatal care is relatively simple. The results can lead to healthy babies and healthy moms.

If you are pregnant and enrolled in the Connecticut General medical plan, call Intracorp at 1-800-633-9900 for the free maternity screening and book now. (The number is also on the Connecticut General I.D. card.)

Unfortunately, this program is not available to members of HMOs. However, pregnant members should seek prenatal care as soon as they realize they are pregnant. A copy of the book, *From Here to Eternity*, is in the Benefits Office, 15WHSE, and available on loan to HMO members and other interested parties.—*Paula Cashin*

Gender bias continued

girls still do not receive an education equal to that of boys, and that often times a girl is treated unfavorably in the classroom. In addition, the report helped to explain why it is difficult to attract women to scientific fields.

To help raise girls' interest in and awareness of science, engineering, mathematics and technology, the Leon Lederman Science Education Center staff began *Expanding your Horizons* in 1992. This pre-college education program is open to middle school girls, and as is geared to providing appropriate role models for girls as well as raising their interest in science and technology. The day-long conference is held once a year. A total of three hundred girls from middle schools in Kane and DuPage counties attended the first conference. This year's conference will be held on March 13.

During the program, a teacher and a

scientist or engineer team up to present a hands-on inquiry-based workshop for the girls. **Kris Ciesemier** (LS/Education Office) said this is an important program because it targets the age group mentioned in the AAUW study. It is also a beneficial program because it teaches girls in a hands-on, active, cooperative environment. This methodology, said **Robin Dombeck** (LS/Education Office), is one of the best environments in which girls can learn.

As well as this program, there are components of other programs offered by the Education Center that deal with gender issues in education. In the Teacher Development Program, for example, teachers can become aware that they can do things differently in the classroom to ensure gender equality. *Beauty in Charm at Fermilab*, a program for sixth through ninth grade teachers, also is

helpful in erasing gender bias by instructing teachers to use a hands-on approach in their classrooms.

To erase gender bias it is going to take time, said Kris. "It is a matter of awareness and staff development. There are individuals who do not believe there is a problem and until they see it happen, they won't even think about it. So it is a matter of becoming aware and observing what it is they do."

Tornado seminar coming

The annual Fermilab tornado seminar featuring meteorologist Tom Skilling will be held in Ramsey Auditorium on April 3, 1993. There will be two presentations with times announced at a later date.

Birdwatchers skeptical on herons' return

Even though there is still a dusting of snow on the ground and Punxatawney Phil said there is going to be six more weeks of winter, spring is not that far off. Soon, buds will start blooming and animals and birds on site will be getting ready to bring new families into their lives.

Birdwatchers at the Laboratory are hoping that one species of bird, the Great Blue Heron, will be amongst those heralding the arrival of spring.

The Great Blue Heron is one of four species of heron that have nested, or at least attempted to nest on site in the last few years. The arrival of the large gray birds usually begins in February. The birds range in height from 42 to 52 inches and frequently feed on the fish and frogs of Swan Lake and the Main Ring moat. Other heron species sighted at Fermilab include the Great Egret, the Black-crowned Night Heron and the Green-backed Heron.

The blue herons were first discovered nesting on site in 1985 in a rookery located near Indian Creek in the southwest corner of the Laboratory. There were about 12 nests at the time, which produced approximately two to three eggs per nest. In 1988 the number increased to 34, producing 55 young, and in 1988, nearly 38 nests were discovered. Between 1988 and 1991, however, the number of birds using the rookery dropped dramatically.

According to **Peter Kasper** (RD/Oper.) and **Rod Walton** (ES&H), who follow the herons closely, 1991 was a rather unusual year for the herons. During that year, they moved from their old rookery to a new rookery in the middle of the Main Ring. There is some question as to why the herons left the rookery, but according to Peter, it may be due to a red-tail hawk who took up residency in the old rookery and forced the herons out. During 1991, five nests were built in the new rookery and a few young were raised successfully. The fall, however, was spectacular, said Peter, as approximately 70 herons, the same number of egrets and 40 night herons, presumably from other rookeries in the area, roosted on site. In 1992, the herons returned to the site but failed to raise

any young. At least five of those herons, however, have stayed on site throughout the winter.

Due to the transitory nature of these herons, Peter and Rod said it is hard to determine if they will return to roost at the Laboratory this year. "It is not easy to estimate to what extent the unusually dry spring last year affected the rookeries and whether or not any such effect will persist," said Peter. (In 1991 there was quite a wet spring which contributed to the high numbers of herons that year.) The herons, however, should continue to use the site so long as they are successful, Peter added.

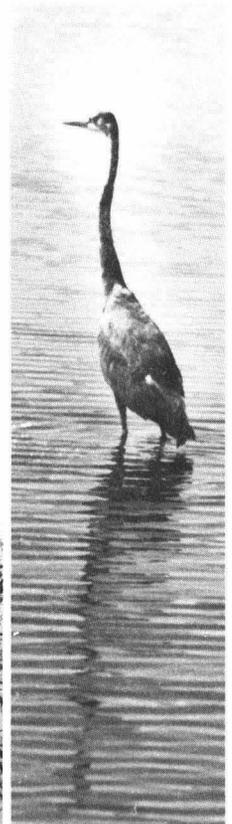
Hérons prefer to nest in tall trees near water in areas that are quiet and isolated. They are very shy, and to an extent, afraid of humans, said Rod. The herons' main predators include crows and raccoons. (Fermilab has placed metal bands around the bottom of the rookery trees to keep the raccoons out.)

Although they are not a rare bird, few suitable nesting locations remain in the area. Those that do remain, such as Fermilab, Lake Renwick in Plainfield

and a 500 acre area in Bartlett, are protected by law and monitored by the state.

Fermilab has become a well-established feeding ground for not only herons nesting on site, but also for those from other rookeries, Peter said. It is still not clear, though, if the herons will try to nest here this year. That appears to be up to Mother Nature.

Blue Heron and rookery tree



In memoriam

Stan Snowdon, long-time Fermilab employee, passed away November 4, 1992. Stan joined the Laboratory November 1, 1967 and retired on June 26, 1987. He returned to the Lab last February as a consultant to the Accelerator Division's Accelerator Physics Department.

Stan had a Ph.D. in Physics from the California Institute of Technology. Prior to joining the Lab, Stan was an instructor at the California Institute of Technology, a lecturer at Temple University, a professor at the University of Wisconsin, a staff member of the Bartol Research Foundation and a physicist with the Midwestern Universities Research Association.

During his tenure at the Laboratory, Stan made many important contributions to magnet design and published over 50 articles on the subject. He began his Fermilab

career as a member of the Accelerator Theory Group under the leadership of Lee Teng. In the early years, Stan was involved in the design of the Main Ring magnets and the rapid cycling Booster magnets, said Lee. Later he worked on the experimental transfer line magnets and assisted the users with magnet design. "Fermilab was a pioneer in the development of superconducting magnets, and Stan made a significant contribution to the early design of Tevatron magnets," said Lee.

After retiring, Stan worked as a consultant, lending his expertise to the Loma Linda Project, the Advanced Photon Source at Argonne and assisting many users on the design of magnets for their experiments.

Stan, a Wheaton resident, is survived by his wife Betty. The couple had three children, Peter, Donald and Judith.

New books on Library shelves

Several items of interest were recently added to the Fermilab Library. The new publications are:

Quantum Field Theory/Lowell S. Brown. Cambridge; New York:Cambridge University Press, 1992.

QC174.45 .B79 1992 LCK CSE

Recent Aspects of Quantum Fields:Proceedings of the XXX Int. Universittswochen fr Kernphysik, Schladming, Austria, February and March 1991/H. Mitter, H. Gausterer (eds.) Berlin; New York:Springer-Verlag, c1991. (Vol. 396 of the Lecture Notes in Physics series.)

QC174.45 R43 1991MAIN

The Excel Spreadsheet for Engineers and Scientists/Irvin H. Kral.

Englewood Cliffs, N.J.:Prentice Hall, c1992.

TA345 .K73 1992LCK CSC

Perspectives in the Standard Model:Proceedings of the 1991 Theoretical Advanced Study Institute in Elementary Particle Physics, Boulder, Colorado, 2-28 June, 1991/editors, R.K. Ellis, C.T. Hill and J.D. Lykken.

River Edge, N.J.:World Scientific, 1992.

QC794.6.S75 T54 1991MAIN

Time for the Stars : Astronomy in the 1990s/Alan Lightman; with a foreword by John Bahcall.

New York:Viking, 1992.

QB15 .L54 1992MAIN

Feynman:Paths of Genius/James Gleick New York:Pantheon Books, 1992.

QC16.F49 G54 1992MAIN

To search the Library's on-line catalog for these and other titles from the FNAL cluster or other DECnet nodes on HEPNET:

SET HOST FNLIB

USERNAME: LIBRARY

Classified ads

Vehicles

1992 Chevy Geo Storm, 5 sp., AM/FM/Cass., A/C, black w/tourquoise pin striping, sharp. Very low mileage, \$10,000. Contact Lisa at x8023 or 708-393-3819, or lisa@dcclaa.

1989 mobile home, 14'x70', 2 bd., 2 bath, C/air, appliances, dishwasher, w & d, shed, eat-in kitchen. W/skylight, quiet neighborhood. Call Irene at x4788 or 708-888-0918 after 4 p.m.

1988 motorhome, Encounter by Georgie Boy, 35', fully loaded, 2 airs, 2 furnaces, elect. jacks and stairs, TV, VCR, microwave, E.C., \$38,000. Call Edie at x3621 or 708-393-3357.

1988 Coleman pop-up camper, sleeps 6, good cond., extras incl. Contact Jack Smith at x3011 or page 0306.

Miscellaneous

Men's brown leather jacket by Members Only, size 46, worn only twice, \$300. Call Shelley at x3324.

Ray-Ban sunglasses. Brand new. "Outdoorsman" model w/ gunmetal frame and neutral grey G-15 lenses, w/ case, \$60. Contact Wade at x3165 or FNAL::WADE.

Valley "tavern style" **pool table** w/access., \$125; 2 **tires**, one on rim, 70R13, both \$20; good cond. Toastmaster **table top oven/broiler**, \$25. Call Sandy at x4171.

Nintendo entertainment system, w/2 control pads, 11 games, adult-owned and used, \$175. Call Kevin at x2140.

Or from the port selector prompt:

FERMILAB= LAN

Vista> C FNLIB

(press return several times)

USERNAME: LIBRARY

5-drawer **desk**, 56" x 24, wood grain formica top, \$100; Story & Clark **console piano**, excell. cond., \$975; Sears Craftsman **bandsaw/sander**, 12" throat, like new, \$200; Admiral **upright freezer**, 15.5 cubic ft., \$100. Call David at x3880.

Golf clubs, Powerbilt Persimmon woods, excell. cond., \$125; **golf bag**, full size w/ travel hood, head covers, new cond., \$50; misc: **putter, head covers, balls**. Call Jim at x4293 or 708-416-0548.

Singer sewing machine no. 6235, top-loading bobbin, good for decorative and elastic thread. Sews 18 different stitches, comes w/ sewing table, \$200 o.b.o. Call Pam at x3730.

Sony hi-fi stereo VCR, SLV-585 MQ VHS w/editing. Remote w/shuttle (18 months old, like new), \$250 (\$540 value). Call Enrique at x3755 or 708-510-1038.

Sharp hi-fi surround stereo amplifier w/ remote and 6 band equalizer. Double cassette deck, dolby/metal/Cr0. Digital turner w/memory. Sharp DX-670 CD player. Four speakers (2 Epi-100 2x8). Perfect, \$290 (\$650 value). Call Enrique at x3755 or 708-510-1038.

One **round-trip Northwest Airlines ticket**, open, anywhere within continental U.S. and Canada, \$200. Contact FNAL:B94786.

Real Estate

3 bd. **brick bungalow**, finished rec. room in basement, 1 1/2 car garage. Well maintained. Call 708-898-8767 or 708-851-0249.

Pets

Iguana for sale w/20 gallon tank and all accessories. Everything goes w/him, \$175 o.b.o. Please call Tia at 708-978-0743 after 5:30 p.m.

To request an item be sure you are in the "Catalog Mode" and enter R at the >> prompt, then follow the directions on your screen. To logout, issue control-Z to return to the initial screen and then respond with L to logout.