

# FermiNews

Fermi National Accelerator Laboratory

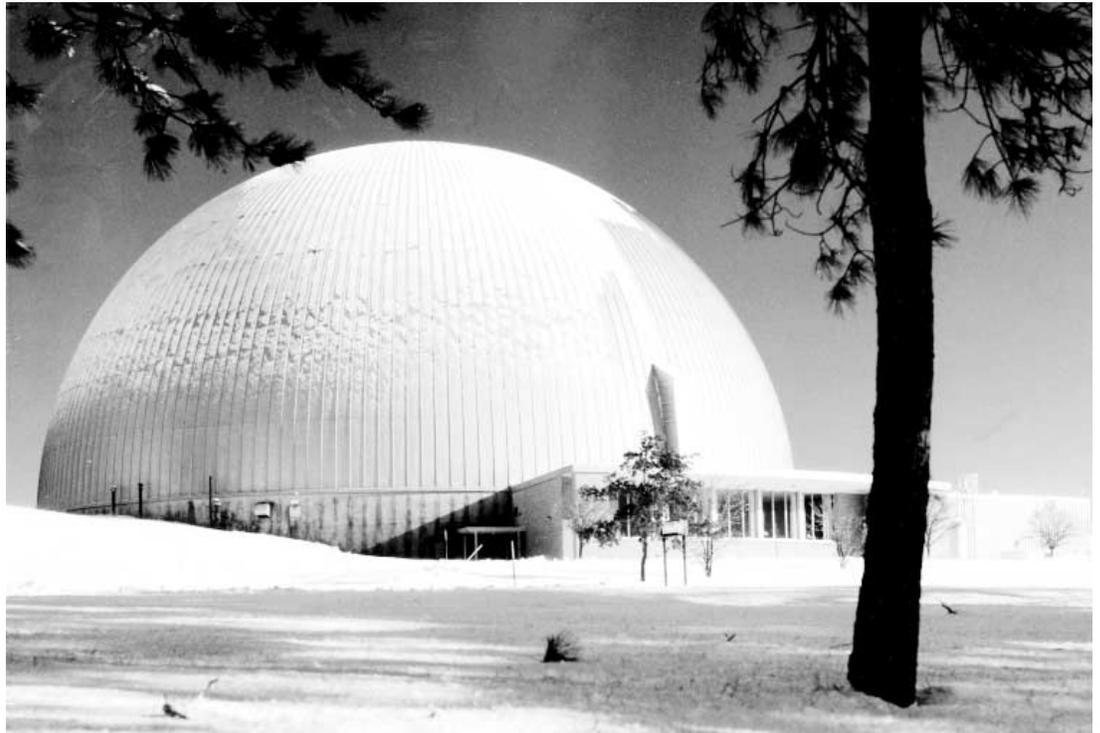
Volume 20

Friday, May 16, 1997

Number 10

## INSIDE

- 2 Accelerator Rx
- 4 FermiKids
- 6 Spring at Fermilab



Photos courtesy of Brookhaven National Laboratory

Public confidence in Brookhaven fell with the lab's disclosure of tritium leaks from spent fuel rods of the High Flux Beam Reactor, above.

## DOE Removes Brookhaven Contractor

Peña sends a message to DOE facilities nationwide

by Judy Jackson, Office of Public Affairs

Secretary of Energy Federico Peña announced on Thursday, May 1, that the Department of Energy would immediately terminate the current management contract with Associated Universities, Inc. at Brookhaven National Laboratory in Upton, New York. Peña said that he made the decision after receiving the results of a laboratory safety management review conducted by the independent oversight arm of DOE's Office of Environment, Safety and Health. In addition, the Secretary said he found unacceptable "the

disintegration of public trust in laboratory management."

Like most other DOE national laboratories, including Fermilab, Brookhaven is a government-owned, contractor-operated laboratory, in which a private contractor operates the laboratory under a contract with the Department of Energy. Peña's action marked the first time that DOE has ever unilaterally terminated a research laboratory's operating contract under such circumstances.

*continued on page 8*

# Finding What Ails An Accelerator

A team at Fermilab combines software and expertise to identify problems in the accelerator infrastructure.

*by Donald Sena, Office of Public Affairs*

Whether it's understanding the cause of medical ailments, finding that annoying rattle in a car or rooting out inefficiency in a production process, many professions rely upon some form of diagnostic expertise. Sophisticated or simple, these tools and techniques help people receive proper treatment and allow machines and systems to operate at a higher level.

At Fermi National Accelerator Laboratory, the array of particle accelerators, technology critical to high-energy physics research, depends upon fast repair and consistent improvement to push the science to new heights. And, with increasing frequency, accelerator operators and physicists are calling upon Jim Holt's team and tools to diagnose nagging problems or enhance a beamline's performance.

Holt, head of the Beam Physics Department and a six-year veteran at Fermilab, has always had a keen interest in the physics of accelerators and, simply, making them work better.

"Our goal has been to use object-oriented software techniques and the latest accelerator physics algorithms to create interactive computer models of the Lab's accelerators that can be used both in the control room and at a desktop," said Holt of the software tools developed by him and his team, including Andrew Braun, Elliott McCrory and Leo Michelotti.

At Fermilab, physicists, users, engineers and operations specialists can adapt Holt's software models to mirror an existing accelerator, then change various parameters on the model to see how an adjustment would affect an accelerator's performance. This allows operators to investigate ways of improving an accelerator's performance without actually touching the real accelerator. Braun said he recently watched an operator use the software in that manner to test numerous ideas.

"He would sit there and play with the model instead of playing with the real machine and say, 'What if...,'" said Braun. "Actually, that's a good catch phrase for the modeling software; it allows people to say, 'What if this were the case?' and then actually implement their idea without having to shut the machine down, change numerous parameters, adjust the magnets, etc. They can just try it on the model."

Like engineers who build a computer representation of an airplane, accelerator operators can eliminate ideas that don't work and keep ones that have promise. Eventually, they must implement the promising ideas, but the models assuredly save time, money and headaches, said Braun. Mike Martens, head of the Tevatron Department in the Beams Division, said he used the Beam Physics software to aid the current fixed-target run, experimenting with Holt's model of the superconducting accelerator. At first he worked directly with Holt, but Martens soon was able to use the software on his own. For instance, Martens said the tools helped them confirm that the Lambertson magnets in the Tevatron were not properly aligned, which helped them raise the machine's intensity.

While the team developed the tools at Fermilab, Holt said they have done much of

Jim Holt's team from the Beam Physics Department. Sitting, Andrew Braun (left) and Jim Holt. Standing, Leo Michelotti (left) and Elliott McCrory.



Photos by Reidar Hehn

the testing in collaboration with scientists at the Stanford Linear Accelerator for the Final Focus Test Beam, a development project for the proposed Next Linear Collider. Holt said they have measured beamline anomalies at SLAC down to 0.1 percent.

“SLAC was a great proving ground for this research” because of the precision of the beamlines, said Holt.

## Reaching a diagnosis

Another benefit of the accelerator software is its ability to diagnose problems and understand anomalies with beamlines. By programming the theoretical performance of a particle accelerator in a model and comparing it with how the machine is actually running, operators can spot potential problems. For example, a recent problem in the new Main Injector 8 GeV line, which contains permanent magnets, had physicists and engineers scratching their heads. The 8 GeV commissioning crew, running protons through the new beamline, saw effects in the line that were inconsistent with the design. For a few weeks, the commissioning team conducted tests to understand what was happening. After purposely sending the protons down the beampipe off-center, the 8 GeV line operators became suspicious that they had a focusing problem, but they couldn't be sure, according to Bill Foster, 8 GeV project leader.

[Quadrupole magnets focus the particles as they streak through the beampipe. If any particles stray from their designed course, the quadrupole magnets “kick” them back into place.] Foster said they finally turned to Holt and his team for help.

Holt, Braun and Phil Martin, Main Injector associate project manager, took about one hour's worth of data on the beamline, deliberately missteering the beam. Braun then compared the computer model of how the line was designed to behave with how the line was really behaving. After three hours of analysis, he was able to create a match with the actual data by making all nine quadrupole magnets in the model weaker.

“With the first set of data, it looked like the first couple of permanent magnet quads were low by about 15 percent. As I read more and more data...it was more confirmation that all of the permanent magnet quadrupoles were down about 15 percent,” said Braun.

Braun asked Holt to verify his results, and Holt agreed with the assessment. Total data-taking and analysis time: about half a day.

“Ten years ago, it would have taken a lot longer to identify this problem,” said Holmes. “We would have rooted around for quite a while with these anomalies in the line, not

really understanding where the problems were coming from.”

After a quick check, it was found that the magnets were indeed specified about 15 percent too weak. The 8 GeV team sent the quadrupoles back to the magnet production facility, where Stan Pruss and Jim Volk from the Beams Division and Glenn Smith from the Technical Division and their crew strengthened the magnets by adding more of the strontium ferrite bricks that give the permanent magnets their field. After compensating for temperature changes, fine-tuning the field and retesting the quadrupoles, the magnet team sent the quadrupoles back to the 8 GeV line. The nine magnets were rebuilt in one day and have been reinstalled.

Holt said the quadrupole problem was relatively easy to diagnose, due in part to the expertise his team has gained over the years. He added that he hopes to continue software development of this kind and eventually to have a comprehensive model of all of the accelerators and beamlines at Fermilab, allowing physicists

*continued on page 11*

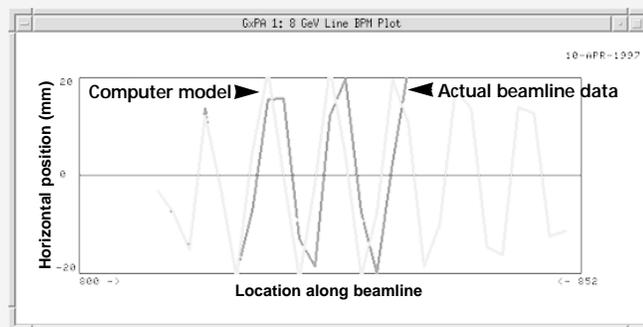


Photo by Reidar Hahn

Stan Pruss, from the Beams Division, with the 8 GeV line prototype quadrupole that helped his team rebuild the permanent magnets.

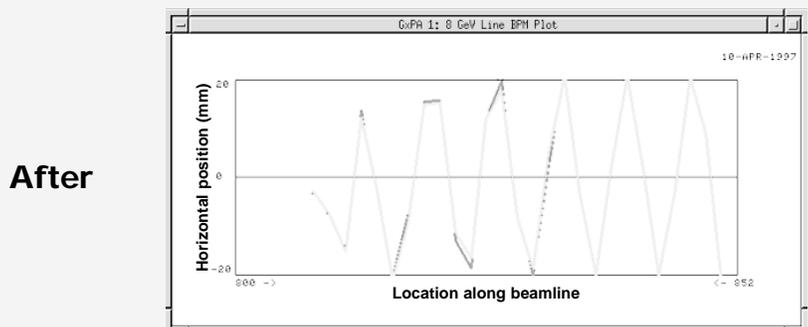
## Computer Modeling of the 8 GeV Line

The two plots show some of the beam position data from the Beam Physics software that helped Jim Holt and crew spot the problem in the 8 GeV line.



**Before**

The top plot details the computer model of how the 8 GeV line was designed to behave compared with how it was behaving before the quadrupole problem was fixed.



**After**

The second plot shows what happened when Andrew Braun weakened the nine quadrupole magnets in the model by 15 percent—a near perfect match with the actual beam positions.

# Fermilab Staff Teach 'FermiKids' About Life at a Science Laboratory

For the second straight year, the children of Fermilab visit for "Take Your Daughters and Sons To Work Day."

by Donald Sena, Office of Public Affairs

They weren't just sons and daughters, but also nieces, nephews, grandchildren, step-children and family friends. All came attached to an adult and all came to learn about careers in science and what life is like at a major research facility.

The "FermiKids" attended Take Your Daughters and Sons to Work Day on April 24. During the busy day, children planted trees, hiked through the woods, took a bird-watching tour, learned about cryogenics and conducted their own press conference, putting a Nobel Prize winner under the spotlight.

The children began the day shadowing their parents, learning what they do at Fermilab and with whom they work. After lunch, the children and their parents chose from an array of activities. Some ventured outside to plant trees with the Roads and Grounds crew in honor of Earth Day and Arbor Day; in all, the participants planted about 150 trees. Some walked through Fermilab's woods with environmental consultant Bob Betz, while other families followed physicist Peter Kasper for a bird-watching tour.

## Science Journalists

Back at Wilson Hall, nearly 30 children put pencil to pad as they conducted their own science press conference. Leon Lederman, Fermilab director emeritus, was the first to fall under the probing queries of the FermiKids. Armed with questions such as "What is a quark?" to "Why did you win the Nobel Prize?" the children learned about the basic constituents of matter and about Lederman's life as a scientist. Lederman was followed by fellow physicists Herman White, Catherine James, Hans Jostlein, John Tompkins and Janet Conrad. The scientists took turns answering questions from the young journalists, and all the physicists seemed surprised at the amount of science the children understood.

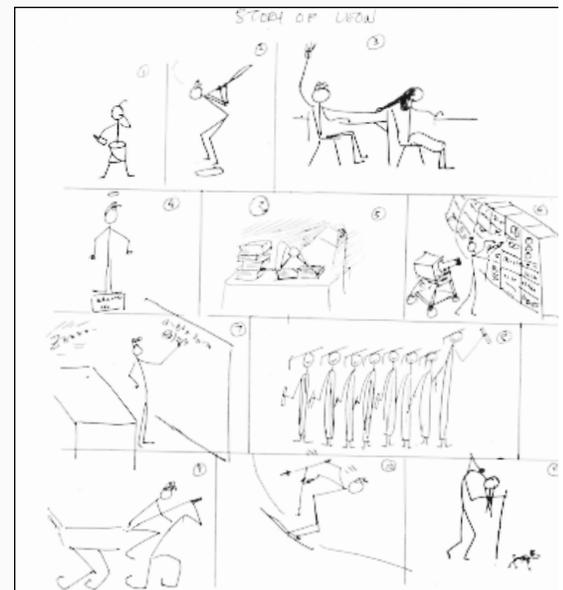
"Since they are the daughters and sons of fellow laboratory employees, I expected an above-average curiosity in science. However, I was surprised at the inquisitiveness they showed in the people they were interviewing; they were not only interested in our work, but if we enjoyed our work," said Herman White, Fermilab physicist.

After the interviews, the kids wrote stories, giving their impressions of the scientists and providing an overview of their day at Fermilab. The Office of Public Affairs compiled the stories and photographs into a special edition of *FermiNews* for the kids to take home and share with their friends, teachers and classmates. Liz Quigg, of the Computing Division, created a page on the World Wide Web containing the kids' writing and pictures. (The web address is [http://www.ed.fnal.gov/FermiKids/front\\_page.html](http://www.ed.fnal.gov/FermiKids/front_page.html))

The children ended their day in Ramsey Auditorium for the highly popular cryogenics demonstration by Mike Urso, a Fermilab engineer. Urso froze ordinary items to teach the children about the effects of very cold temperatures on matter. ■



Fermilab Director Emeritus Leon Lederman explains quarks to the FermiKids. Lederman also presented his life story in a cartoon (below).



Left to right, Catherine James, Janet Conrad, Hans Jostlein and Herman White, scientists at Fermilab, answer questions at the mock press conference.



Mark Leveling enjoys lunch during "Take Your Sons and Daughters to Work Day."



Mike Urso and a volunteer from the audience at cryogenics demonstration.



Members of the Fermilab family plant trees in honor of Arbor Day.



During the event, Elizabeth Sharonov drew this representation of Wilson Hall for the special publication of *FermiNews*.

## A tribute to Fermilab

After spending the day at the Laboratory with her father, Michael Geynisman, Julia Geynisman, 10, wrote this poem.

### Fermi

Many people don't know Fermi,  
Many people will say what's that place?  
So I will tell you about Fermi -  
- It is the center of wonder and grace.

Fermi is a very beautiful place,  
One of the prettiest of its kind.  
But the true beauty of Fermi,  
Lies within the peoples' mind.

Here at Fermi we discover matter,  
And the tiny particles that make up it.  
Here at Fermi we uncover creation,  
Little by little and bit by bit.

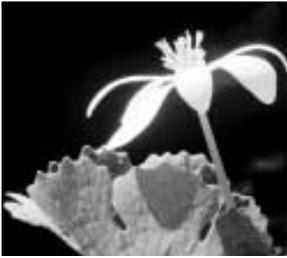
Here at Fermi we are crossing horizons  
Scientists from countries all over the world  
Join their efforts, hands and minds  
To answer the questions billion years old.

# Fermilab Welcomes Spring

At Fermi National Accelerator Laboratory, you don't have to look hard to find the harbingers of spring. It's the delicate emergence of woodland flowers and the raging fires of a prairie burn. It's the crowded bike paths and it's a local weatherman teaching residents how to combat severe weather.

And it's babies—baby buffalo, baby deer, baby ducks and baby geese by the hundreds. In this photo essay by the Visual Media Services Department, members of the Fermilab family—with skin, fur or feathers—engage in some of those tell-tale signs of the new season.

~ *Donald Sena*



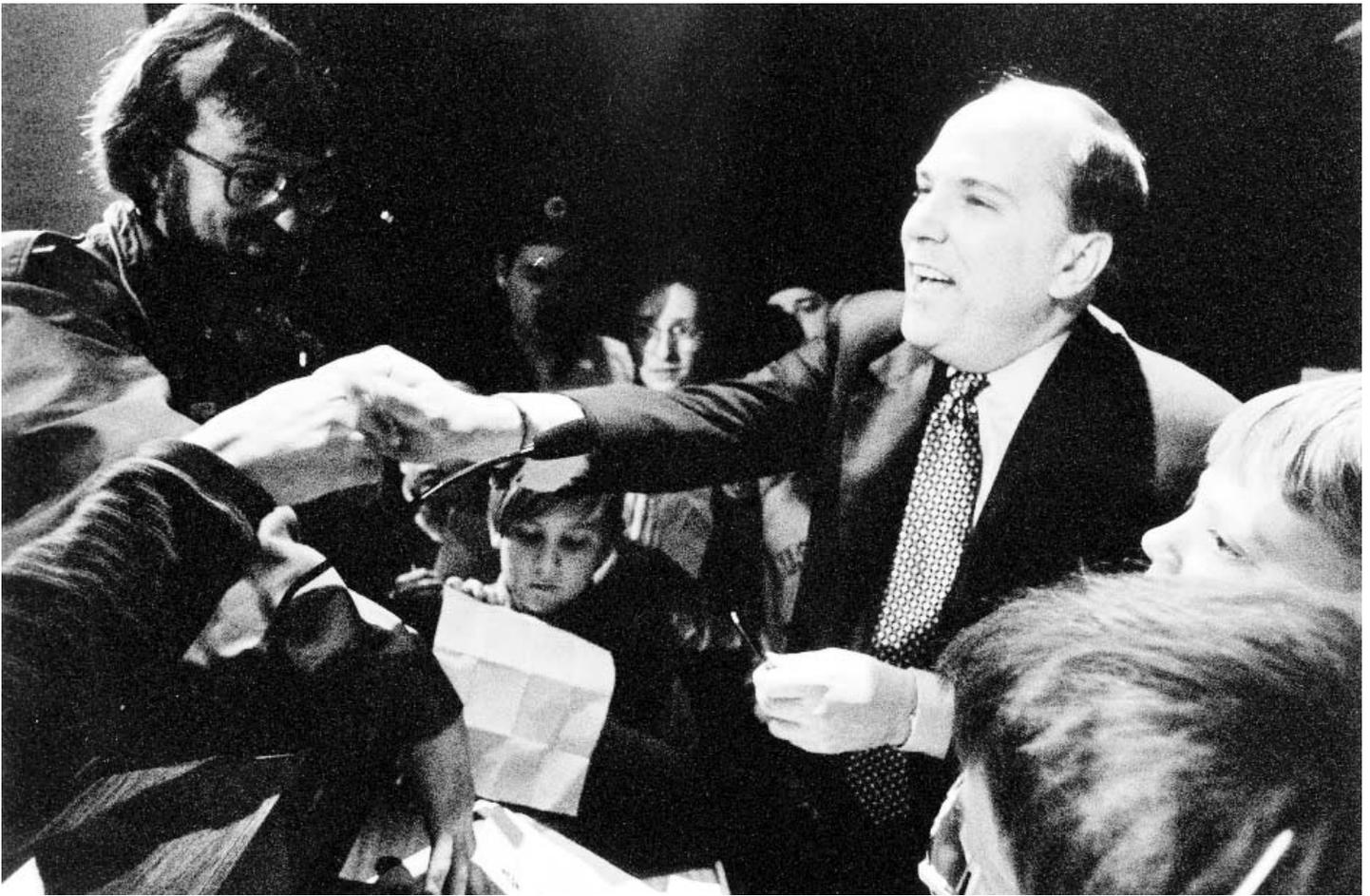
Bloodroot, a woodland flower, makes its appearance in the Fermilab woods.



Karen Kephart hits her form early in the new season.



A new family of geese in a parking lot at the AZero building.



Tom Skilling, weatherman for a Chicagoland television station, greets members of the audience during a break at his annual spring seminar on tornadoes and severe weather, an immensely popular program at Fermilab.



Each spring the prairie keepers set hundreds of acres afire to promote growth of the native grasslands, while hindering the spread of European species.

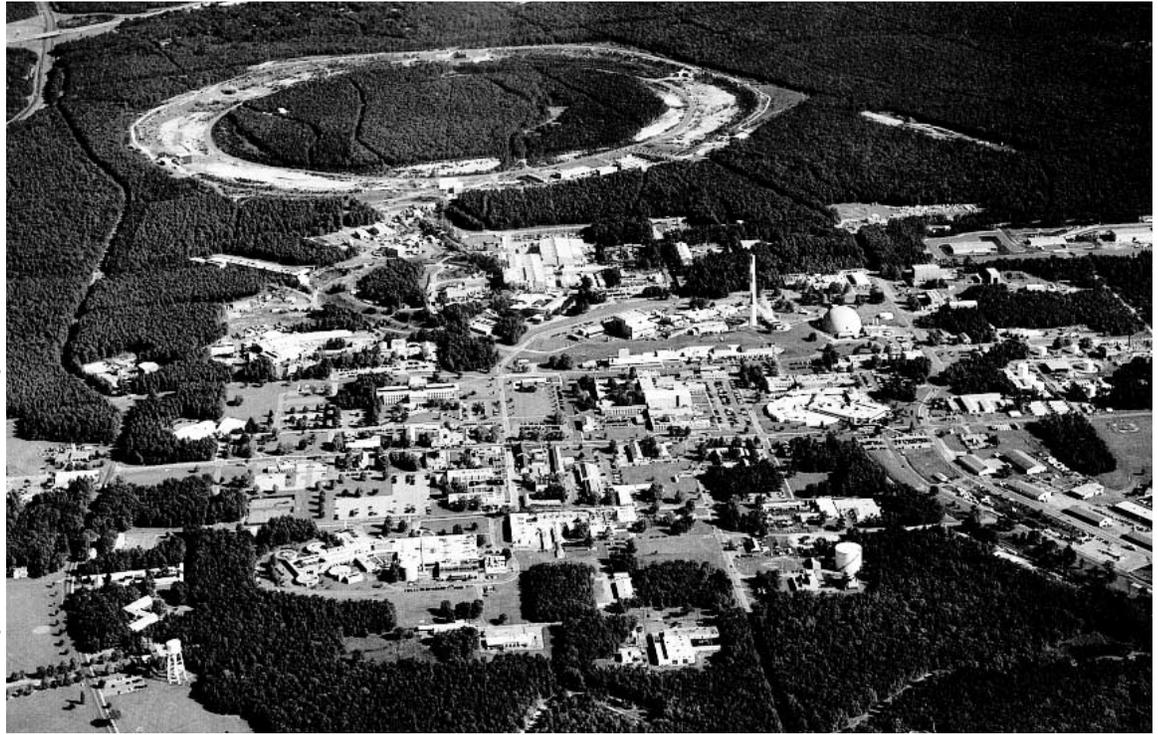


Members of the Fermilab Roads and Grounds crew prepare trees for the annual spring planting in honor of Arbor Day.

# Brookhaven

continued from page 1

Photo courtesy of Brookhaven National Laboratory



An aerial view of Brookhaven National Laboratory in New York.

**“ There need not—  
and will not—  
be a trade-off  
between  
award-winning  
scientific research  
and environment,  
safety and health.”**

~ Federico Peña,  
Secretary of Energy

The announcement came as Brookhaven and AUI, the only contractor Brookhaven has ever known, were preparing to celebrate the Long Island laboratory’s 50th anniversary.

## **“Imbalance” of safety and science**

Peña said he was sending a message to Long Island and to DOE facilities nationwide that he will take appropriate action to rebuild trust and to make environment, safety and health a priority. In describing the need for improvement in ES&H at Brookhaven, Peña described “an imbalance between environment, safety and health and science missions—resulting, for example, in the perception that funding improvements in worker safety and environmental protection are ‘trade-offs’ for dollars that could be spent on research.”

“There need not—and will not—be a trade-off between award-winning scientific research and environment, safety and health,” Peña said.

At a Brookhaven press conference, Peña outlined initiatives that DOE will take. The agency will put Brookhaven’s contract up for competition, a process expected to take about six months. The Secretary assigned Martha Krebs, director of DOE’s Office of Energy Research, to prepare a plan in 30 days

for correcting the problems identified in the safety report. Peña also appointed John Wagoner, manager of DOE’s Richland Operations Office in the state of Washington to lead Brookhaven’s operations during the transition to a new contractor. Finally, Peña requested an immediate inspection of Brookhaven by the U.S. Environmental Protection Agency.

Energy Research Director Krebs said that public trust and confidence in science at the national laboratories must begin locally with the laboratories clearly focusing on being good neighbors in their communities.

“Without a doubt,” Krebs said, “the science performed at our laboratories is essential to our nation’s security and future well-being. We must work continually to show how our work also contributes to the well-being of the communities around our facilities. We have always placed the safety and health of our workers and the community at the highest priority. Now, with recent events, it is imperative that we renew this commitment to integrate our science with sound environment, safety, and health practices.”

Cherri Langenfeld, manager of DOE’s Chicago Operations Office, whose area of responsibility includes both Brookhaven and Fermilab, said that

Peña's actions carry messages for every DOE facility.

"These events tell us that doing great science is no excuse for being a bad neighbor in the eyes of our host communities," Langenfeld said. "They also tell us that effective environment, health and safety management must be a top priority of every DOE and laboratory employee. Where these values are not part of our management culture, we and our contractors have a lot of work ahead of us. We must protect the public, our workers and the environment by building these concepts into everything we do."

### **A message for Fermilab**

In a message to Fermilab employees and users following the Brookhaven announcement, Laboratory Director John Peoples cautioned against allowing an imbalance like that found at Brookhaven to arise at Fermilab.

"We must all remind ourselves of our commitment to do our jobs safely; with regard for the health of ourselves, our colleagues and our neighbors; and with respect for the environment," Peoples said. "In the short run, it may sometimes appear that taking time for ES&H takes time away from our research mission. Nevertheless, each one of us must build into our work the time it takes to do things right."

In a letter to the Fermilab director, Frederick Bernthal, president of Universities Research Association, Inc., the non-profit consortium of research universities that operates Fermilab for DOE, noted the central role of ES&H in all aspects of the Laboratory's scientific program.

However, Bernthal wrote, "more than ever, we are obliged to demonstrate that scientific and ES&H priorities are inseparable. We know that the active participation of our 86 member universities in the management and oversight of Fermilab produces the best science. But we must also achieve, and be recognized by the public as having achieved, the very highest standards in our stewardship of the environment, safety and health."

### **Tritium at Brookhaven**

Attention focused on safety and environmental issues at Brookhaven with the discovery in January, 1996, of a plume of tritium, a radioactive isotope of

hydrogen, in the aquifer beneath the laboratory. Tritium is a substance of particular concern, because it can replace hydrogen atoms in water molecules, creating radioactive water that may percolate through the ground to mix with drinking water sources. Brookhaven traced the probable tritium source to the spent fuel pool of the laboratory's temporarily closed High Flux Beam Reactor, a research reactor. During an estimated decade of movement in the aquifer, the tritium plume has traveled about 2,400 feet south of the reactor. On May 3, after one day on the job, Wagoner, Brookhaven's interim manager, told reporters he was confident the public drinking water around the laboratory was safe despite the longtime leak from the reactor.

"From the data I've seen, the water is safe, absolutely," Wagoner said.

Local and national media have reported extensively on the tritium contamination. Much of the negative media attention Brookhaven has received has centered on the fact that the tritium leak went undetected for many years. Further, early announcements by Brookhaven to regulators and the media about the potential for radioactive releases from Brookhaven now appear to have been erroneous, undermining Brookhaven's credibility and damaging relations with residents of surrounding communities.

### **Tritium monitoring at Fermilab**

Unlike Brookhaven, Fermilab has never had a nuclear reactor. However, normal accelerator operations at the Laboratory do produce tritium in the areas of experiment targets and beam absorbers. To make sure that the tritium is properly contained, Fermilab has had a tritium monitoring program in place for almost as long as the accelerator has operated. The events at Brookhaven have prompted Fermilab officials to launch a thorough review of the monitoring of the presence and movement of tritium on the Laboratory site.

Monitoring systems using a number of wells around the site to sample the aquifer have shown no indications of tritium in groundwater or the aquifer. The Laboratory has recently begun a program to install new state-of-the-art source monitoring wells in the aquifer



Photo by Reidar Hahn

Martha Krebs, Director of DOE's Office of Energy Research, visits Fermilab's award-winning prairie in 1995. Steve Holmes (left), Fermilab physicist, and URA President Fred Bernthal stand with Krebs.

immediately down-gradient of the beam interaction sites where measurements and modeling suggest that it would be useful to do so.

"We expect the results of our review to give us information about the adequacy of our efforts to validate the monitoring and modeling of tritium on our site," Peoples said. "The first results of our reviews give us confidence that we are doing it right. Nevertheless, we intend to assess our understanding thoroughly."

Peoples said that Fermilab is also pursuing ideas for enhanced communication with the public about aspects of the Laboratory's scientific and environmental programs.

"A national laboratory like Fermilab cannot operate successfully unless it earns and keeps the public trust," Peoples wrote in his May 5 message to Fermilab employees and users. "In the past three decades, we at Fermilab have done much to earn the public trust. I am counting on each one of you to help us keep it." ■

## ACCELERATOR

From April 28 to May 4, the accelerator ran reliably at high intensity, according to Bob Mau, head of accelerator operations. The accelerator team made a short access to fix a few rf stations, but the machine ran 144 hours out of a possible 168 hours. The accelerator also broke the record for the average intensity in a week at  $2.36 \times 10^{13}$  and achieved the second best integrated intensity in the Tevatron era at  $1.96 \times 10^{17}$ .

The week of May 5–9 had a few more problems, Mau said. Operators had to shut down the accelerator Monday morning for some maintenance, and Tuesday they lost a Main Ring power supply feeder. Also, the Antiproton Source performed studies.

During the week of May 12–16, operators will be conducting 1 TeV magnet tests; they plan on ramping up the Tevatron as high as it can go to locate the weakest components in the infrastructure. The accelerator team eventually will replace those weak components to improve the machine.

## FIXED-TARGET

Collaborators provided this update on fixed-target experiments.

**E799 / E832 KTeV** “KTeV is continuing to collect data for the precision measurement of kaon decays (E832). With our current data collection rate we are reproducing the precision of KTeV’s predecessor (E731) every ten days. Our goal is to maintain high running efficiency throughout the remainder of the ‘97 run,” said Robert Tschirhart of Fermilab.

**E866 NuSea** “For the last three weeks, E866 has been measuring the yields of  $J/\psi$  mesons produced in tungsten, iron and beryllium targets. We have been focusing on events with large forward momentum. The goal is to carefully study the strong nuclear dependence previously observed in the hadronic production of quarkonium. E866 has also been busy analyzing the data from the  $u\bar{b}$ / $d\bar{b}$  run. A first pass analysis of the entire data set, performed on the Computing Division’s parallel processor “farms,” was completed this past week. This analysis reconstructed more than 350,000 Drell-Yan events,” according to Rusty Towell, from Abilene Christian University, and Jason Webb, from New Mexico State University, both graduate students on E866.

**E862 Antihydrogen** “We installed our modified  $e^+$  spectrometer on May 6, and are looking forward to starting to take antihydrogen data as soon as the current pbar studies are completed,” said Dave Christian of Fermilab.

**E815 NuTeV** “We broke  $2E18$  protons on target, twice our old intensity, and are continuing to run well. The graduate students have made significant advances in their development: e.g, they have banned me from the trigger logic room, demonstrating both wisdom and confidence,” said Bob Bernstein from Fermilab.

**E872 Donut** “We’re running smoothly and slowly increasing our intensity. A bulk emulsion module will be installed next week and, at that point, we’ll be running at full intensity,” said Vittorio Paolone of the University of Pittsburgh.

**E781 SELEX** “The update news is wonderfully dull; things are stable and the machine has been running well. The experiment’s emphasis is on maintaining good operational efficiency and on improving the offline analysis,” said Jim Russ from Carnegie–Mellon University.

**E831 FOCUS** “We continue to take data smoothly. April was a record month; we would like to keep this up. We have passed a symbolic milestone, having reconstructed as many Golden Mode Charm events ( $K+1/2/3$  pions) in the Expressline online monitoring system as we analyzed offline during all of the preceding experiment, E687,” said Art Kreymer of Fermilab.

**E871 HyperCP** “We have been taking data under relatively stable conditions. The beam quality was generally fine, except we have experienced beam rolling during the spill. Last week, we spent some time in testing our optical trigger and found the photon background was too high for it to be useful. To our surprise, we also observed so many  $K_0$ s, produced near the exit of the curved channel, that we could offer them to KTeV if they run out of it,” said Kam-Biu Luk of Fermilab.

**E835 Charmonium** “Experiment E835 continues to take data at the  $\eta$  resonance below the transition energy of the Antiproton Accumulator. So far we have collected about  $7 \text{ pb}^{-1}$  of data,” said George Zioulas of the University of California at Irvine.

# Chez Léon

## M E N U

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 May 21

Dominican Beef  
Potato Fonseca  
Coconut Cake

### Dinner Thursday May 22

Pate de Foie  
with Cornichon  
Garlic Shrimp  
with Red Peppers  
and Wild Mushrooms  
Lemon Rice  
Orange Cake  
with Creme Anglaise

### Lunch Wednesday May 28

Assortment of  
Stuffed Vegetables  
Banana Strudel  
with Chocolate Sauce

### Dinner Thursday May 29

Steamed Asparagus  
with Tomato Bell Pepper Salsa  
Fettuccine with  
Medallions of Lobster  
and Spring Vegetables  
Wild Greens Salad  
Chocolate Soufflé with  
Frangelico Cream Anglaise

## Accelerator Ailments

*continued from page 3*

and engineers to improve and fix their physics tools with greater ease. Holmes said that problems and setbacks inevitably occur when building large machines and working with new technologies like the permanent magnet beamline. Fermilab scientists often remind people that the superconducting Tevatron, widely considered a huge success, had its share of problems in the development and testing stages. Holt's software modeling tools, not

available to the Tevatron builders, will continue to aide in finding problems, while allowing operators to understand the accelerators better.

"When you put [an accelerator] together, you never expect everything to go perfectly. What you have to do is make sure you have tools in hand, so when you encounter something unexpected, you can actually figure out what the cause of the problem is and fix it," said Holmes. "That's why these tools that Holt and company developed are valuable. We've always had tools at some level, but these are more sophisticated, and, as a result, improve our effectiveness in raising the performance of our facilities." ■

## LAB NOTES

### Lab Recycling

Fermilab's recycling team needs help keeping all non-recyclable material out of the program. Currently, there are eight major collection points with large bins at each location. Putting items that don't belong in the bins makes recyclables worth less to our vendor. Certain items that have been found are also dangerous or hazardous. Some of the items that don't belong and show up most frequently in the recycle bins include three ring binders, plastic bags, pieces of metal, computer disks and items simply thrown in the wrong bin. Hazardous and dangerous items discovered include aerosol cans, bottles of liquid correction fluid, a large bottle of ethyl alcohol and a shaving razor with blade. If enough of these "contaminants" show up in bins, the recycling vendor can refuse to accept them.

In an effort to keep our recyclables as pure as possible, members of the Lab's Hazardous Control Technology Team routinely check and pull out items that don't belong in the bins. If you are trying to dispose of an item and you are unsure if it is hazardous or not, contact your division's hazardous waste coordinator to dispose of it properly. The paper products that we ask you to separate for recycling are white paper, junk mail (including newspapers, magazines, catalogues, non-white paper), computer printout paper and cardboard. Also, please break down your cardboard and remove any inserts before recycling it. Breaking it down saves precious space and makes it easier to manage. The paper recycling program depends on everyone doing his/her part. So please take a little extra time when deciding how to dispose of items you no longer need.

### New Employment Manager

As of April 1, 1997, Shelley Krivich has assumed the position of employment manager. Please inform everyone in your division/section that any correspondence or reference to James Thompson as Employment Manager should now be directed to Shelley Krivich.

### Site Access Gates

In the next few weeks, workers will likely be installing gate hardware equipment at both Pine Street and Batavia Road entrances. These gates are designed to control unwanted vehicular traffic during off hours, as well as to prohibit the cross traffic that would subject this site to Department of Transportation regulations.

Prior to placing the gates into operation, Fermilab will be distributing tags and/or cards that can be used to activate the gate arm mechanism. The type of tags and/or cards that will be distributed depends upon your employment, user or visitor status at the Laboratory. They will be distributed just prior to placing these gate arm mechanisms into operation.

For most people who enter the site between 7-9 a.m. and who leave the site between 4-6 p.m., the presence of the gates will hardly be noticeable. This is because the gate arms will be disengaged during these two-hour morning and evening "rush hour" windows during the regular work week. While the gate arms are disengaged, both gates will be attended by security guards who will monitor the traffic for authorized access, as is presently the case.

Visitors to Fermilab will be directed to visitor entrance gates at these same entrances, where tickets are dispensed, allowing the visitor to leave by the same gate. Visitors tickets dispensed at the Batavia Gate will not be good at the Pine Street exit and vice versa. For after-hours access, visitors will need to use an intercom, located at each entrance gate, to obtain access through the Communications Center in Wilson Hall.

No changes to the Wilson Street Gate are anticipated at this time.

Any questions related to the new access gate system or problems encountered once they become operational should be directed to Ray Stefanski (x3872) or Bill Griffing (x8069).

## CLASSIFIEDS

### FOR SALE

■ '92 Ford Crown Victoria LX, fully loaded, 43k miles, excellent condition, disk brakes. \$11,500. Phone (630)355-2740.

■ Room air conditioner, Amana, 6650 BTU/hour, Model # 7P2MA, Energy efficiency rating 9.5, 110 volt, purchased in 1990. Used only 2 seasons. Very easy to install. \$125. Call Bill, x4173.

■ Two BIC speakers Advent model TPR 400, walnut veneer bases. \$200 (fair deal). Jim MacLachlan, x4484 or (630)232-2273.

■ Intel Pentium 133MHZ Processor with attached heatsink and fan, \$130. Call Greg at x3998 or email cisko@fnal.gov.

■ Used Gameboy unit, perfect working condition. Retail \$50 (new). Asking \$20 or best offer. Contact Justin, x2676 or donoho@fnal.gov.

■ Women's Huffy 18-speed mountain bike. Great cond. Like new. 3 yrs. old. Black w/silver speckles, on site for viewing. \$75, call Wanda, x3377.

■ Home in Warrenville/Summerlakes (clubhouse, pool, tennis courts) 5 minutes from the lab. School district 200. 3 bedroom, 1 bath ranch. Full partially finished basement. \$127,500. 30W007 Danbury Drive. Call Jennifer (630) 393-2051.

■ Three bedroom, 2 bath, brick ranch, full basement, two car attached, oversized garage, DR, LR, lge kitchen, central air, 3 season porch, 2 fireplaces. Quiet Bruce Lake neighborhood, close to schools & shopping, acre lot, across from recreational lake & residential park. 5 mins. from Stevenson Expressway (I-55), 7 mins. from I-355. Unincorporated Downers Grove. Perfect for your family. Lived in and loved by same family for 31 years. Contact Carolyn Purcell, x3397 or (630) 985-9330 or thepurcells@worldnet.att.net

■ Springlake Townhome, 2 bedroom, 1 1/2 bath, 3 levels w/ finished basement. Oak floor on main level. Utility room, storage area, end unit w/lake view and deck. Naperville schools. Call Chris & Vicki Kuhnen (630) 978-7044.

## MILESTONES

### BORN

Anna Katherine Derylo, on April 22, to Bonnie and Greg (PPD/ETT) Derylo. Gale Pewitt (TD) is the proud grandfather.

### RETIRING

Douglas Booth, ID 906, Technical Division/Machine Shop, June 13, 1997. His last work day was April 18, 1997.

## CALENDAR

### MAY 16

Fermilab lecture series presents "The Improbability of Human Life in the Age of Bacteria" by Stephen Jay Gould, evolutionary biologist and author, Harvard University. Lecture is at Ramsey Auditorium at 8 p.m. Call (630) 840-ARTS for tickets.

### MAY 19

Summer Singles Tennis League. Several round robin tournaments arranged according to level of players. Player of all levels welcome. Games played weekdays between 9am and 7p.m. Sign-up deadline for round 1 is May 14. Contact: Luc Demortier, luc@fnal.gov or Jean, x2548, jeanm@fnal.gov.

Coed Volleyball FUN League. Games are held on Monday and Tuesday in the village sand volleyball courts. Contact Jean Slisz, x6010, joan@fnal.gov, or Jean Guyer, x2548, jeanm@fnal.gov.

### MAY 23

International Film Society Presents: Fargo, at 8 p.m. in Ramsey Auditorium, admission \$4.

### MAY 27

Summer Soccer League. Games held on Tuesday and Thursday at the outdoor village soccer field. Male or female of all levels welcome. Contact Sandor Feher, fehers@fnal.gov or Jean Guyer, x2548, jeanm@fnal.gov.

### MAY 28

Coed Softball League. Games held on Wednesday and Thursday at 5:30 and 6:45 p.m. Captains meeting at Noon on May 21 in the Atrium. Contact Rene Padilla, padilla@admail.fnal.gov or Jean Guyer, x2548, jeanm@fnal.gov.

### ONGOING

English lessons, Thursdays 10-noon in the Users Center, call Janet Antonio, (630) 769-6518.

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.

### HONORED

The following people received DOE Partners in Excellence Awards on May 5:

■ Judy Jackson and Ray Stefanski, for leadership in the Land Use Planning Team.

■ Bruce Chrisman, for developing the pilot business management oversight process.

■ Larry Coulson, for developing the Fermilab Integrated Safety Management System (ISMS).

■ Steve Holmes, for managing the Main Injector project.

Fermilab will receive a 1997 Brooks McCormick Environmental Award on May 15, by the Conservation Foundation of DuPage County, for demonstrating leadership and commitment to the quality of the environment in and around the DuPage County area.



*FermiNews*  
Fermi National Accelerator Laboratory

Published by the  
**Fermilab**  
**Office of Public Affairs**  
MS 206  
P.O. Box 500  
Batavia, IL 60510  
630-840-3351  
ferminews@fnal.gov

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

The deadline for the Friday, June 6, 1997 issue of FermiNews is Tuesday, May 27.

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

FermiNews welcomes letters from readers. Please include your name and daytime phone number.

☆ U.S. GOVERNMENT  
PRINTING OFFICE:  
1997-545-057/60016

