

Fermi News

Fermi National Accelerator Laboratory

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Number 19

Historic Main Ring Bids Farewell Forever

On September 15, the Main Ring shut down after 25 years in the forefront of particle physics research.

by Sharon Butler, Office of Public Affairs

Videocameras rolled, Nikons flashed, and onlookers cheered. On September 15, with a ceremonious push of a giant gold lever fitted with royal-blue grips, beam in the historic Main Ring was switched off in Fermilab's Main Control Room, ending a stunning era of particle physics.

When it was completed in 1972, the Main Ring was the most powerful accelerator of its time, and in the years to come, as Director John Peoples said, it would put Fermilab "on the map." Despite its balky dipole magnets, the Main Ring enabled physicists to collect reams of data confirming the Standard Model and to

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Thousands Visit Fermilab for Open House

15,000 guests explore all areas of the Laboratory on a nearly perfect Saturday.

by Donald Sena, Office of Public Affairs

First the blue and purple shirts arrived. More than 650 volunteers—employees and scientists at Fermi National Accelerator Laboratory—came early for the Lab's first Open House in 14 years. Wearing their signature T-shirts, the volunteers readied their hand-outs, double-checked their displays and drank that last sip of coffee, all the while wondering how many people would show up. Open House organizers said to expect 10,000–20,000 guests, but some dismissed that as wishful thinking. Then the first bus pulled up to Wilson Hall; one volunteer glanced at another and said with a mix of nervousness and excitement, "Here they come."

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Guests walk through the Main Injector tunnel (above) and learn about magnets (right) at Fermilab's Open House.

INSIDE

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11 Czech Football Players



Photo by Jenny Mullins



Photo by Reidar Hahn



Fermilab Fêtes Former Farmers

Site's former residents return for an open house in their honor.

by Judy Jackson, Office of Public Affairs

The Erdmann family sold eggs at the end of Wilson Street. The Baumanns raised beef and hogs on Kautz Road. And the Feldotts farmed the land now occupied by CDF, the Collider Detector at Fermilab.

On Saturday, September 6, the Erdmanns, the Baumanns and the Feldotts—lots of Feldotts!—along with more than a hundred of their former neighbors returned to the land they once farmed, for a first-ever Fermilab open house held in their honor. They spent the sunny afternoon touring the Laboratory and reminiscing with old friends and relatives about life on the site before the arrival of the National Accelerator Laboratory, later renamed Fermilab, in 1974.

"I suspect our arrival here 30 years ago may have been somewhat intrusive for you," said Fermilab Director John Peoples in his welcoming remarks, raising loud, if rueful, laughter from the audience. Many of the farm families displaced by the Laboratory used the proceeds from the sales of their farms to purchase new farms in the area. Peoples noted the pace of change in the three decades since the Laboratory's arrival, but said that some things remained constant.

"One thing that hasn't changed on the Fermilab site is regard for the land we live on," Peoples said. "As farmers, you cared for and respected the land that supported you and your families. As a laboratory, we have continued that respect and regard for the land." Peoples noted the role of Fermilab prairie specialist Bob Lootens, son of a former Fermilab farm family, in the restoration of more than 1,000 acres of tallgrass prairie on the Laboratory site.

Photo by Jenny Mullins



Later, Lootens greeted the returning visitors, including many members of the extended Lootens clan, at the former Baumann barn, one of three stops on a bus tour of the site for the guests. Lootens explained the old barn's new role as the storage area and processing site for seeds of Fermilab's annual Prairie Harvest. Grandchildren of farm families skipped through the barn's empty hay loft, which will soon be deep in drying prairie plants, while Lootens explained the Laboratory's prairie restoration project to their elders.

Next stop for the tour buses was CDF (renamed, for the day, "Collider Detector at Feldotts"). Fermilab physicist Peter Limon explained the workings of the 5,000-ton particle detector, where in 1995 the top quark made its first appearance since the Big Bang. Leon Feldott, now of Elburn, Illinois, expressed satisfaction that the elusive quark chose the Feldott farm for its birthplace.

"It couldn't have picked a better spot," he said.

"The farmers asked great questions," Limon said later on the warm afternoon. "They didn't want to leave. Or maybe it's because it was air-conditioned in the assembly hall."

Finally, fellow Fermilab prairie expert Mike Becker introduced the visitors to Fermilab's famous bison herd, grazing in a former Feldott pasture.

At the end of the afternoon, visitors and their Laboratory hosts met at the former Kuhn barn, now a center for Laboratory gatherings, for a chicken barbecue and an opportunity for

Former neighbors met for a chicken barbecue and a chance to visit at Fermilab's Kuhn barn.

**"As farmers,
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~ John Peoples,
Fermilab Director

some serious visiting. Neighbor recognized neighbor, sometimes after a decades-long interval.

“Look honey,” said Corliss Weaver, niece of former farmer Art Schimelpfennig, perusing a copy of *FermiNews*, to her husband. “There’s a picture of Rod Oxe. He was the ring-bearer at our wedding.” Oxe, now a member of Fermilab’s Fire Department, grew up on a farm on the site.

Some guests took special tours of the homes they once occupied, now devoted to Fermilab housing and office space.

“Ellen called and told me to clean up the house because we were having visitors,” said former Fermilab Director Leon Lederman. His wife informed him that members of the White family, the site’s former residents, would be arriving to see their old home, Lederman said. “So I did some dusting and sweeping.”

Peter Erdmann, formerly of Wilson Street, introduced himself to Fermilab’s Becker, the afternoon’s buffalo guide.

“We used to sell eggs,” Erdmann began.

“I know,” Becker interrupted. “My Dad and I used to stop at your farm every week to buy eggs when Mom told us to.”

Adelaide Nelson, now of Batavia and a descendent of farmers who first arrived on the Fermilab site in 1868, voiced the views of many fellow guests about returning to the place they had to leave 30 years ago.

“We felt bad at the time,” Nelson was quoted as saying in a local news account of the event, “but I’m thrilled to pieces now, because if Fermilab wasn’t here it would just be houses and houses and shopping malls.” ■

Photo by Jenny Mullins



Farm families toured the Fermilab site by yellow school bus. Above, three generations head for a tour of the former Baumann barn, guided by Fermilab prairie expert Bob Lootens, shown here on a Lab tractor.



Below, guests visited the Fermilab bison herd and explored the collider detector at CDF, now undergoing an upgrade in the rectangular assembly building in the background.



Open House

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Photos by Jenny Mullins

Gene Fisk, a Fermilab physicist, explains the DZero detector hall to guests.

And they kept coming.

Some visitors pushed strollers, others had canes; a few wore scout outfits, while others came in their soccer uniforms fresh from morning games. Some guests came with five kids in tow, while others came alone. Yet, despite their differences in age, sporting preferences and marital status, they came for the same reason: to learn about Fermilab's science and to have some fun on a nearly perfect late-summer afternoon.

By almost every account, the gathering was a success. Open House organizers, using quite unscientific means for a science laboratory, said the final guest count hovered around 15,000. Other volunteers said it was more, and some said it was less. But one thing was certain: it was crowded. Children swamped the Leon Lederman Science Education Center, participating in hands-on physics activities. Families strolled through the tall-grass prairie, as thousands walked through working physics experiments and toured the world's newest accelerator tunnel. Fifty buses cruised through the site, almost all full of guests going to the next tour stop. Fermilab volunteers even served 3,800 gallons of lemonade. But the best measure of the day's success was found in the curiosity and excitement of the visitors and in the enthusiasm of the volunteers.

"We were terribly impressed with your work, your environment and your enthusiasm," wrote Randy Rutledge of Oswego and Nancy Zorn of Warrenville in an e-mail message to Fermilab. "...The enthusiasm showed by all the employees was simply astonishing. Every single person obviously delighted in their job and sharing it with others."

Other guests shared similar sentiments at the end of the day and in notes sent the following week.

"I'd just like to say 'thank you' for your recent open house! I felt that it was a great outreach to Batavia and surrounding communities, and let us see up-close what goes on behind all those gates," said Ryan E. Pieratt. "...I had a great time there, seeing the accelerators up close, and the hands-on labs, and the forums. I remember coming to Fermilab when I was in 8th grade, from Batavia Middle School, but this was MUCH better. I saw, and learned, a lot more."

The day's events

Volunteers at the Main Injector accelerator tunnel and the science experiments reported a steady stream of people eager to view areas of Fermilab not normally open to the public. The accelerator complex and Main Injector alone had over 5,000 guests, as people learned how Fermilab accelerates particles and walked one-quarter mile in the tunnel.

Strolling through the Main Injector, one man, when asked if he was having a good time, said, "You bet. How often do you get to walk through a particle accelerator tunnel?" Another guest overheard the question and answered, "Never!"

After learning how—and where—Fermilab accelerates the particles, many guests toured the places where the particles collide. The DZero detector hall had a crunch of people lined up to view the three-story-high, 5,000-ton physics tool, while its counterpart, CDF, also hosted a steady stream of people curious about the tools that found the top quark. Visitors also explored two fixed-target experiments, NuTeV and KTeV, and toured Lab D, where scientists are developing the next generation of silicon vertex detectors for CDF and DZero. At NuTeV, scientists walked with guests through the detector hall, and explained the physics and engineering behind the neutrino experiment.

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Fifty buses carted guests around the 6,800-acre site.



Photo by Jenny Mullins

Some Fermilab guests became "quarks for a day" at the SciTech exhibit.

Open House

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Cub scouts explore the Main Control Room.

A family strolls through Fermilab's restored tallgrass prairie during the Open House.



Photos by Jenny Mullins

The Feynman Computing Center was another popular Open House tour stop. Guests saw the Lab's sophisticated computer technology, and many visitors even put up their own Web pages. Judy Nicholls, of Fermilab's Computing Division, said the most popular attraction was the virtual-reality demonstration. At the Technical Division, guests learned about the superconducting magnets Fermilab builds for its accelerators, and a large crowd enjoyed the cryogenics demonstration.

Wilson Hall was buzzing

Wilson Hall was a hub of activity during the festivities. Fourteen booths introduced guests to many Lab activities. The most popular was an astrophysics booth that allowed children to create a "universe in a jar" by putting sparkles in a small glass jar of water and corn syrup. As children were creating their universes, members of Fermilab's Astrophysics group explained the constituents of the real universe, according to Chris Stoughton. Fermilab volunteers at another booth answered questions about radiation and environmental management. The Office of Public Affairs passed out literature about

Fermilab and gathered guests' opinions about proposals for new roads on the site. Another crowded area of Wilson Hall was the "Ask the Dr.!" booth where physicists attempted to answer science questions from visitors. Don Lincoln, Fermilab physicist, said people came armed with all types of science questions, from physics to chemistry to archaeology.

Throughout the day, guests sat in Ramsey Auditorium for science lectures about quarks and watched a Fermilab video in the One West auditorium. Also, volunteers led tours of the 15th-floor visitor area. Even the food tent on the west side of Wilson Hall was lively, with a band and a dance troupe entertaining the crowd.

Volunteers

The key to the entire day, according to Bruce Chrisman, Fermilab's associate director and coordinator of the Open House, was the effort of the volunteers. He said every volunteer brought Fermilab to life and gave an aura of enthusiasm and fun about Fermilab's work. One guest remarked that at every corner and display there were Fermilab employees or user scientists with big smiles and an eagerness to explain what they did.

"We ended up with more than 650 volunteers when the count was finally done, which is really a tremendous expression of people's willingness to put in the time and talk with the public. We couldn't have done it without them," said Chrisman.

Even Fermilab's famous buffalo got into the act, grazing in full view of the buses going to and coming from the Open House parking lots.

Calls for more

Volunteers said many guests asked if Fermilab would hold the Open House more often, as the last one was in 1983. Chrisman said Fermilab will definitely plan another Open House before the year 2011. However, the gathering can be expensive; the Open House cost about \$100,000. Chrisman was quick to remind people that Fermilab is open every day for self-guided tours and access to the grounds. Still, the memory of the day had guests calling for more.

At about 6 p.m., two hours after the Open House had closed, Chrisman was driving home through the eerily quiet site when he spotted a guest hitchhiking back to the parking lots. Chrisman picked him up and the guest explained that "he just had a ball, he didn't want to leave and he missed the last bus to the parking lot."

And to Chrisman's surprise, and delight, the guest's car was one of three still in the lot. ■



Photo by Reidar Hahn

The cryogenics demonstration at the Technical Division was a big hit.



Photo by Jenny Mullins

Visitors lined up all day to create a "universe in a jar" and learn about astrophysics.



Photo by Jenny Mullins

More Fermilab guests enjoying ice cream at the Open House.

Main Ring Farewell

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find the bottom quark, the first quark in the third generation of matter's elementary particles. In its last 14 years, the aging accelerator still served as an injector, thrusting protons into the still-more-powerful Tevatron and spurring the discovery of the top quark.

But who might have predicted such an illustrious part in the history of particle physics from the Main Ring's fitful beginnings?

Bob Mau, chief of Accelerator Operations, who was here at Fermilab when the Main Ring was first commissioned, said that turning off the Main Ring at the Monday morning ceremony was a lot easier than turning it on 25 years ago.

Then, said Rich Orr, another Main Ring veteran who spoke at the ceremony, "there were floods, there were famines, there were frogs.... The machine had every flaw imaginable.... We were the laughingstock of the world."

Design

"The old 200-GeV project [with the Main Ring as its centerpiece] was easily the biggest thing [the U.S. Department of Energy] ever attempted," said Peoples. Its \$250 million pricetag is equivalent to \$1 billion today.

The design of the Main Ring was born in 1967 on an empty stretch of tile flooring in unfinished rented office space in Oak Brook, Illinois, when Robert Wilson, Fermilab's founding director, promised Congress he would build the machine by June 1972.

He would, indeed, but he would do it his way, according to Catherine Westfall and Lillian Hoddeson, historians of science who have chronicled this period. He had no experience in building large proton synchrotrons, but he shunned the experts, dismissed the engineers, lauded creativity and extolled risk-taking. His detractors called him irresponsible; his supporters, a genius.

"Money and effort that would go into an overly conservative design might better be used elsewhere....," he told Westfall and Hoddeson, explaining his unconventional approach.

"A major component that works reliably right off the bat is, in one sense, a failure—it is over-designed."

Wilson's goal was to build the highest-energy machine at the least possible cost. And since the bending magnets absorb at least a quarter of the total cost of an accelerator, attention focused there. To save money, Wilson opted for compact bending magnets with



Photo by Reidar Hahn

simplified methods for inserting and fabricating the coils. Never mind, according to Westfall and Hoddeson, that "the use of pared-down magnets was inherently risky, since larger magnets produce higher fields more reliably...[:] the simplification bought considerable savings." Later modifications decreased the magnets' weight and improved magnetic properties.

Westfall and Hoddeson quote Norman Ramsey, then president of the Universities Research Association, Inc., as saying that Wilson "took risks on about 20 aspects of the design, saving about \$5 million per risk. 'We knew something would fail,' he noted, 'but we figured it would be much less expensive to fix the failure than to play it safe with all 20 items.'"

Construction

In October 1969, Wilson broke ground for the Main Ring's tunnel (Fermilab physicist Ernest Malamud, who served on Wilson's management team, still has the shovel).

Those were heady times, when Wilson spurred Herculean efforts, but Malamud also remembers the pressure, as Wilson advanced deadlines and drove his staff toward ambitious goals.

The director insisted, for example, that a magnet be set in the tunnel as soon as it was dug, not for technical reasons, but just to let the construction workers know that the scientists were "on their tails," according to Westfall and Hoddeson.

And money for machine parts was doled out to two contractors at a time. Each contractor would receive a third of the money; whichever one finished first got the remaining third.

From left to right, Rich Orr, a Main Ring veteran, Andy Mravca, of DOE, John Peoples, Fermilab Director, and Bob Mau, head of Beams Division operations, switch off beam in the Main Control Room, shutting down the Main Ring.



Photo by Reidar Hahn

Howie Pfeffer, of the Beams Division, punches off the power supplies in the Main Control Room.

“ A major component that works reliably right off the bat is, in one sense, a failure—it is over-designed.”

– Robert Wilson,
Fermilab’s Founding
Director

Installation of the magnets proceeded at a feverish pace. In April 1970, the first magnet was placed in the tunnel, and a year later, the last.

Summer of 1971

But in the summer of 1971, tensions were wound as tight as a copper coil. Because of the hurried schedule—by now, Wilson had promised to get the Main Ring done a year early—the magnets had been installed in the middle of winter, making them very cold. When spring arrived, it brought in warm air. Water, as much as a quart, condensed on the magnets, and they short-circuited. As Westfall and Hoddeson noted, “Unless the magnet problems were solved, the entire project would fail,” and no one was sure what the causes were.

Other problems surfaced, according to Westfall and Hoddeson: magnets were misaligned, ion pumps failed, pieces of copper were found lying in the beam pipe, a plastic cap was stuck in a quadrupole.

Shards of stainless steel, left over from the process of cutting magnets, lay in the Main Ring’s vacuum tube. Researchers tried training a ferret, named Felicia, to collect the debris by dragging a harness through the tube, but Felicia refused to cooperate.

Rumors spread of a campaign to oust Wilson.

But by winter, the troublesome magnets had been reconditioned or replaced, and the project was finally back on track.

Success

In January 1972, researchers produced a stable beam of 20 GeV, and Wilson could claim that the project had come in on time and under budget. By February, the beam reached 100 GeV, breaking the world’s record for proton energy. Malamud and Soviet colleagues launched the first fixed-target experiment, attempting to determine whether the size of the proton varied with the energy of a collision.

The beam ramped up to 300 GeV in July 1972, and to 400 GeV by the end of the year.

According to Westfall and Hoddeson, a full-scale research program was under way by 1975, with the beam routinely operating at 400 GeV and an intensity of 1.84×10^{13} , and unscheduled downtime totaling only 28 percent. In May 1976, the Main Ring produced a beam of 500 GeV.

By then, according to Westfall and Hoddeson, people were jokingly proposing Wilson for sainthood. Yet those dipole magnets remained a problem, to the very end.

On to the Main Injector

With the shutdown of beam on September 15, crews began dismantling the Main Ring. Parts of the historic machine will be recycled, though not the troublesome dipoles. Eighteen of the Main Ring’s radiofrequency cavities, which accelerate the beam, and 120 quadrupole magnets, which focus the beam, will find their way into the new Main Injector, scheduled for launching in 1999. The Main Injector promises a much greater number of collisions, and better chances of finding elusive particles at high energies.

Thus the Main Ring, or pieces of it at least, will witness a new era of particle physics, perhaps the discovery of supersymmetric particles, maybe even the Higgs boson, helping explain still deeper reaches of matter and its distant beginnings.

But officially, the next beam projected into the Tevatron will be from the Main Injector, not the Main Ring. That’s why Steve Holmes, project manager for the new injector, told the September 15 gathering he was not contemplating the end of one era and the beginning of another. With all the work yet to do next year, he was thinking only: “Gulp!” ■

Founding Director
Bob Wilson (right)
breaks ground for the
Main Ring, October
1969.



Fermilab Archive Photos

The first magnet of the Main Ring is lowered into place, April 1970.



Photo by Reidar Hahn

Steve Holmes (right) and Dixon Bogert, the project manager and assistant project manager for the Main Injector, prepare to dismantle the Main Ring—something Holmes said “should have been done a long time ago.”



Fixed-Target Run Is Over

by Sharon Butler, Office of Public Affairs

Hastily scribbled entries in a logbook, left behind in the deserted control room of a fixed-target experiment, document the last moments on September 5:

- 4:50 Beam is gone (is that it?)
"Problems with left-bends—Investigating"
- 5:30 Beam is back
- 6:00 **RUN IS OVER!**

With that, teams of scientists departed, like a retreating army, leaving behind recycling bins overflowing with empty Coke cans and champagne bottles, wisecracks scrawled on a whiteboard, a skull-and-crossbones flag tied to a pole, equipment that had been shut down and unplugged, a red-alert sign permanently displaying "BEAM DISABLED." A few stragglers now remain, but for the most part the portakamps are empty. The control rooms, once manned around the clock, are quiet: no alarms sound, no emergency notices flash on the computer screens. Only the hum of a janitor's vacuum cleaner breaks the silence.

Activity has shifted to the Feynman Computing Center, and desktops all around the world, as the 600-plus scientists who staffed the fixed-target experiments return home to analyze the data they came here to collect. Tapes of data continue to arrive daily at Feynman—10,000 from one experiment alone. ■



Photos by Reidar Hahn

Rick Thies, of the Feynman Computing Center, checks on the thousands of tapes of raw data that arrived from E871.

Laboratory honors patent winners

On September 3, Laboratory Associate Director Tom Nash presented Leon Beverly (right) and Rick Hance, both of the Particle Physics Division, with certificates and cash awards in recognition of their achievements as inventors. They, along with Alex Kristalinski, now working in the Pacific Northwest, and Age Visser, retired, devised a method for reducing potentially damaging harmonic currents in high-voltage power networks. Paul Cliff, also retired, received a patent award for his design of a safety lock-out device that will ensure the electrical security and safety of any appliance. "Patents are a real recognition; [they are] accomplishments often forgotten," said Nash. The Patent Awards highlight the contributions made by these five Fermilab inventors. ■

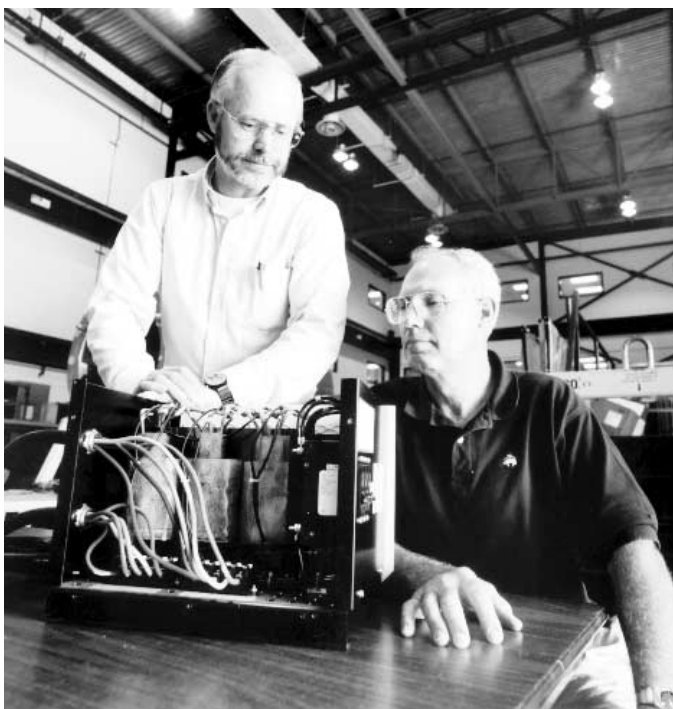


Photo by Reidar Hahn

Chez Léon

MENU

Lunch served from
11:30 a.m. to 1 p.m.

\$8/person

Dinner served at 7 p.m.
\$20/person

For reservations, call x4512
Cakes for Special Occasions
Dietary Restrictions
Contact Tita, x3524

Lunch Wednesday October 1

Spicy Coriander Chicken Salad
with Pumpkin Seeds
Coconut Flan

Dinner Thursday October 2

Gnocchi with Spinach
Garlic Grilled Jumbo Shrimp
with Prosciutto and
Basil Risotto
Watercress, Tomato and
Red Onion Salad
Lemon Soufflé
with Strawberry Kirsch Sauce

Lunch Wednesday October 8

Fontina Mushroom
Pancetta Lasagna
Caesar Salad
Chocolate Cups
with Raspberry Mousse

Dinner Thursday October 9

Grilled Squid
with Lemon and Garlic
Veal Chops
with Balsamic Vinegar
Zucchini and Fennel Sauté
Olive Oil and Orange Cake



Czech points

Fermilab graduate student Arnold Pompos of Purdue University, a native of Slovakia, describes the Fermilab site to visiting members of the Prague Eagles, a Czech team of "American football" players. The team, complete with cheerleaders and coaches, visited Fermilab on August 29, during a two-week tour of the Chicago area. The Eagles, 56 strong, also visited Pompos's experiment, CDF. Judging from the audience's response to Pompos's spirited explanations, particle physics is much more amusing in Czech than it is in English.



Photos by Reidar Hahn

CALENDAR

OCTOBER 2

Wellness Works presents: "Osteoporosis," James R. Lindemulder, Rush-Copley Medical Center, 1 West conference room from noon to 1 p.m.

OCTOBER 4

Prairie Harvest from 10-2 p.m. Follow the on-site directions to harvest sites. Wear field clothing and gloves. Bring pruning shears and paper grocery bags. If you are bringing a large group, call ahead, x3303.

OCTOBER 10

International Film Society presents: *Wallace & Gromit: The Best of Aardman Animation*, UK (1989-95). Admission \$4, in Ramsey Auditorium, 8 p.m.

OCTOBER 11

Fermilab Arts Series presents: Pilobolus Dance Theater, \$21. All performances begin at 8 p.m. in Ramsey Auditorium, Wilson Hall.

OCTOBER 17

The Fermilab lecture series presents: *Music for Meantone Tuning: An Excursion through Europe in the Sixteenth and Seventeenth Centuries*. A lecture/demonstration by David Schrader, harpsichord/clavichord, at 8 p.m. Admission is \$5.

ONGOING

NALWO coffee mornings, Thursdays, 10 a.m. in the Users' Center, call Selitha Raja, (630) 305-7769. In the Village Barn, international folk dancing, Thursdays, 7:30-10 p.m., call Mady, (630) 584-0825; Scottish country dancing, Tuesdays, 7-9:30 p.m., call Doug, x8194.

THIS FALL

Step aerobic classes on Mondays and Wednesdays and muscle-toning classes on Tuesdays and Thursdays from 5:30 to 6:30 p.m. in the Recreation Facility. Two fall sessions will be held for each, Sept. 8-Oct. 31 (\$48) and Nov. 3-Dec. 16 (\$36). Registration and payment can be made at the Recreation Office, WH15W; or mail name, class and check payable to Bod Squad, MS 126. Must be a current facility member. For more info, call x2548 or x5427 or e-mail jeanm@fnal.gov.

FOR SALE

- '94 Ford Explorer Sport 4x2. Exc. cond. Power windows, locks, air, AM/FM cassette. 5-spd trans., 54K miles. \$13,500 obo. Contact Laurie, x4401.
- '93 Ford Ranger XLT, extended cab, 4.0 liter V-6, 5 spd, power steering & brakes, ac, AM/FM cassette stereo, tonneau cover, bed mat, 41.5K miles, exc. cond. \$10,000 obo. Call Ron, x8864 or (630) 466-1823.
- '92 Volvo 240, 84K, ac, AM/FM cass., pwr windows, cruise, custom luggage rack, silver, runs/looks like new! \$9,900 obo. Call Jim, x8483 or 847-550-0153.
- '89 Ford Escort LX, 4 dr, 5 spd, white, very low mileage (42K), well maintained and in exc. cond. \$2,800 obo. Contact Simon, x2329 or swalk@fnal.gov.
- '89 Toyota Tercel, auto., 2-dr sedan, 110K miles, reliable, runs well, looks good, no rust, \$2,600 obo. Baldwin acrosonic spinet piano, built in '50s (?), keeps tune well, \$595 obo. Contact John, x4774 or johny@fnal.gov.
- '89 Mazda 323 SE, 2 dr, hatchback, 5 spd, 108K. In fair cond. \$1,500/obo. Contact Mike, x8421 or martens@fnal.gov.
- '88 Hyundai hatchback, good cond., 105K miles, needs engine, \$100. Call x2986, or e-mail michgall@fnal.gov.
- '84 Toyota Camry DX, 4 dr, 5 spd, ac, 198K, some rust but good local transportation. \$650 obo. Contact Stephen, x4517 or parke@fnal.gov.
- '79 XLS Harley Davidson motorcycle, custom paint, new trans., clutch, clutch taimer, new mustang "nostalgia" seat, new Kuryakyn pegs, bags, tool pouch and much more. \$5,500. Call Jack M, x2865 or (630) 231-8961.
- Six-piece living room set, \$250, includes: 90" long gold/brown couch, 2 blue chairs, 2 end tables & 1 coffee table; Queen-size waterbed, \$200, 4-drawer wooden pedestal w/bookshelf headboard, heater & motionless waterbed bag; 1 horizontal blind, \$25, dove gray, fits sliding glass (patio) doors. If interested, call (630) 879-6381 after 7 p.m.
- Infiniter laser pointer, new, pen-style metal body, 2 AAA batteries (incl). Orig price \$50, asking \$35. Contact Clif, x2954 or Horvath@fnal.gov.
- Guild acoustic guitar and case. Purchased 1 year ago at \$728 and lightly used. Asking \$600. Call Jean, (815) 286-3536.
- Drafting table, \$50; GE gas stove, Profile series, stainless steel, natural gas & LP gas jets, self-cleaning oven, sealed burners. Paid \$1,350 Oct. '96, asking \$1,100, used a few hours. Will deliver if reasonable distance. Kenwood multi-component stereo system w/cab. includes linear tracking turn table, amplifier ka-94, synthesizer, am/fm tuner kt-54 (memory holds 14 am & 14 fm stations), graphic equalizer ge-34, dual-deck cassette recorder kw-64w, cd player dp-840, 2 4-way 150-watt speakers jl-840, \$2,000 obo. Atomic Arc 195 skis, Salomon 547 sport bindings, size 12 US or 13 EU and Trappeur 2000 boots (also have ski & boot bag), \$200 obo. Head skis, older-style bindings, \$25. Contact Terry, x4572 or skweres@fnal.gov.

Radiation Dosimetry Program

Beginning October 1, all temporary radiation badges (TLDs) will be issued from the Communications Center on the ground floor of Wilson Hall. The Communications Center is staffed 24 hours a day, 7 days a week, ensuring that badges are available whenever they may be needed. Temporary badges will be collected as they are now, using Laboratory mail, the collection cylinders near the elevators on the ground floor of Wilson Hall, a "drop box" on WH7E and the badge racks. Questions should be directed to Elaine Marshall, x8756.

"Slow Down!"

Residents of Fox Hollow on Fermilab's eastern boundary have expressed concerns about Fermilab employees who fail to obey the speed limit while shortcutting through the Fox Hollow-Summerlakes neighborhood on the way to and from work at the Laboratory. In response to these concerns, Fermilab has asked the Warrenville police to increase their presence in the area of Mack Road and Continental Drive during peak commuting hours. For the sake of safety, out of consideration for our neighbors, and to avoid traffic tickets, obey the speed limit.

Scholarships Require SAT Test

Candidates for Universities Research Association (URA) scholarships are reminded that the scholarships are awarded on the basis of SAT 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, 1998.

LETTER TO THE EDITOR

This e-mail letter, from a Minnesota man to Fermilab Director John Peoples, is one example of the many messages of thanks and appreciation that Fermilab has received in the days following the Open House.

Dear Mr. Peoples:

Last month, after reading about the discovery of the top quark in Scientific American, I accidentally stumbled upon Fermilab's open house notice on your Web site. My nephew David (who is in grade school in Duluth, MN) and I drove from Minneapolis on Friday with high anticipation. We were rewarded on Saturday with a most enjoyable and informative visit. I hope that I will have another opportunity in the future to visit again.

For several years, I have been interested in high-energy physics and the experimental work of Fermilab and other similar laboratories. I am fascinated by the technology that is used, the experiments that are performed and the discoveries that are made.

I would like to congratulate you and the entire staff of Fermilab for a most successful open house and to thank them for their efforts. Please forward this to all of them so they will know their efforts were appreciated.

Sincerely, Richard Schwarz



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Please send your article submissions, classified advertisements and ideas to the Public Affairs Office, MS 206 or e-mail ferminews@fnal.gov

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