

# Ferminews

FERMI NATIONAL ACCELERATOR LABORATORY

## Experimental Astrophysics Group begins initial run

The Computing Division's Experimental Astrophysics group embarked on Fermilab's first-ever Experimental Astrophysics run August 12. The run marks the group's first use of a new charge coupled device (CCD) camera, the Drift Scan Camera. This camera is designed to take astronomical images and store them for later viewing. This CCD technology, which acts much like a piece of photographic film, now makes remote observation of the stars possible.

The purpose of this run is to test the operation of the drift scan camera that will eventually be placed on a 3.5 meter telescope at Apache Point, New Mexico, where the Sloan Digital Sky Survey telescope will be. Members of the Experimental Astrophysics group also hope to observe some interesting astronomical phenomena while conducting the nightly tests outside Lab 7.

**Tim McKay**, Lederman Fellow in the Physics Section and one of the key operators of the drift scan camera system, said the real virtue of doing this test run "is not looking at the sky so much as it is testing it (the camera) in something like the real mode." Tim said that through the test, which is expected to run one more week depending on the weather, the group has discovered "all kinds of things about the user interface, starting the system up, stopping it and making it run like an experiment instead as if it was in a laboratory." Tim added that the group has learned a lot about how they want to operate the camera at an observatory. "It's great to do that here instead of at a \$10,000 a night telescope. Even just moving it once is a big test. But every time we do the test it gets significantly better. We have proven we can drift scan without any significant image problems."

**Bryan MacKinnon** of the On-line Support department said the camera is analogous to photographic film. The CCD is mounted in the dewar, or cryogenic tank. As light passes through the telescope to the CCD, image data is read from the CCD. It is monitored in real-time on a display and eventually recorded on disk and tape.

The concept of drift scanning, however, is slightly different from that of a regular video camera. "The idea of drift scanning," said Tim, "is you can point your telescope at the sky and not move the telescope. What we do in the drift scan camera is instead of rolling film, we move the image



Members of the drift scan camera collaboration.

across the CCD chip at the same rate as the sky goes by. Consequently, we get a picture of a long strip of the sky."

The original idea for the camera came through the collaborative efforts of three experimental astrophysicists, **Rich Kron**, **Steve Kent** and **Chris Stoughton**. Since then, the project has grown to encompass four different groups at Fermilab and nearly 30 people. Besides the Experimental Astrophysics group involvement, others who played key roles in the development of the camera include the Computing Division's On-line Support department, under the guidance of Associate Head **Don Petravick** and the Research Division's Detector Electronic Systems group, led by the efforts of **Ray Yarema** and **Merle Haldeman**. The On-line Support group designed, developed and integrated the camera's computer system, including a custom VME board. The Detector Electronic Systems group designed and developed the front-end electronics that take the light gathered by the telescope optics and converts it to digital data. The data is then processed by the On-line Support group for various types of image reconstruction. The Physics Section, through the efforts of **Hans Jostlein** and others, also contributed to the project, providing the space for the telescope and camera in Lab 7 and making it possible to assemble the telescope.

The camera will be moved to Apache Point after the 3.5 meter telescope is complete. The Experimental Astrophysics group expects it to be finished in October. At Apache Point the group plans to conduct several experiments with their camera, probing such questions as the isotropy and expansion rate of the universe.

## inside

Education Office  
summer wrap-up  
page 2

Total Quality  
Management  
page 3

Family Day photo  
display  
page 6-7

Trash = Cash  
page 8

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., September 17 issue  
of *Ferminews* is  
Wed., September 8.  
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.



# Education Office programs draw 500 to Lab

The Education Office was host to over 500 students and teachers this summer who came to Fermilab to learn new ideas in math and science in the unique and energizing environment of a research laboratory. The programs included the Summer Institute for Chicago Science and Mathematics Teachers; Topics in Modern Physics National Institute; DOE Teacher Research Associates Program (TRAC); Illinois Leadership Institute; Fractals, Chaos and Dynamics Symposium; the DOE High School Honors Research Program in Particle Physics and 12 Summer Science Adventures for teachers, students and their parents. Many of the teachers and students who participated in the successful programs are shown below.



1



2



3



4



5



6

1) Fractals, Chaos and Dynamics Symposium participants and presenters. Nearly 100 high school mathematics teachers from 28 states, Canada, Mexico, Turkey and Russia took part in this symposium that introduced teachers to the emerging field of fractal geometry, chaos and dynamical systems.

2) Chicago Summer Institute participants. Sixty high school physics, chemistry, biology and mathematics teachers from schools in Chicago and the surrounding area took part in the three-week institute that enhanced their science and mathematics knowledge and teaching ability.

3) Participants in the four-week Illinois Leadership Institute were 24 middle school teachers from 11 school teams. The teams participated in research experiences and were updated on standards, best practice and educational technology in order to

develop and implement plans for a systemic reform of their science curriculum.

4) Thirteen national and regional teachers participated in the eight-week Teacher Research Associates (TRAC) program. Mentors and a TRAC graduate (a returning teacher) are also present in the picture.

5) The Topics in Modern Physics Institute had 45 high school physics teacher participants from 29 states. Lectures, tours and classroom activities during the two-week program will enable teachers to incorporate particle physics topics into their physics curriculum.

6) DOE High School Honors Program members. Sixty students from 50 states, Washington, D.C., Puerto Rico, Canada, Mexico, Australia, Germany, Italy and Japan took part in the two-week program designed to expand students' knowledge and interest in particle physics via lecture, tutorial and research participation.

# Quality initiative on the move

Director **John Peoples** recently completed two three-day training courses at the Motorola/Milliken Quality Institute. The institute was held in July and August in Schamburg, Illinois. Among the nearly 80 class members were Secretary of Energy Hazel O'Leary, top DOE executives, including the directors of the national laboratories, all DOE field operations managers and key department program managers.

The institute, sponsored by Motorola and Milliken Corporation, was specifically designed for the DOE complex and presented the philosophy, techniques and tools necessary for the implementation of a Total Quality Management Program. "The Secretary of Energy is absolutely committed to turning the DOE complex into what is known as a quality organization, which means one that practices total quality management," said Associate Director **Bruce Chrisman**, who also attended the institute as a member of the DOE Quality Council.

The objective of the six-day training program is to begin the process of building a Department of Energy management and leadership team dedicated to meeting the expectations of those they serve by providing quality products and services in a timely manner at a reasonable cost.

DOE's partnership with Motorola and Milliken began over a year ago when the idea for the institute sprang from a consulting relationship between Los Alamos National Laboratory and Motorola. During a visit to the New Mexico site, Bob Galvin, Chairman of the Board of Motorola, talked to management at Los Alamos about Motorola's quality movement and what Motorola might be able to do for the national laboratories—which Galvin regards as the "scientific jewels of the nation."

"Los Alamos deserves a lot of credit for DOE's involvement in this institute," said Bruce Chrisman. Los Alamos brought the idea of Motorola developing a quality institute for the national labs and possibly DOE to the members

*"The Secretary of Energy is absolutely committed to turning the DOE complex into what is known as a quality organization, which means one that practices total quality management."*

*— Associate Director Bruce Chrisman*

of the 3 Point Program—a committee composed of lab representatives who meet monthly to deal with a variety of intralaboratory issues.

Based on Motorola's outstanding track record in the area of quality management, members of the committee were interested in Motorola's proposal, but questioned how Motorola could relate the quality institute to the research environment.

The first three days of the institute held last July featured a review of the lessons in quality learned by Motorola and Milliken Corporation. A program overview by William Wiggernhorn, President of Motorola University, opened the institute. Sessions included a talk titled "Leadership—Reviewing a Successful Organization," by Bob Galvin and a presentation by Tom Malone, Chief Operating Officer of Milliken, on "Empowered People and their Contribution to a Quality Organization." George Fishcher, chairman of the Board and Chief Executive Officer of Motorola, spoke to the group on the role of leaders in developing a customer-focused organization. "There were many very inspirational speakers who shared their successes and their lessons learned," said Bruce. "The training was a very positive experience."

The goals and objectives of the first session included: identifying customers and their expectations, identifying tools and measurements that can assist in developing a quality culture, identifying barriers within DOE that hinder the development of a quality culture, and developing a "future" customer model around environmental opportunities.

The first session of the Quality In-

stitute was preceded by a strategic planning session in which DOE and laboratory executives discussed the department's mission statement, core values and future trends. The discussion of trends examined the external forces that will ultimately determine what issues and challenges the department should be equipped to handle in the future.

The second three-day session gave the participants an opportunity to apply some of what they had learned in the first session as the Secretary and lab directors and other class members began the work to develop a strategic plan for the department. "The directors of the national labs are very active participants in the Secretary's quality initiative," said Bruce. "The agency is soliciting ideas and listening."

The two sessions gave the participants many ideas to take back to their own organizations, but it did not give them a prescription for TQM. One of the important concepts learned according to Bruce was that TQM has to be adapted to the existing corporate or laboratory culture. Lessons learned and success stories are important to share to help avoid the mistakes of others, but each organization must develop its own program within its own management framework.

So where is Fermilab in this process? "Right now we are in a look-and-learn mode. It is clear that there is applicability in the TQM processes to operations at the Lab. How broad is not yet clear. This is something we have to figure out how to do. We can't just read a book on TQM and do it next Monday," said Bruce.

## Author Guidelines to be distributed

The Publications Office will soon be mailing a brochure titled *Author Guidelines* to all laboratory employees. This pamphlet is designed to help you publish your work more efficiently through the Publications Office and through professional journals. Following the guidelines will help protect your rights as an author and agent of URA/DOE and will also help the Laboratory more effectively manage and distribute the information. Please read the pamphlet thoroughly and keep it for further reference. If you do not receive a copy during the week of September 6-10, 1993, please contact the Publications Office. The *Guidelines* will also be included in new employee packets. Additional copies are available in the Publications Office, WH15SW.

## Harper's Index

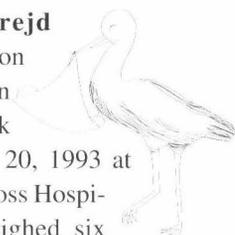
Chances that a viewer of the Weather Channel watches for more than 27 minutes at a time: 1 in 5.

Price paid at auction last year for a Dudley Do-Right lunchbox and thermos: \$2,200.

## Congratulations to

Bill and **Barb Frejd** (Children's Center) on the birth of their son Derek Norton. Derek was born on August 20, 1993 at 7:19 p.m. at Silver Cross Hospital in Joliet. He weighed six pounds, 15 ounces and was 19 inches long. Derek is the Frejd's first child.

Tom and **Jill Hentges** (RD/ES&H) on the birth of their daughter Kelly Britt. Kelly was born on July 22, 1993 at 11:59 p.m. at Humana Hospital in Schaumburg. She weighed seven pounds, 11 ounces and was 19.5 inches long. This is the Hentges' first child.



## Benefit notes

### Health plans open enrollment

Information regarding the open enrollment period and changes to Fermilab's Connecticut General and HMO plans was mailed to employee's mail stops this week. During the open enrollment period, September 13, 1993 through September 24, 1993, active employees can elect to transfer their medical and dental coverage. This time is also your opportunity to find out more about Fermilab's CIGNA PPO plan and HMO plans.

A representative from CIGNA is scheduled to conduct meetings about the PPO plan in Ramsey Auditorium on Monday, September 13 at 1:30 p.m. and 3 p.m. and Tuesday, September 14 at 8:30 a.m. and 10 a.m. The HMO and PPO representatives will also be in the Atrium of Wilson Hall on Monday, September 13 from noon to 5 p.m. and Tuesday, September 14 from 8 a.m. to 1 p.m. to distribute information and answer any questions that you may have.

## 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. All foreign films have English subtitles. Admission is \$3 for adults, \$.50 for children 12 and under. Coffee and cookies will be served on the second floor mezzanine following each film.

September 10: *Who Framed Roger Rabbit?* Live action and dazzling animation are combined in this spoof about a down-and-out detective hired to clear a cartoon star of murder charges. Robert Zemeckis, dir. U.S., 1988 (103 min.).

September 24: *Show People*, Satirical look at Hollywood starring Marian Davies and the Who's Who of 1928 MGM in cameo roles. Randolph Hearst co-produced. Live piano accompaniment. King Vidor, dir. U.S., 1928 (80 min.).

## URA scholarships require SAT test

Candidates for Universities Research Association (URA) scholarships are reminded that the scholarships are awarded on the basis of SAT (Scholastic Aptitude Test) scores. Thus, high school seniors are reminded to **sign up for a fall testing date** if they have not already taken the tests.

URA awards a number of scholarships to regular, full-time 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.

Scholarship applications will be available after the first of the year and are due March 1, 1994.—*Ruth Christ*

## Wellness Committee hosts medical seminar

Dr. Joseph Nuzzarello, a urologist with Central DuPage and Elmhurst Hospitals, will be giving a presentation on prostatic awareness on Tuesday, September 29, 1993 from noon to 1 p.m. in Curia II. The talk is sponsored by Merck Pharmaceuticals and presented by the Wellness Works Committee.

## Don't forget your Annual Report

Just a reminder to pick up your copy of the *1992 Annual Report*. The report contains employee reflections on the first 25 years of the Laboratory and the history of the wine and cheese seminars, as well as our significant milestones in 1992. Copies are available from the Publications Office, the Public Information Office, Visual Media Services, CDF, DØ, the Feynman Computing Center, the Industrial Center Building and the Housing Office.

Ferminews

## Announcements

## Fermilab Arts Series presents

### Celtic Celebration: Tannahill Weavers (Scotland) and Trinity Irish Dancers

A lively sampling of music and dance from the fair isles is on tap as the Fermilab Arts Series hosts a Celtic Celebration featuring Scotland's Tannahill Weavers and hometown favorites, the Trinity Irish Dancers in Ramsey Auditorium on Saturday, September 18 at 8 p.m.

To experience the Trinity Dance Company is to travel back through the mists of Irish history and forward into the uncharted paths of modern dance and ballet. Composed primarily of the top dancers from the Trinity Dance Academy, this energetic troupe has embarked on a journey to spread traditional and progressive Irish dance throughout the world. In a short time these dancers have made multiple appearances on *The Tonight Show*, at The Grand Ole Opry, performed in the film *Backdraft*, and won competitions around the world. They return to Fermilab by popular demand, after their remarkable performance in the 1991 Ethnic Dance Showcase.

Scotland's Tannahill Weavers have that unique combination of traditional melodies, driving rhythmic accompaniment and rich vocals that make their performances unforgettable. Born of a session in Paisley, Scotland, and named for the town's historic weav-



*The Trinity Dancers*

ing industry and the local poet laureate Robert Tannahill, this group began to attract attention immediately, breathing new life into Scotland's vast repertoire of traditional melodies and songs. This five-piece ensemble performs on traditional instruments such as guitar, fiddle, fife, whistles, mandolin, bodhran, bouzouki, and of course, bagpipe. The Tannahill Weavers now have ten albums to their credit, and are firmly established as one of the premier groups on the folk concert stage.

Don't miss a toe-tapping feast for the eyes and the ears as Fermilab hosts this Celtic Celebration. Tickets are \$10. For further information or telephone reservations, call 708-840-ARTS weekdays from 9 a.m. to 4 p.m.

## Volleyball season comes to a close

The 1993 volleyball league season came to a close earlier last month, marking the end of another fun time for all.

Repeating last years performance, the Beer Smugglers, led by captain Angie Velasquez, took first place honors with a 24-6 record. In a tight race for second place, Angie Prosapio and her team the Killer Dwarfs, edged out Maxine Snee and the Maximizers for second best with a record of 18-12. The Maximizers finished at 17-13.

Other teams rounding out the league roster were the Leftovers, led by Scott Hawk at 14-16; Easy Street, led by Sharon Austin at



*The winners (l to r) Angie Velasquez, Jenny Hall, Dennis McAuliff, Roy Justice and Gordon Bagby. (Not pictured Dave Jakubek, Patty Jakubek and Wes Mueller.)*

9-21 and Dave Richardson's team with a record of 8-22.

## Chez Leon menus for September

Lunches are served Wednesdays for \$13. Dinners are served Thursday evenings for \$23.50. For reservations call x4512.

### Wednesday, September 8

Smoked turkey, broccoli and black bean soup, selection of stuffed vegetables, cabbage/snow pea and carrot slaw, almond torte.

### Thursday, September 9

Marinated mussels, filet mignon with morel cream sauce, vegetable of the season, garden tomatoes with pesto, orange hazelnut soufflé.

### Wednesday, September 15

Garlic and saffron soup, grilled salmon with avocado citrus salsa, vegetable of the season, cassis sorbet.

### Thursday, September 16

Lobster bisque, veal piccata with capers and pine nuts, vegetable of the season, Caesar salad, peach tart with marsala cream.

### Wednesday, September 22

Tamarind soup, pork sate with peanut sauce, steamed rice, oriental salad, fruit platter.

### Thursday, September 23

Calzone with four cheeses, basil and eggplant, grilled pompano with spinach and cherry tomatoes, mixed greens with raspberry vinaigrette, lime tart with berry sauce.

### Wednesday, September 29

Booked.

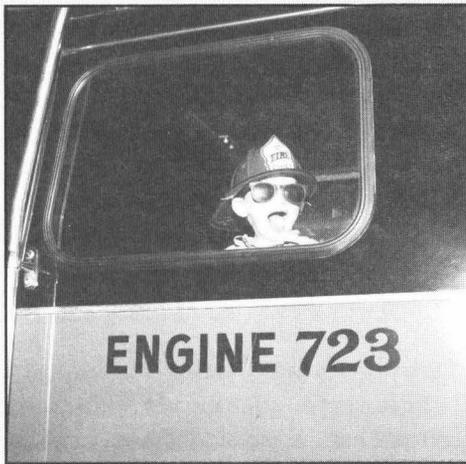
### Thursday, September 30

Spinach and cheese stuffed pasta shells, grilled lamb chops w/green peppercorn sauce, vegetable of the season, romaine salad with anchovy dressing, orange caramel flan.

# Family Day: a time for fun, food and exploration

## August 6, 1993

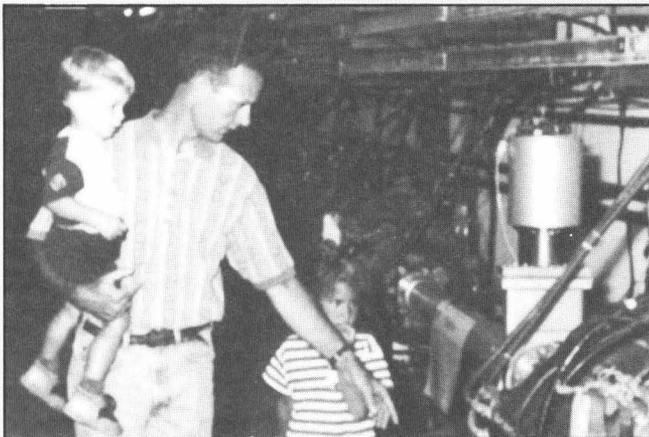
*The 1993 Family Day was a success and a fun and informative time for all who attended. As well as the usual good food and games that were offered, employees and their families also had the opportunity to visit nine different tour sites set up throughout the Laboratory. To allow employees and their families to get better acquainted with the many areas of the Lab, tours were given at the Antiproton Source, Linac, Fire Station, Feynman Computing Center and the buffalo field. The Lederman Science Education Center, Labs 7 and 8, Wide Band Lab and the Industrial Center Building also gave tours.*



*Andrei Hahn, son of Reidar Hahn (LS/Photography), enjoys exploring Engine #723 at the Fire Station. Visitors to the station viewed the fire engines, ambulance and other equipment on display.*



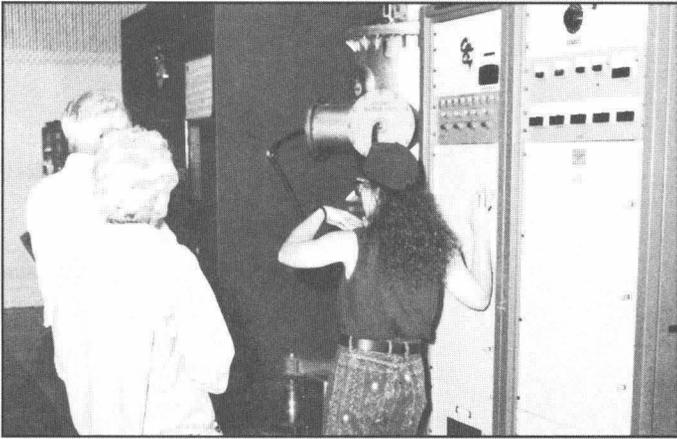
*Families gather around the children's pony ride. The pony rides were one of many fun attractions offered to children at the Taste of Fermilab.*



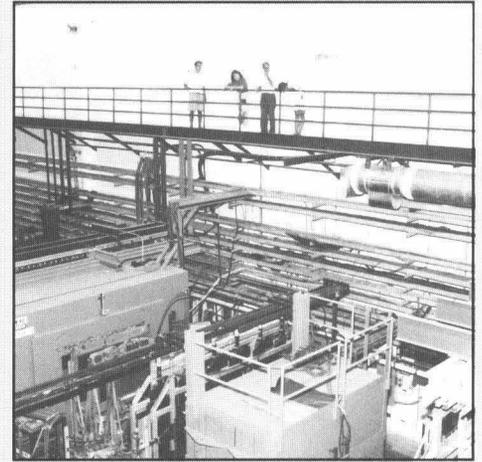
*A family takes a look through the Antiproton Source tunnel at AP10. Visitors there learned where antimatter is collected and stored.*



*A family gazes at Fermilab's bison near the buffalo barn. Two contests held at the barn offered children a chance to guess the weight of the herd's largest bull and guess the total number of buffalo in the herd.*



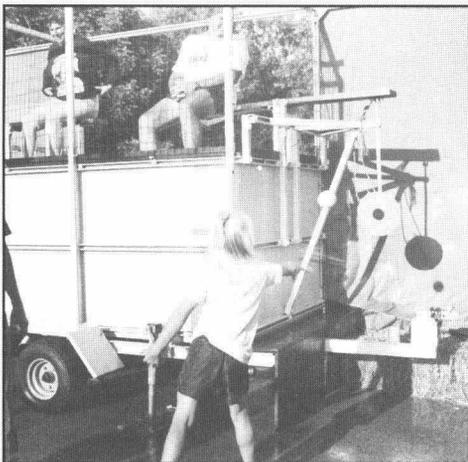
Visitors to the Linac get a closer look at the beginning of the acceleration process. The tour continued with a visit to the Main Control Room.



Four visitors to the Wide Band Lab get a bird's eye view of the workings of a fixed-target experiment from high atop the catwalk.



(Left) Father and son gather around computer terminals at the Feynman Computing Center. Visitors to the Feynman Center were given a short lesson on computer farms and the VAX cluster.



Delmar Miller (RD) looks on as he is about to be sunk at the dunk tank. (Left) Ann Miller (BS) dries off slightly while waiting for the next ball to hit.



Jack Schmidt (CD) and his family explore an interactive teaching station at the Lederman Science Center. Assistants were on hand to explain the fun-filled stations to the visitors.

## Trash = cash

As innocuous as it sounds, solid waste, or in the vernacular garbage, is a high-priced ticket item at Fermilab. This year alone, it cost close to \$190,000 to get rid of our trash! Each week approximately 500 cubic yards, or 50,000 pounds, of solid waste is removed from the Laboratory. The waste is accumulated in 2, 4, 6, 10, 15 and 20 cubic-yard dumpsters located throughout the site. The waste generated in your work area — laboratory, technical, or office — is dumped into these receptacles.

Before any waste is removed from the site, it is surveyed by a technician from the Laboratory ES&H Section. The technician checks each dumpster to determine if any hazardous waste is present. If hazardous waste is found, the dumpster is "locked out" until the waste can be disposed of in an environmentally safe manner in accordance with DOE guidelines. Hazardous waste can be in the form of waste associated with experimental, technical or accelerator work. Hazardous waste can also be generated by maintenance or support staff work. With the enhanced awareness and identification of hazardous waste by all of the Fermilab population, environmentally unsafe waste found in dumpsters on site turns up less and less frequently.

The disposal of solid waste is becoming more expensive, not only for Fermilab but for the average household. Local disposal companies are raising their rates yearly, if not more frequently. These increases are putting strains on already overburdened household budgets. As a result, Fermilab dumpsters are acquiring "household" trash at an increasing level. Mattresses and box springs and 30-year-old console television sets are not part of the usual Fermilab trash. Dumpsters have been recipients of used motor oil and open paint cans with paint residue, items that are considered hazardous waste and that are costly and time-consuming to dispose of properly. In an effort to eliminate non-site-generated waste, the Fermilab Security Department will begin monitoring unauthorized dumping, that is, garbage brought from home and dumped here. (Notably, it is against Illinois law to dump garbage on someone else's property, including government property, without consent.)

Fermilab has traditionally been consid-

## Classified ads

### Vehicles

**1984 Escort wagon.** First \$800 or offer takes. Ready to go. A/C, new tires, newer battery, newer exhaust, runs great, good shape, little rust, 93K miles. Call Russ at x2888 or 815-393-3314.

**1976 Kawasaki KZ 900,** 18K miles, runs good, looks good, \$900; **1973 Suzuki GT 380,** 13K miles, 3 cylinder-2 stroke, ram air cooling, runs good, looks good, \$380. Call Scott at x4082 (7 to 3:30) or 815-286-7387.

### Miscellaneous

150 MB ESDI **hard drive** w/floppy/hard drive controller, \$150 installed; **Toshiba laptop T1200XE,** 286, 20 MB hard drive, one 3.5" floppy drive, 2 MB RAM, external keyboard port, mouse port, printer port, DOS 5.0, MS Word 5.1, \$550, \$600 w/mouse. Call Mike or Dorothy at 708-393-3239.

**1880 Steinway upright grand piano.** Great sound, great condition, well cared for, \$800; **JoAnna contour vertical blinds,** brand new, still boxed, pearl white, 73 1/4 x 84 1/2, \$75. Call Matt at x3005 or Ruth at 708-393-0330.

Toyo 45A aluminum **field case,** \$80; Zone VI 4x5 **photographer's apron,** \$10; LumiQuest ultrasoft **flash bounce,** \$12; Sunpak Thyristor auto 522 **electronic flash,** \$75; Canon FD **rear lens caps,** \$1 ea.; Canon **macro auto ring,** \$20; Calumet **accessory pouch (P14000),** \$12; Bogen 3055 (older) **ball head & quick release plate,** \$8; Dodge Shelby **shift link,** \$1 ea.; Dodge 1985 **repair manuals,** \$15; H6054 **halogen headlamp,**

ered a "family-oriented" facility. Programs have been established for the whole family through the Activities Office and Nalrec and Nalwo. Families picnic and bicycle through the facility. The facility is open for the enjoyment of the Fermilab family and the surrounding community. Fermilab welcomes all people who work and play here — just leave your household trash at home.

\$3; **Asolo Yukon boots** (10 1/2 MM), \$50. Call Tom at x3145.

**6 piece mahogany bedroom set** w/like-new box spring & mattress, \$250; **Maple 3-cushion couch,** \$50; **Maple platform rocker,** \$35. Call 708-741-0767.

**20MB MFM hard drive** w/controller for IBM PC (8-bit), \$40. Call Jim at x2207.

Ladies' **ruby and diamond ring,** white gold, cluster design, 9 diamonds: 1 carat weight, 12 rubies: 1 carat weight. Appraised at \$3,200, asking \$1,500. Call Richard at x3740.

**14 ft. fiberglass bass boat and trailer.** Two deck/swivel seats, trolling motor, steering console, radio, running lights, gas can, anchor and battery, \$1,000. Call Frank at x8042 or 708-264-1921.

**1982 Baja 19 ft. ski boat.** Fresh 396 cu. in. engine, Berkley pump, cover, bimini top, tandem axle trailer w/new tires, nice boat for \$4,000; **Tournament soccer foosball table,** butcher block style, heavy duty, good shape, \$250; **RC airplanes,** 1 trainer, Solo III, very durable and gentle flying. 1 balsa kit plane w/ two engines, radios, etc. Also a field box w/ electric starter, battery and many spare parts, \$225. Call Scott at x4082 (7 to 3:30) or 815-286-7387.

### Real estate

**Condo for rent.** 3 bedroom deluxe in Wheaton, 2 full bath, 1 car garage, balcony w/beautiful view. Convenient and quiet location. All appliances. \$960/month + security deposit. Contact Randy at 708-393-9843.

—*Connie Kania*, Building Inspection and Repair, FESS

*During this time of budget constraints and escalating costs many Fermilab employees are exploring methods of minimizing waste and saving dollars—not to mention saving the environment. The next issue of Ferminews will cover some of these methods.*