October 1, 1993 Vol. 11, No. 18

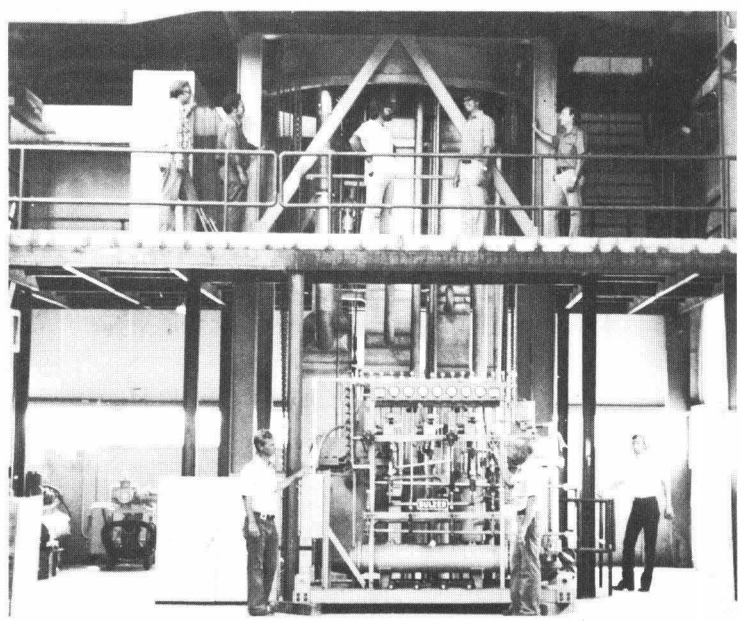
Ferminews

FERMI NATIONAL ACCELERATOR LABORATORY

Tevatron cryogenic cooling system named ASME historic landmark

Fermilab's Tevatron was designated an International Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers September 27.

Dignitaries from the ASME, Fermilab and DOE gathered at the Laboratory for an afternoon dedication ceremony. There, ASME National President John Fernandes presented a bronze plaque to Director **John Peoples**. In his acceptance speech, John recognized the many and varied contributions of the Laboratory's engineering community to the successful, record-breaking accomplishments of Fermilab and the Department of Energy.



The Tevatron is the world's first high-energy superconducting accelerator and currently the highest-energy accelerator in the world. The cooling system, which brings super-cold liquid helium to the superconducting magnets, is a crucial component of the Tevatron, and the landmark designation recognizes this significance.

When placed in service in 1983, the cryogenic cooling system was the largest low-temperature system ever built and had an important two-pronged goal: to enable higher current in the accelerator magnets (allowing higher energy acceleration) while at the same time reducing power consumption to one-third of what it would be at normal temperatures. This goal was successfully achieved.

In order to assure high reliability, the refrigeration system has two major components, the Central Helium Liquefier and a satellite refrigeration network located at 24 stations around the accelerator ring. Connected by an insulated pipeline atop the Tevatron berm, the cooling system delivers approximately 5,000 liters of liquid helium per hour to the magnets in the tunnel. The combination of a central facility with satellite refrigerators takes advantage of the higher efficiencies possible with large scale equipment and provides continued operation in the event of equipment failure.

An ASME International Mechanical Engineering Landmark represents a progressive step in the evolution of mechanical engineering and reflects a positive influence on society worldwide.

The ASME landmark designation recognizes the decade of reliable operation as well as the innovative engineering involved in the initial design and fabrication of the system. Many innovations included in Fermilab's system have served as a model for similar systems around the world.

The ASME History and Heritage Recognition Program, which began in September 1971, provides a public service by examining, noting, recording and acknowledging achievements of particular significance. An ASME International Mechanical Engineering Landmark represents a progressive step in the evolution of mechanical engineering and reflects a positive influence on society worldwide.

inside

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The deadline for the Fri., October 15 issue of *Ferminews* is Wed., October 6. Please send your article submissions or ideas to the Publications Office.

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October is Energy Awareness Month

Energy: New Choices for a Changing World

"Politically, economically, and environmentally, our world is changing - and so are our energy choices. The energy choices we make affect every aspect of our lives. By matching the best energy option to each of our energy needs, we maximize our energy resources and ensure adequate, reliable energy supplies, environmental protection, and sustainable economic growth."

This is the theme for DOE's 14th Annual Energy Awareness Campaign aimed at promoting a greater public understanding and awareness of energy sources, how they can be used wisely and effectively, and the importance of energy to the economic prosperity and the future of the United States.

At Fermilab, this year's observance of the energy awareness month will be highlighted with focus on the Fermilab Employee Energy Conservation Award Program (FEECAP).

A year ago, the Committee was reinstated with members nominated to serve a two-year term. The new committee made an enthusiastic go at evaluating suggestions received from employees, painstakingly discussing each suggestion, getting the assistance of experts in the field, assessing the viability of the suggestions from the standpoint of effect on operational reliability, safety and health, the lab's policies, and finally from the standpoint of implementation.

What this exercise has revealed is the high, overall consciousness of energy use and energy-efficient equipment and practices amongst our employees. All the committee members were left with the singular impression that each and every suggestion had merit in one way or the other. The assessment for award had to be done very stringently, mainly from the standpoint of implementation.

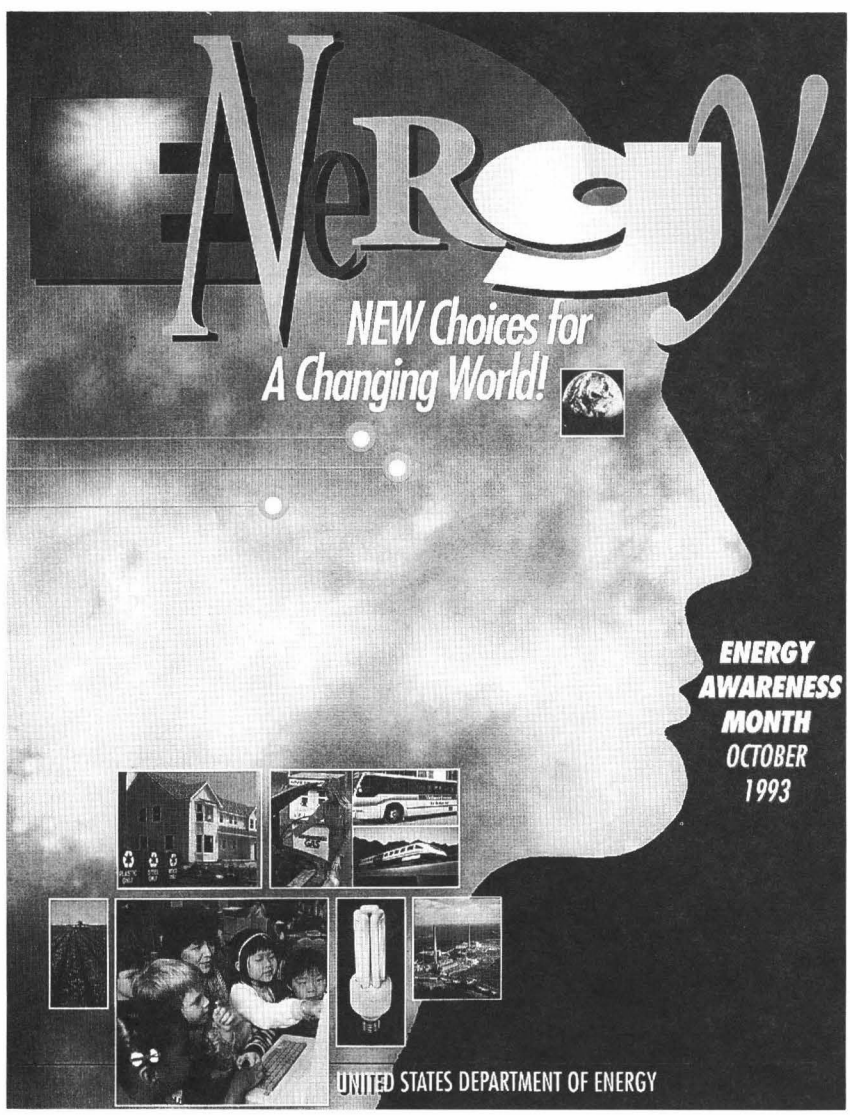
The list of suggestions to be evaluated included over 70 suggestions, of which 42 have been evaluated. Twenty-eight suggestions are in various stages of evaluation.

The committee has identified a few suggestions for award and is presently in the process of getting approvals from all the divisions/sections concerned, for the implementation of these suggestions. Details about the successful suggestors, their suggestions and award amounts will be made available in the next issue of *Ferminews*.

It is anticipated that the pending evaluations will be completed in the very near future and hoped that many successful suggestions will emerge. The successful suggestors, in this go around, will be recognized at a formal presentation ceremony, as has been done in the past.

In closing, let's applaud the fine effort put in by the FEECAP Committee and above all by the numerous suggestors who provided excellent input.

—Venkat Kumar



The Department of Energy has changed its priority to implement President Clinton's plans. We are substantially redirecting our research and development funding toward greater utilization of clean fossil fuels, especially natural gas, weatherization, renewable energy, energy efficiency, fusion energy and high-energy physics research.
—Hazel R. O'Leary, Secretary of Energy, before the International Energy Agency Governing Board, June 4, 1993.

A Proclamation

"Energy: New Choices for a Changing World"

Whereas, **Fermilab** has been a leader in the development of innovative methods of energy conservation, particularly in the use of superconductivity to reduce the use of electrical energy; and

Whereas, the wise use of energy and energy-producing resources are the foundations of future economic prosperity for our society and because of recently enhanced concerns about the global impact of energy and waste; and

Whereas, the proper use of coal, water, natural gas, petroleum products, and alternative energy sources comprises a highly complex set of issues that are of paramount importance to every citizen; and

Whereas, consensus regarding proper use is not easily reached; however all involved agree that using less energy, or practicing energy conservation, is most desirable and beneficial; and

Whereas, institutions, government, business, and private citizens alike must cooperate to achieve meaningful savings in both energy use and dollars to ameliorate the burden of rising costs of energy; and

Whereas, such cooperative efforts are beginning to have an impact on our energy-use habits and to demonstrate reduced energy consumption;

Therefore, I, John Peoples Jr., Director of Fermi National Accelerator Laboratory, proclaim **October, 1993** as **Energy Awareness Month** at Fermilab, in conjunction with the national observance, because it is important for all citizens to be aware of the necessity of conserving energy for our mutual benefit.

In Witness Whereof, I have hereunto set my hand. Done at Fermi National Accelerator Laboratory this first day of July, in the Year of Our Lord, one thousand nine hundred and ninety three.

J. R. Peoples Jr.

Director

FIA meeting provides stimulating exchange

Representatives from business—small and large, local and national—gathered at Fermilab September 9 and 10 to attend the Thirteenth Annual Industrial Affiliates Meeting and Industrial Briefing. The yearly event provides a forum for dialog on a topical issue and an opportunity for attendees to become better acquainted with Fermilab through tours and informal meetings with our staff.

Chairperson Joe Lach referees a panel discussion during the 13th Annual FIA Meeting and Briefing.

This year's theme, *Beyond the Cold War: The Changing Arena of Science*, was a most timely one and registration for the meeting was record-breaking. Representatives from the academic community and the Department of Energy were also in attendance. **John Venard** of the Office of Research and Technology Application organized the meeting that was chaired by **Joe Lach** (RD). The planning committee — **Bruce Chrisman** (Directorate), **Dave Christian** (RD), **Dave Finley** (AD), Joe Lach, **Jim Strait** (TS) and **Bob Trendler** (RD)— gave initial guidance about topics and speakers. **Pat Oleck** of ORTA handled all the meeting arrangements and detailed logistics.

The three key speakers were Roald Sagdeev, who was Director of the Institute for Space Research in the former Soviet Union, Richard Slansky, Leader of the Theoretical Division at Los Alamos National Laboratory, and Lewis Franklin, a visiting scholar at the Stanford Center for International Security and Arms Control. **Leon Lederman** gave the banquet speech entitled "Global Science: The Universe and Batavia."

All the attendees were treated to a lively and stimulating interchange on this timely subject. Although the meeting's four speakers represented different perspectives and came from different backgrounds, there was a degree of consensus in their comments and conclusions.

The last portion of the two-day meeting was devoted to a panel discussion led by Joe Lach. With questions, solutions, comments and quips all being exchanged, this session offered an opportunity for animated dialog between the speakers and the audience.

Many speakers, both on the panel and in the audience, called for new and more effective ways to communicate with the public in order to proclaim and to explain the limitations as well as the possibilities of scientific research.

The Fermilab Industrial Affiliates organization was founded in 1980 to improve communications between industry and Fermilab and its user-university community and to facilitate the spin-off of state-of-the-art developments from the Laboratory.

The Affiliates are a group of about 25 organizations, each of which has an interest in the research and development work under way at the Laboratory.

Fermilab helping to reduce ozone depletion

The following is the third in a series of articles on waste minimization efforts at the Laboratory. In this issue we examine what is being done at Fermilab to reduce the use of chlorofluorocarbons (CFCs), a major suspect in the cause of ozone depletion.

Efforts by the FESS Engineering and Planning Group and Business Service's Vehicle Maintenance have helped to reduce the amount of potentially harmful CFCs used in different refrigeration processes throughout the Laboratory.

CFCs, commonly known as freons, were first produced in the 1930s and subsequently became widely used as a refrigerants and industrial cleaning solvents. Following atmospheric testing in the late 1980s, however, it was suspected that CFCs were a major cause of the hole in the ozone layer and restrictions on their use were quickly put in place. At the beginning of this year, production of CFCs was stopped world-wide, although limited supplies do exist for servicing older air conditioners and refrigeration equipment.

For the last year, Vehicle Maintenance, under the direction of **George Davidson**, has been recycling R12, a common CFC, in automobile air conditioners to help combat the ozone depletion problem. As certified freon recyclers, the staff uses a machine to recapture the freon from vehicles while work is being done on the automobile. The freon is pumped out of the vehicle, cleaned and then put back in. This reduces the risk of freon being released into the air.

> ***"Environmental studies estimate that it takes 10 years for refrigerants that are released on ground level to get to the altitude where they can affect the ozone layer. So effects we are seeing right now would be from releases of decades past.... if we could stop all of the CFC releases right now, it could take as much as 200 years to restore the atmosphere to what it was in 1970."***

Eventually, motor vehicles will no longer use R12 in their air conditioners and the CFCs will be phased out as older vehicles

Continued on page 8

Benefit notes

During the open enrollment period the Benefits Office received many questions about the changes to the medical program. Following are some of the most frequently asked questions.

Q. What will it cost me for a brand name prescription drug when I use the network pharmacist?
A. If there is no FDA approved generic equivalent, you will pay only the $5 co-payment. If there is a FDA approved generic equivalent, you will pay the $5 co-payment and the price difference between the brand name and generic drug.

Q. What if my doctor will only prescribe a brand name drug?
A. That is a discussion between you and your doctor. However, if there is a medical reason why you cannot take a generic medication, you and/or your doctor can call RX Prime to consider the brand name. Very few individuals are unable to take generic medications. *By law brand-name and generic medications must have the same active ingredients and the same therapeutic effect.* Inactive ingredients may be different e.g. fillers used to bind the active ingredients. The generic equivalents provided under the prescription drug card plan are: FDA (Federal Drug Administration) approved, rated A under FDA rating, and must be found on Illinois' drug formulary (list of approved drugs) which is one of the most conservative lists in the country.

Q. Do I have to choose a primary care doctor under the PPO plan?
A. No, you must pick a primary care doctor only if you join an HMO.

Q. What if an out-of-network doctor admits me to an in-network hospital? How will my bills be paid?
A. Under the PPO arrangement, the charges from the out-of-network doctor will be paid at 80% after the $250 deductible, and the charges from the in-network hospital are not subject to a deductible and will be paid at 90%. You will pay 20% of the doctor's bill and 10% of the hospital's bill up to the plan's out-of-pocket limit.

Q. What does out-of-pocket limit mean?
A. An out-of-pocket limit provides a ceiling on the amount of eligible medical expenses that you may have to pay in a calendar year. For example, once you pay your deductible, the most you will pay for eligible expenses in a calendar year is $1,000 in-network and $1,500 out-of-network. The out-of-pocket limit includes your co-insurance (your 80% and 90% share of expenses) and PPO co-payments (your $10 office visit payments). The out-of-pocket limit is cross accumulated between in- and out-of-network expenses. This means that the individual maximum is $1,500 not $2,500. (Your prescription card plan costs are not part of the out-of-pocket limit.)

Q. How are allergy shots covered under the PPO if I use an in-network provider? How are allergy shots covered under the HMOs?
A. Under the in-network PPO, you pay $10 per office visit. Under some of the HMOs the $10 office co-payment is waived if a nurse provides the service. Check with your specific HMO to be sure this is their practice.

Q. Where are PPO claims filed? Are there new claim forms?
A. In-network and out-of-network claims will be processed at the same claims office in Bourbonnais, IL. If you use in-network providers, you will not need to file claim forms. The providers' offices will handle the claims processing. If you use out-of-network providers, you will use the same claim forms that you currently use to file CG claims. (Claim forms are available from the Benefits Office.)

Wellness Committee offers way to kick bad habits

Are you struggling with a weight problem? Or are you a smoker who wants to quit? Well, you don't have to face these challenges alone, Fermilab's Wellness Committee is here to help you.

The Wellness Committee is seeking employees who are interested in attending a smoking-cessation program and/or a weight-loss program at the Laboratory.

The cost of the three-step smoking-cessation class will be approximately $100-$150, depending on the number of participants. The program, *Smokeless*, is sponsored by Edwards Hospital and includes an introductory phase that prepares the participant to quit smoking. The second phase is the treatment/skill development phase and consists of one-hour meetings held on five consecutive days. The final phase is a proven maintenance program of two meetings held a week apart. As a graduate of *Smokeless*, should you ever go back to smoking or want to reinforce your non-smoking behavior, you can re-enroll in the program at Edwards Hospital at no additional charge.

The cost for the weight-loss class will be between $65 and $75 for eight, one-hour sessions. The topics to be discussed include goals and objectives, exercise, changing eating habits, taking charge of your eating behavior, diet and heart disease, reading food labels, eating to reduce cancer risks, dining out and how to modify your favorite recipes.

Classes will be held on site from noon to 1 p.m. The cost of both programs will be paid by the employee at the time of registration. However, as an added incentive, 25% of the fee will be reimbursed by Fermilab if you remain smoke free and/or achieve and maintain your goal weight for a period of six months following the last class. Another 25% of the fee will be reimbursed if you are smoke free or maintaining your goal weight at the end of one year.

Please contact Mae Strobel in Medical at x3232 before October 15 if you are interested in enrolling in one or both of these programs.

Harper's Index

Number of emergency-room admissions last year for injuries involving houseplants: 2,421.

Number of admissions for injuries involving pillows: 5,840.

DOE seeks comments on environmental program

Fermilab employees are invited to participate in the U.S. Department of Energy's effort to gather comments on the Environmental Restoration and Waste Management Program.

For several years, DOE and the Lab have been cleaning up environmental contamination and improving waste management practices here—carrying out our part of DOE's national program. The Chicago Operations Office is now seeking to increase input into this program by soliciting comments from employees and other stakeholders involved or interested in the environment at Fermilab.

A package of information describing the planned program and the budget allocated for individual projects and waste operations is available in the Library on the third floor crossover; or to receive a copy, call Jon Cooper in the DOE Batavia Area Office, WH6E at x4288. The deadline for comments, which should be directed to the Batavia Area Office, is October 15.

Sprechen sie Deutsch?

If you don't, it is not too late to join German language class. Beginners meet at 4 p.m. and intermediate class meets at 5:30 p.m. each Tuesday in the conference room in 20 Neuqua. Both classes continue to be taught by Angela Jostlein. You may call her at 708-355-8279 or Brenda Kirk at x3440 if you have any questions.

Nalrec events

Don't miss another fun-filled Kuhn Barn party October 15 from 5:15 until 9:45. DJ Homer will once again be spinning records and chicken on the grill will be served. Dinner will cost $2 and includes 1/2 chicken with or without barbeque sauce, potato salad, cole slaw, roll and butter.

Prairie seed harvest

The Fermilab Prairie Committee will hold its annual seed harvest on Saturday, October 30 at the Laboratory. Volunteers are needed to hand gather seeds that will be used to maintain the diversity of plant life in Fermilab's 900-plus acres of prairie. Harvesting will take place at locations on the Fermilab site from 9 a.m. and until 3 p.m. Follow the on-site road signs to the harvest areas.

Volunteers are welcome to spend as little or as much time as they wish. No experience is necessary. All harvesters should wear field clothing and bring pruning shears and paper grocery bags if possible. For more information call the Public Information Office at x3351. In case of inclement weather on the scheduled harvest dates, call the switchboard at x3000 to verify harvest plans.

Catch the spirit of giving

Tax-free payroll deductions

The time of year has arrived when employees are asked to contribute to charities through payroll deductions or one-time contributions. Using the payroll deduction plan, an employee may choose up to three charitable organizations including a community fund.

No pledge below $12 per year for 1994 can be accepted through the payroll deduction plan. The selected charities must be among those approved by the Internal Revenue Service. The payroll deductions an employee designates will be made every pay period, beginning January 1, 1994, and will continue throughout the year. At the end of 1994, employees taking advantage of this plan will receive a statement of their contributions for income tax purposes. Pledges for the 1993 year will end December 31 unless they are renewed.

Thanks to all who have given or who plan to give. You are making a difference in your community by improving the lives of thousands of individuals. For additional information, contact Ruby Coiley at x8365.

Nalwo news

Attention! The National Accelerator Laboratory Women's Organization (Nalwo) is open to all employees, users and guests, their spouses and their families. There is no official membership. To join, simply attend a Nalwo function. We sponsor trips, potlucks, international folk dancing, playgroup, stretch exercise, craft and cooking workshops and other special events. Our schedule is "posted" in the Events folder of the INFO facility on the VAX cluster.

If you would like to join the decision-making process, please attend the periodic open Nalwo board meetings. For information on when and where, call Selitha Raja, 708-305-7769. We need help to set up, arrange and clean up various activities. We welcome your contribution and participation.

Nalwo also invites you to the Annual Luncheon of Friday, October 8 from 12 noon to 1:30 p.m. at Chez Leon in the Users' Center. Please bring a favorite dish from your country to share. Nalwo will supply drinks and excellent company! Bring your suggestions and ideas and meet each other and the new Nalwo Board.—*Sue Mendelsohn*

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.

October 8: *Thousand Clowns* A wonderful comedy-drama about a man who eschews conformity at every juncture and lives his life marching to a drummer only he hears. Jason Robards stars. Fred Coe, dir. U.S., 1965. (117 min.).

October 29: *The Leopard Man* (plus a cartoon) A leopard, rented as a publicity stunt, escapes and kills a little girl. Other murders follow, but is it the leopard? Great atmospheric thriller! Jacques Tourneur, dir. U.S., 1943. (63 min.).

Fermilab Arts Series presents

The Suk Chamber Orchestra

"Suk's violin sang with an eloquent sweetness that was simply ravishing, and never abandoned its tonal or technical aplomb even in the bravura finale."—*Chicago Tribune* .

The great violinist Josef Suk will be both the soloist and conductor when the Suk Chamber Orchestra opens up the Fermilab Classical Series in grand style on Saturday, October 16 at 8 p.m. in Ramsey Auditorium.

The Suk Chamber Orchestra was established in 1974 and is named after the prominent Czech composer of the post-Dvorakian era, Josef Suk. The 14-member chamber ensemble ranks by international standards among the top ensembles of its kind.

Josef Suk, one of the world's most distinguished instrumentalists, is the grandson of the composer Josef Suk, for whom the orchestra was named, and the great-grandson of Antonin Dvorak. He has pursued a brilliant career that combines the roles of soloist and chamber musician. Josef Suk was the first violinist of the Prague Quartet and founder of the renowned Suk Trio, one of Czechoslovakia's leading ensembles. He will be performing Bach's Violin Concerto in a minor, BWV 1041 at Fermilab. In addition, the concert will feature Myslivecek's Divertimento in F, Janacek's Suite for Strings and Dvorak's Serenade for Strings, Op. 22.

Join us as the Suk Chamber Orchestra kicks off the Fermilab Classical Series 93/94 Tickets are $15. For reservations, call 708-840-ARTS weekdays from 9 a.m. to 4 p.m.

Congratulations to

Cheryl S. and **Paul A. Upshaw** (FESS/O&M) on the birth of their son James Anthony. James was born on September 13, 1993 at 8:15 a.m. at St. Joseph's Hospital in Joilet. He weighed seven pounds and 11 ounces and was 20 inches long. James is welcomed by brother Paul Jr.

Disastros take first place

Following recent baseball tradition of last place to first, the Disastros won both the 1993 co-ed softball league's regular season (8-2) and playoffs (3-0) after two years in the cellar. Asked about the turnaround, **Tim May** said, "it took us two years to find out that each game's winning team gets a free pitcher of (liquid refreshment). Once we figured that out, there was no stopping us." The season was marked by plenty of good times and very close games.

Top row, l-r: Tim May, Brian Fellenz, Greg Vogel, Max Staples, Mike Martens, Dan Klepec. Front kneeling, l-r: Sherry Hickey, Ed Barsotti, Laurie Barsotti, Jim Fitzgerald. Not pictured: Jim Budlong. Alternates: Shoua Moua, Judy Sabo and Jessica Fellenz.

Other teams and captains include: Beer Smugglers (**Angie Velasquez**), Byte Sox (**Ron Rechenmacher**), The Knights (**Fred Lewis**) and Wild Band (**Rene Padilla**). We encourage others to come out and have fun playing next year.—*Ed Barsotti*

Fermilab Lecture Series

Caught in the Crossfire: Fundamentalism, Science and the "Culture Wars"
Martin E. Marty, The University of Chicago
Friday, October 22, 1993 at 8 p.m.

Seventy years ago a new movement, Fundamentalism, developed in America and challenged science in the classroom and the courts. For decades it played a relatively minor role in the religious landscape, but now, at the century's end, Fundamentalisms prosper in America and elsewhere in the world.

Fundamentalisms challenge the world views with which scientists feel most at home. The battles, waged on school boards, hospital boards, textbook boards, town boards, zoning boards and library boards caught most non-fundamentalists off guard. Understanding where fundamentalists are coming from and where they might be going has become an urgent topic today.

Six years ago Martin Marty was asked to direct a project then being organized by the Academy of Arts and Science to study religious fundamentalist movements in the modern world. The Fundamentalism Project brings together an international team of scholars for an assessment of the history, scope, sources, character and impact of the fundamentalist movements within the world's major religious traditions. The project has received much attention and was the basis for the PBS television series *The Glory and the Power: Fundamentalisms Observed*, based on the book of the same title by Dr. Marty. Martin Marty, along with R. Scott Appleby , is the upcoming guest speaker in Fermilab's Lecture Series on Friday, October 22 in Ramsey Auditorium.

Martin E. Marty is the Fairfax M. Cone Distinguished Service Professor of the History of Modern Christianity at the University of Chicago, where he earned his Ph.D. in 1956. He has taught since 1963 in the Divinity School, the History Department and the Committee on the History of Culture.

Marty is also senior editor of the weekly *The Christian Century* and senior scholar-in-residence at, and past president of, the Park Ridge Center for the Study of Health, Faith and Ethics. He edits *Second Opinion*, the journal of the center, as well as the fortnightly newsletter *Context*; he is also co-editor of the quarterly *Church History*. The author of 40 books, he won the National Book Award in 1972 for *Righteous Empire*.

Admission is $3. For further information or telephone reservations, call ARTS.

New QA manger joins Lab

Kathy Williams has joined the Director's Office as manager of the Quality Assurance Office. Kathy said she looks forward to new challenges at Fermilab as we move to full implementation of the Fermilab Quality Assurance Program. Kathy has 18 years of experience in both quality assurance and Total Quality Management in the food processing industry. "Her experience will help us in the months ahead," said Associate Director Dennis Theriot.

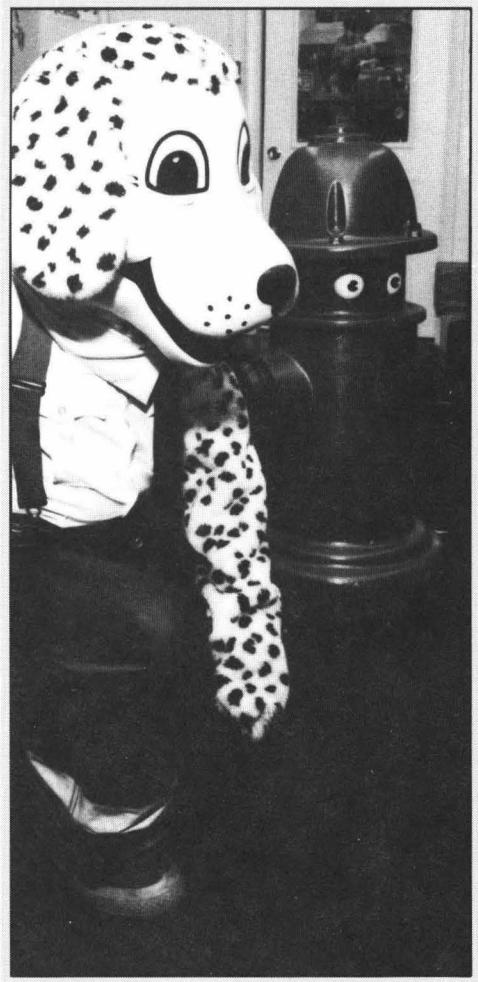
DOE expands Core Values

The Department of Energy, with significant input from the national laboratories, has drafted a mission statement and core values for the department. In previous issues of *Ferminews* we have presented these to our readers. Since that time, however, DOE has expanded the core values. In the next few issues of *Ferminews* we will run the expanded values. These values are visionary, but is where the department would like to see the DOE Complex move toward.

1. We are customer-oriented
   - Our decisions and actions are responsive to the customer's needs.
   - We foster a participatory manner of doing business where the opinions and input of diverse stakeholders are sought and considered early in the decision-making process.
   - Programs and solutions to major issues are developed in a proactive way with our customers and stakeholders.

Throughout the core values you will see references to customers and stakeholders. Customers are anyone we serve both in and out of the Laboratory. Stakeholders are those who support the Laboratory.

Fire Prevention Week: October 3-9



In recognition of Fire Prevention Month, Sparkie and Pluggie, Fermilab's fire safety mascots, are offering their safety tips for home and at work. "It's smart to be safe," says Sparkie.

- **Install and maintain smoke detectors.** Install a smoke detector on each level of your home and outside each sleeping area. Change the batteries in each smoke detector every spring and fall when you change your clock.
- **Plan and practice an escape plan.** Plan two ways to escape from every area and room in your house, shop or office. When staying in a hotel or motel plan an escape route from your room.
- **Get out and stay out.** Once out do not reenter a burning building. If people are trapped, firefighters have the best chance of rescuing them.
- **Smokers need watchers.** Carelessly discarded smoking materials are the leading cause of fire deaths in the United States. Never smoke in bed or when drowsy. Use large deep ashtrays.
- **Be careful while cooking.** Never leave cooking utensils unattended. Keep handles on pots and pans turned inward. If a pot or pan catches fire, put a lid on it.
- **Space heaters need space.** Keep heaters three feet from anything that will burn. Make sure that the unit has a tip-over switch and is UL listed.
- **Keep matches and lighters away from children.** Children are fascinated by flame, so keep matches and lighters up high were kids cannot reach them.
- **Electrical safety.** Check electrical appliances for frayed or cut cords. Use only UL listed equipment.
- **Stop, drop and roll.** If your clothes catch on fire, don't run. Stop where you are, drop to the ground, cover your face with your hands, and roll over and over to smother the flames.
- **Crawl under low smoke.** If you must exit through smoke, the cleanest and coolest air will be 12 to 24 inches above the floor. Crawl on your hands and knees to the nearest exit.
- **Install and maintain a fire extinguisher.** Know how to operate the extinguisher. Maintain the extinguisher in accordance with the manufacturer's instructions. Keep the extinguisher near an exit. Use the correct extinguisher for the type of fire.

CFCs continued

are replaced.

According to **Steve Krstulovich** (FESS/E&P), new lines of refrigerants are currently being developed to replace CFCs, and another class of less troublesome freons, hydrochlorofluorocarbons (HCFCs). One of the new ozone-friendly classes of refrigerants are hydrofluorocarbons (HFCs). These have an ozone depletion potential, or ODP, of zero, which means they pose little or no risk to the ozone layer. CFCs have an ODP of one, while HCFCs carry a ODP of .05.

Also being developed are azeotropes, a blend of HFCs with thermodynamic properties similar to CFCs, which are not harmful to the ozone layer. A major HFC, R134a, is becoming widely used as a replacement for CFCs. At Fermilab, R134a has replaced R502, a CFC, in two chillers in the Muon Lab. Eventually, all vehicle air conditioners at the Laboratory will be using R134a.

CFC cooling units at the Laboratory continue to be phased out and there are only a few applications where they are still in use. "This is mostly in automobile air conditioners and in small amounts in window air conditioner units and refrigerators," said Steve.

The single exception to this is the use of CFCs in the chillers at the Central Utility Building. One of Engineering and Planning's projects is to replace these chillers with new energy-efficient units that use an environmentally-friendly refrigerant.

"The chillers have a large inventory of CFCs, about 6,000 pounds," said Steve. "What the Lab has done so far is to use improved purge units and receiver equipment to be able to recover and recycle the CFCs so as to minimize leakage. Work is in progress right now on a retrofit package to replace the CFCs in the three 1500-ton CFC chillers."

Through the In-House Energy Management Program, Engineering and Planning has already developed the first funding request for a new CFC-free chiller that will take over part of the load of the existing CUB chillers by cooling the Linac 50°F low-conductivity water system.

For the past few years, said Steve, the Lab has been phasing out remaining CFCs by purchasing equipment containing R134a, HCFC units convertible to the new azeotropes or absorption units that do not use CFCs.

The importance of eliminating the use of CFCs is of global concern. "The big problem is not so much what we see today, it is what we don't see," said Steve. "Environmental studies estimate that it takes 10 years for refrigerants that are released on ground level to get to the altitude where they can affect the ozone layer. So effects we are seeing right now would be from releases of decades past. They also project that if we could stop all of the CFC releases right now, it could take as much as 200 years to restore the atmosphere to what it was in 1970. So these are long-term effects."

Classified ads

Classified ads may be submitted only by active employees of Fermilab, visitors, DOE and contract personnel and/or immediate family members. We regret that we cannot advertise services or run electronic mail addresses in an ad. Ads are run on a first-come, first-served basis. Ads not carried because of space restrictions will be held for the next classified ads. Ads will run only once and must be resubmitted for subsequent publication.

Vehicles

1989 Toyota Tercel, red, stick-shift, 3-door hatchback, 60K miles, works fine—no problems whatsoever. New muffler and relatively new tires, $2,400. Call Mike at x2479 or 708-879-6095 evenings.

Miscellaneous

Four football tick**ets, Illinois v. Wisconsin** at Champaign Nov. 20, 1993. Call Jim at x4293 or 708-416-0548.

5 black vinyl **cushioned bar stools**, $60. Call Ron at x4070.

AT&T 5510 cordless phone w/speakerphone feature, like new, $100 o.b.o.; **back pillow**, provides sacral and lumbar support, $10. Call Dan at x3916.

Wanted: individual with MS needs stationary exercise bike at reasonable cost. Contact Roger at x8257.

Lost: blue topaz and diamond ring. Contact Jean at x2548. $25 reward.

Golf clubs. Trident metal driver, replica of Callaway Bobby Jones deep face driver, $40; Jumbo 747-XL kevlar-graphite driver with an Aldila HM40 boron graphite shaft, $80. Both in like-new condition. Call Jack at x2812.

Pets

Male miniature Dachshund, 8 weeks old, call Joe at x2894 or 708-820-1158.

AKC **Rottweiler pups**, exc. blood lines, born 9-12, $350. Call John at x4420 or 708-213-7668.

New in the Stockroom

1825-1410 Primer coating, all purpose, 12 oz. pressurized spray can, wood/metal, Seymour hi-tech P/N 16-807, flammable, red iron oxide, indoor/outdoor.

1630-0665 Filter, air, pleated panel, disposable, E.F.C. P/N EP2HC or equal, 14 in. x 20 in. x 2 in.

1246-5805 Wrench set, socket head screw, metric, Allen type, 14 short series wrenches, sizes 2, 2.5, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 17 and 19mm.

1246-5350 Wrench set, box and open end, combination, metric, chrome plated, 12-point wrenches, B-19mm.

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