

# FermiNews

The Newsletter of the Fermi National Accelerator Laboratory

## TOP MATTERS

The announcement at Fermilab on March 2 of the discovery of the top quark by the CDF and DZero collaborations marked a milestone not only in Fermilab history but in the science of particle physics. The top quark's discovery drew much attention. People called from Batavia, Boston and Bangladesh with questions about the newest member of the family of elementary particles. One question that almost everyone asked, in one form or another, was "So what?" They wanted to know, in simple terms, what the discovery of the top quark means, and why it is impor-

tant. Why does the top quark matter?

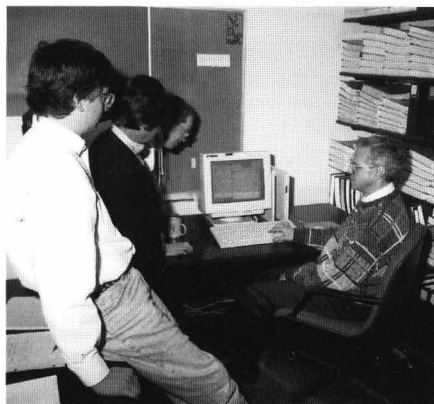
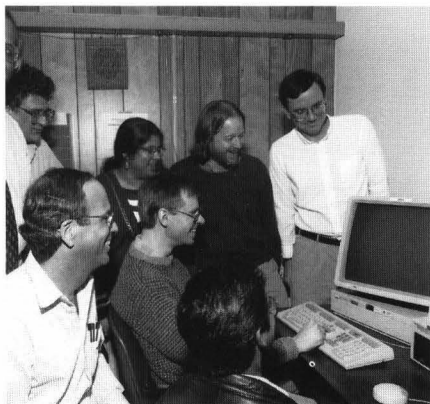
### GOTCHA!

For almost 18 years, scientists looked for the top quark, because physics theory said it was there. A remarkably simple theoretical picture, the Standard Model, describes the elementary particles and forces of matter. Experiment after experiment has tried to find flaws in the Standard Model's predictions, but so far all the experimental evidence supports it. The Standard Model predicts six quarks; scientists had found only

five. If the top quark hadn't turned up, it would have called the entire theory into question. Now, the discovery of the top quark provides strong evidence for the Standard Model.

### IT'S BIG

CDF and DZero have shown that the top quark is by far the most massive of all the fundamental particles, some 40 times heavier than the next heaviest quark, the bottom quark. "We have no idea at all why it weighs as much as gold," says CDF physicist ALVIN TOLLESTRUP. "It is only a little quark, and here it is weighing as much as a whole gold atom....No one was expecting that at all." Why is the top quark so heavy? The answer is connected to another question, perhaps the central unanswered question of particle physics: Why does matter—any matter—have mass? Although we don't know why the top quark is so heavy, some physicists believe that whatever causes mass is somehow more closely connected to the top quark than to any other particle. Precisely measuring the mass of the top quark may give us insight into the origin of mass.



*Herb Greenlee, DZero (left), and Mel Schochet, CDF, push the buttons to electronically submit their collaborations' top quark discovery papers to Physical Review Letters on Friday, February 24.*

## FermiNews



Friday, March 17, 1995 • Volume 18, Number 5

Fermilab Regional Science Bowl Results .....	page two
Study Reveals Deer Impact on Vegetation .....	page three
Teachers Explore Reason Behind Wilson Hall Winds .....	page four
People & Events .....	pages five through seven

### FROM THE BIG BANG TO BATAVIA

Top quarks flashed briefly into existence in the instants after the Big Bang at the beginning of the universe, and promptly disappeared for about 15 billion years. They had not been seen since, until they

*continued to page two*

# FERMILAB REGIONAL SCIENCE BOWL SENDS TEAM TO WASHINGTON

Five whiz kids walked away champions of Fermilab's Regional Science Bowl on February 25. Eighty students competed in the brain-racking event to represent the Laboratory at the DOE Science Bowl® in Washington, D.C.

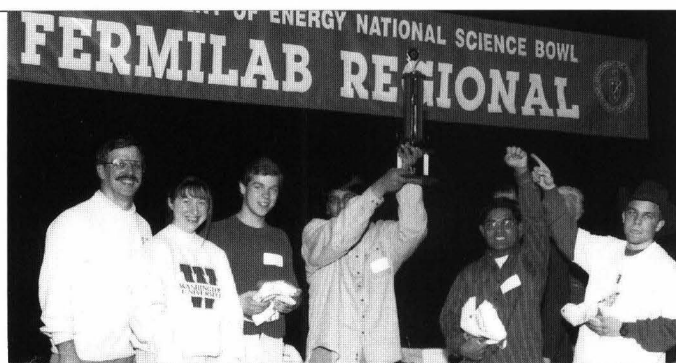
Crystal Lake South High School left with the championship trophy, narrowly besting runner-up Burlington Central High School in the final round of the half-day competition. Mooseheart and Crystal Lake Central High School of Frankfort finished as semi-finalists.

Led by coach Ernie Quigel, Crystal Lake South team members Atit Desai, Karl Garman, Stephanie Goode, Prashant Sura and Joe Leider pitted their intellects against the Burlington Central team in the final round on astronomy, biology, chemistry, computer science, earth science, mathematics, physics and current events questions. REGINA RAMEIKA (RD) moderated, Jeff Neff (DOE Chicago Operations Office) timed, Gary

Pitchford (DOE Chicago Operations Office) scored and MARJORIE BARDEEN (LS/Education Office) officiated at the final round.

Former Fermilab Director Leon Lederman presided over the awards ceremony, handing out the first, second and semi-finalist trophies. Every team who competed received tee-shirts and lunch courtesy of DOE and Fermilab.

Approximately 200 students, observers, coaches, teachers and Fermilab volunteers were in attendance. This is the second year that Fermilab has hosted a Regional Science Bowl event and the fourth year that Fermilab has participated in the event. To the many Laboratory staff members and outside organizations who contributed their time and expertise to making the Fermilab



*The winning Science Bowl team from Crystal Lake South High School cheer their victory at the awards ceremony.*

Regional Science Bowl a success for all of these students, a sincere and appreciative "thank you" goes out from the Education Office.

The champion Crystal Lake South High School team and their coach will travel, all expenses paid, to Washington, D.C. to represent Fermilab in the DOE National Science Bowl® April 28-May 1, 1995. There they will compete against approximately 50 teams from other regional science bowl events for prizes and science trips.—*Brian Charles*

## TOP MATTERS

*continued from page one*

turned up in particle collisions at Fermilab. Of the world's accelerators, only the Tevatron is powerful enough to create top quarks. Studying top quarks may give us clues to understanding the origins of the universe.

## TOP MATTERS NOW

Although the top quark did not stick around for long, it had a profound influence on how the universe turned out. The top quark's mass is linked to the mass of the proton, the basic unit of the atomic nucleus in everyday matter. "If top weighed 10 times more or less," says Fermilab theorist CHRIS QUIGG, "the proton's mass would be shifted up or

down by about 20 percent, through top's effect on the evolution of the strong force that holds up and down quarks together inside the proton. This world would have a very different character."

## WHAT USE IS IT?

For now, the best use of the top quark is to make the universe more understandable. "We can't predict the eventual practical value of our new knowledge," says DZero physicist JOHN WOMERSLEY, "but experience has taught us the worth of physics research as a source of discoveries that change not only our understanding of the world but our world itself." In the 1920s, for example, discoveries in atomic physics led to the theory of the structure and behavior of atoms we

call quantum mechanics, and to an utterly new understanding of nature. At the time, no one suspected that from this new knowledge would come lasers and solar cells and, in 1947, the invention of the transistor, the basis of all modern electronics and the age of information. The discoveries we make today affect the kind of future we can expect tomorrow.

## WHAT'S NEXT?

The discovery of the top quark marks the end of one scientific quest and the beginning of another—like touching the shores of a new scientific continent. Now experimenters at Fermilab can begin to explore the unknown territory they have found. Watch these pages to learn what they discover! ■

# STUDY REVEALS DEER IMPACT ON VEGETATION

Results from an ongoing, multi-year survey of deer population at Fermilab show that the Lab's vegetation is quite a popular menu item for white-tail deer.

The deer enclosure study, begun in 1992, reveals that over the last three years deer browsing of certain forest and prairie flowers and plants has markedly increased.

ROD WALTON (ES&H) of the National Environment Research Park program, who manages the study, notes that the findings of the survey should be taken with "a grain of salt—a very large grain of salt." Studying ecology, Rod says, "is a little like 'finding' the top quark. You can't really find it, but only evidence for it. Ecology is highly statistical, and there is an enormous amount of natural variation or 'noise' in the environment."

To begin the deer enclosure study, seven fenced enclosures were constructed in areas vulnerable to over-browsing by deer, in particular forested areas and prairie. The structures, each eight-foot high, allow researchers to compare the plants inside the fenced areas with those outside in order to understand the effect of deer browsing on the plant communities.

The main questions that the survey is attempting to answer include: How intense is deer browsing activity in various habitats? What, if any, long-term damage is being done to plants by deer browsing activity? What potential do plant communities have to rebound from intense deer-induced damage? Do deer preferentially choose to eat one or a few species to the exclusion of others?

Researchers, led by Victoria Nuzzo from Native Landscapes, found that in the

Lab's forest community the percent of woody vegetation stems suffering from deer browsing has increased from 66% of stems browsed in 1992 to 89% in 1994.

In addition, researchers found that deer tend to have "favorite" species, such as gray dogwood (which they hit the hardest), even though they tend to sample a little bit of everything.

Studies conducted in the Big Woods on all types of vegetation show that the composition of the plant community was stable over the three-year period, with 64 different species recorded. About 19% of those species suffered some deer damage. However, nearly half the deer activity was concentrated on only five species of forest flowering plants.

The study also shows that vegetation height is significantly greater in the forest enclosures than in the control, or exposed, plots. In 1992 average plant height in the control plot was 30 cm, but in the fenced area, after one year of protection, it was 50 cm. After two more years, average control plant height in 1994 was 32 cm and average protected plant height had increased to 75 cm.

Rod notes that vegetation is more heavily browsed in the control versus the enclosed plots as one would expect. However, there is damage to vegetation within the fenced plots caused by foraging of smaller animals such as mice, rabbits and groundhogs. "The enclosure studies also allow us to separate the damage caused by deer from that caused by other sources."

In the prairie tracts, researchers found little difference in plant community between the enclosure plots and control plots after two seasons of protection from deer herbivory. "There is very little indication that the prairie is



being hit as hard as the forest," says Rod. "Deer apparently dislike eating grass, and since Fermilab's prairie plots are dominated by grasses, the overall effect of the light browsing activity of deer is not discernible.

"In order to get more confident of the data, we'll have to carry out the experiment over a longer time period, and maybe reformulate our questions," says Rod. The experiment is expected to run for five years. "We should also examine the prairie in the spring as well as in the fall, and I suspect we'll find more species of plants eaten by the deer when they don't have to fight the tall grasses."

In a separate study by CTE Engineers on the impact of deer on the Main Injector wetland mitigation area, researchers found several heavily damaged trees and shrubs due to deer browsing. Of a total 74 trees and bushes randomly inspected, 16 were found to be heavily damaged and 26 moderately. The most severe damage was not due to browsing, however, but by tree girdling—the loss of bark caused by bucks rubbing their antlers on the trees. At least 22 trees were damaged from girdling.

To alleviate current damage and reduce future harm, researchers recommend that the Lab either prune damaged trees or install protective coverings on tree trunks. "There was much work done on the wetland mitigation project," says Rod. This is an investment at risk. ■

# TEACHERS EXPLORE REASON BEHIND WILSON HALL WINDS

Anyone who has entered Wilson Hall on a blustery day, or sometimes even on a calm day, for that matter, knows how challenging it can be to get through the hi-rise doors. The wind is so strong at times that even trying to walk toward the building is a struggle—wind slams into your face, papers fly, and you can just about count on losing your hat. But, why is it so windy around Wilson Hall when it seems the rest of the site is calm?

As part of a newly created Education Office program, eight teachers from Palatine School Districts 15 and 211 began an experiment last month to answer this question.

The teachers were taking part in the Education Offices' Immersion program. The program is an attempt to help teachers learn science as it is practiced. The teachers take a "real life" question and explore possible answers. From this exercise, they will learn the skills necessary to lead similar immer-

sion activities in their classrooms.

"The teachers do real science," said JIM JADRICH, Education Office program leader for physics. "The teachers 'discover' a phenomena, they frame a question, they take data, take some more data and then try to reach a reasoned conclusion."

To explore their question of why it is so windy around Wilson Hall, the teachers compared actual wind measurements taken from around the building with measurements from a model wind tunnel they constructed at the Lederman Science Center.

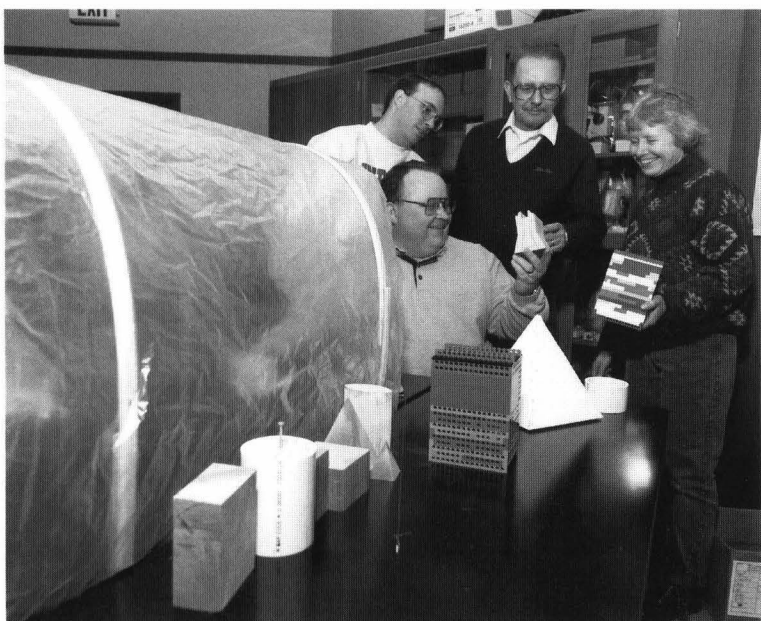
Though not very high-tech, the wind tunnel was extremely useful. Built with wood, sheets of plastic and a three-speed fan, the eight-foot-long model allowed teachers to measure both wind velocity and direction. The teachers built different models of Wilson Hall using wood and Lego blocks to act as replicas of the building. Other odd-shaped objects, such as wooden cones and pyramids were also used in the wind tunnel experiments.

The teachers took data over a period of two weeks, and some early data revealed winds of 50 m.p.h. swirling across the front of Wilson Hall. "We made some fairly extensive qualitative measurements and comparisons," said Jim.

"Excluding some confounding effects due to the few buildings and trees in proximity to the high-rise, we found that the wind patterns and velocities around Wilson Hall were consistent with theory and were reproducible in a wind tunnel. In particular, the excessive wind velocities experienced near the faces of the building are consistent with fluid flow models that say that relatively mild breezes occurring a distance away from a tall building will be accelerated when they move around and past the building. This means that the building itself does not "produce" wind, it simply channels the existing wind blowing towards it in such a way as to dramatically increase its velocity."

Jim added that the experiment also confirms the theory that explains the dramatic changes in wind direction you might experience when you enter Wilson Hall from the ground floor on the west side. "The wind often changes its direction from blowing in the direction you are walking to blowing straight in your face or blowing from the right. At the same time, if you glance at the flags in the front of the building, they indicate a wind direction sometimes completely opposite to this. We found this was easily demonstrated in the wind tunnel and is consistent with flow models."

Even though the teachers had to brave excessive winds and maybe chase a wind-blown hat or two, they all enjoyed the experience. "It was nice to actually do hands-on science in a lab," said Ken Spengler, a chemistry teacher at Palatine High School. "It has been many years since I participated in a 'research project' in which the results were truly unknown. I learned much about the kinds of thinking that research scientists employ." ■



*Palatine Teachers (l-r), Adam Palmer, Ken Spengler, Cathy Berry and Roy Schodtler (seated) show off models of Wilson Hall as they prepare to take data in their specially constructed wind tunnel to the left.*

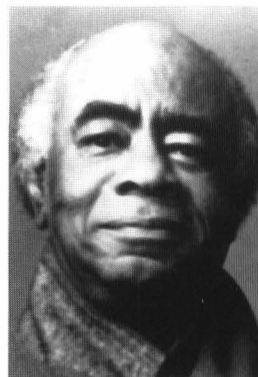
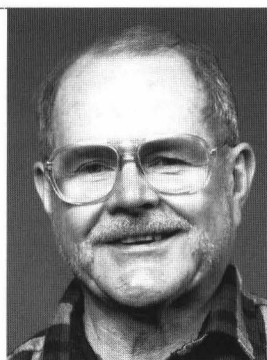
# People Events

## SCHOEBERLEIN TO RETIRE

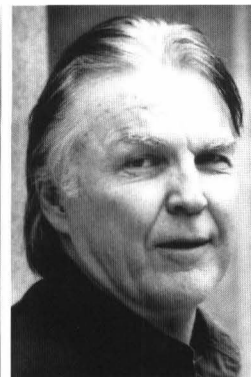
ALLAN SCHOEBERLEIN of the Research Division Electrical Electronics department is retiring March 31 after 14 years of service to Fermilab. Allan began working here in June 1981 in the Cryogenics department. A technician, Allan has worked on many projects including the CDF calorimeter.

In his retirement, Allan and his wife plan to travel, hopefully adding more cruises to their itinerary. They also are looking to settle in on some ocean front property in Florida.

“Fermilab is the greatest place a person would want to work,” said Allan. “The people are fantastic. They are the best. I’ll miss them and Fermilab, but I will be visiting.”



Roscoe Lee Browne



Anthony Zerbe

## ARTS SERIES PRESENTS

### BEHIND THE BROKEN WORDS ROSCOE LEE BROWNE & ANTHONY ZERBE

Two consummate actors of the American stage and screen celebrate some of the greatest writing of the 20th century. Experience Millay, Auden, Cummings, Giradoux, Yeats and others in a performance that moves behind the words to the passion and power that inspired the master poets of this century when Anthony Zerbe and Roscoe Lee Browne visit Ramsey Auditorium on Saturday, March 25 at 8 p.m.

Roscoe Lee Browne is renowned as a Shakespearean actor as well as for his roles in the plays of August Wilson. He launched his theater career with the New York Shakespeare Festival’s inaugural season in Central Park. Television credits include an Emmy Award for *The Cosby Show* and Emmy nominations for *Barney Miller* and *Falcon Crest*. He now has a recurring role on *Sequest*. He received the Los Angeles Drama Critic’s Award for best actor for his performance of Makak in *Dream on Monkey Mountain* by Nobel Laureate Derek Walcott and again for the role of Bynum Walk in *Two Trains Running* by Pulitzer Prize playwright August Wilson. His films include *The Liberation of Lord Byron Jones*, *The Comedians*, *Uptown Saturday Night*, *Topaz* and *Mambo Kings*.

*continued to page six*



## In the Kitchen with Tita

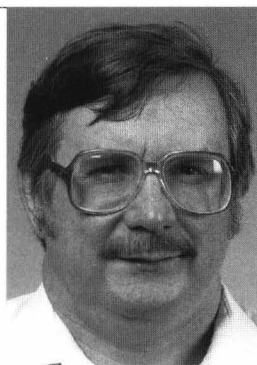
About 30 NALWO members and their guests were treated to a lively, informative and comprehensive cooking demonstration by TITA JENSEN, chef of Chez Leon, in the Users’ Center kitchen on February 24. Tita called her presentation “Meals on the Run” and it was clear that only someone with her enormous energy, wonderful culinary talents and excellent organization could do so much in a mere two hours. She prepared lentil soup, several kinds of chicken, grilled flank steak, medallions of pork, cheese souffle, stir-fried vegetables, potatoes au gratin, Santa Dominican style beans and rice, chocolate cake, flan, and more, while providing exemplary commentary and explanation. The participants saw the ingredients, smelled and touched a few unusual ones, learned about shopping, watched and helped with the preparations, and—best of all—tasted everything afterwards at an impromptu lunch. NALWO thanks Tita, SELITHA RAJA for the organizing and MADY NEWFIELD for writing and distributing copies of the recipes.—Sue Mendelsohn

# AT YOUR (COMMUNITY) SERVICE

## HERBER LEADS CLASS DISCUSSION ON SCIENCE & TECHNOLOGY

What effect do science and technology have on society? The answer to that question is complex and can involve hours of discussion, as RANDOLPH HERBER of the Computing Division found out recently. Randy presented this issue to a group of Elgin Community College students as part of an honor student course *Science, Technology and Humanity*.

Randy taught a section of the course entitled "Obvious Manifestations of Technology in Modern Society" during two class hours January 30 and February 1. The course, consisting of eight one-week sessions, was taught by non-teaching members of the Elgin Community College staff and people from industry. Randy, who also led noon-time seminars on Unix concepts this winter at Fermilab, was encouraged to take part in the ECC course by MARK LEININGER of the Computing Division.



The main emphasis of the section was defining science, technology, humanities and humanity, as well as understanding what effect the main advances in science and technology have had on the past and the future.

"Through the course, I had hoped to lead the students to a more comfortable understanding of science and technology and discuss the degree to which technology has become invisible," noted Randy. "Many people see just the part of the service that they interact with directly and not the technologies in the background. I had also hoped to encourage the students to independently investigate the human condition and its history."

## RICK PIERCE TO DIRECT PLAY

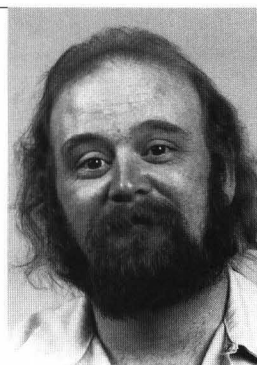
Fermilab's "resident" actor and director, RICK PIERCE (RD), will again display his directing talents this April in a special weekend of three one-act plays at the Albright Theater in Batavia.

"Acting Toward a Cure" will be the theme for the April 22 and 23 special performances. All proceeds will be given to AIDS research. Rick will be directing the Lee Blessing play, *Patient A*, the story of Kimberly Bergalis, the woman who reportedly contracted AIDS through her dentist. Other plays scheduled for the weekend include Harvey

Fierstein's *On Tidy Endings*.

Auditions will be held March 19 and 20 at the Albright Theater.

Performances will be held April 22 and 23. Tickets are \$10. The Albright Theater is located at 101 N. Island Ave. in Batavia.



## ARTS SERIES

*continued from page five*

Anthony Zerbe is recognized as one of the country's most accomplished and versatile actors with extensive credits in television, film and theater. His major films include: *Turning Point*; *Rooster Cogburn*; *Farewell, My Lovely*; *Parallax View*; *Papillon*; *Cool Hand Luke*; *Tell Me The Truth*; and *License to Kill*. He recently starred as Teaspoon Hunter in the TV series *The Young Riders*, and received an Emmy Award for his role in the popular series *Harry O*. He has appeared in numerous TV series from vintage classics such as *Gunsmoke*, *Mission: Impossible* and *Columbo* to this year's *Under Suspicion*; *Murder, She Wrote* and *Tales From The Crypt*.

Join Roscoe Lee Browne and Anthony Zerbe at Ramsey Auditorium on March 25. Tickets are \$15. For reservations, call xARTS.

## PLAN FOR THE FUTURE

The Fermilab Wellness Committee invites you to attend a noon-hour seminar covering legal issues in estate planning. The seminar will be presented on March 23 from noon to 1 p.m. in 1 West by Fermilab counsel, GREG WOJCIECHOWSKI. Greg will cover taxes, trusts, probate, wills and living wills, power of attorney, joint rights and obligations regarding property. Heirs and beneficiaries are also welcome to attend.

## Harper's Index

Number of the four cats who have lived in the White House since 1933 that were owned by Republicans: 1

Number of years since there has been no dog in the White House: 71

## BENEFITS NOTES

---

### CONTACT LENS SOLUTIONS REIMBURSABLE UNDER FSA

The IRS now considers contact lens solutions as reimbursable under Health Care Flexible Spending Accounts (FSA). The term "solutions" refers to any and all solutions required for contact lens maintenance: saline solution, cleaners, rewetting drops, etc.

If you participate in the Health Care Flexible Spending Account, you may submit requests for reimbursement for these items by filling out the Health Care FSA claim form and attach the cash register receipt. If there are several items on the receipt, it would be helpful if you circle the solution item.

IRS Publication 502 includes a list of covered medical expenses. A copy is available for review in the Benefits Office, or you can contact your local IRS office for a copy.

## MOVIES

---

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.

■ March 24: *Raise the Red Lantern*, A beautiful college student becomes the fourth wife of a wealthy man in 1920s north China. Moody tale of oppression and intrigue of the "old" China. Zhang Yimou, director, China, 1991, 125 minutes.

## REDUCE YOUR RISK

---

Look around you. One of every three or four people you see may have high blood pressure. Perhaps you do. High blood pressure is a serious problem in this country. It's a major cause of disability and premature death. It contributes to heart attacks, strokes and kidney problems.

The good news is that high blood pressure is controllable. Many people can control their high blood pressure by changing some of their daily habits. Losing weight, being more physically active, reducing salt intake and moderating alcohol intake are ways to control high blood pressure. Other people have to take medicine as well.

If you don't know what your blood pressure is, find out. To learn more about high blood pressure or to have it checked, stop by the Wilson Hall Users Office,

1E, from 11:30 a.m. to 1 p.m. on Tuesday, March 21, 1995 (Please note location change). A short quiz will be available with literature on reducing your risk.

If you don't have high blood pressure, you can still benefit from adopting a healthy lifestyle. If you smoke, stop. Eat a balanced diet that includes a lot of fruits, vegetables and whole-grain breads and cereals. Cut down on the amount of salt that you use. Be physically active. And use alcohol only in moderation.

If you are diagnosed with high blood pressure, follow your doctor's advice carefully. You may be told to take medicine. If so, take your medicine exactly as prescribed.

*Information for this article was supplied by the American Heart Association.*

## NALWO NEWS

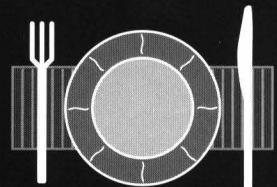
---

The Fermilab International Folk Dancers meet in Ramsey Auditorium on Thursday, March 23 only. From then on folk dancing resumes in Kuhn Barn each Thursday evening at 7 p.m. Please join us for fun with dance and music.

Mady Newfield will lead a discussion on children's books at the NALWO coffee morning in the Users' Center on Thursday morning March 23 from 10 a.m. until noon. These books are fun for people of all ages.

### *Chez Léon Menu*

*Lunch (Wed) \$8.00 • Dinner (Thurs) \$20.00  
Reservations: x4512*



*Wednesday, March 22 • Seafood Vol-au-Vents, roasted red pepper and butter bean salad, apple almond cake*

*Thursday, March 23 • Coconut and vegetable soup, Thai shrimp curry w/ rice, tropical fruit sundae*

# CLASSIFIEDS

## ■ MISCELLANEOUS

Queen-size waterbed w/headboard, heater & safety liner, \$75; TV cart, solid oak, light color, 16"d x 26"w x 25"h, \$75. Call Ron at x4663 days or 708-466-1823 eves.

JVC single compact disc player, model #XL-VII2BK, excell. cond., 1-yr. old, \$50 firm. Call Bill at x4175 or 708-897-4892.

Octagonal walnut club table, 4 matching chairs w/upholstered cushions, 1 leaf, table is 42"l x 42"w x 27"h (w/o leaf), excell. cond., \$300; Ladies' Northwestern golf clubs, right-handed, powder blue/white bag, used twice, \$300; Smith-Corona Galaxie XII manual portable typewriter w/hard-sided carrying case, excellent condition, \$25. Call Shelley at x3324.

Good bike w/front light, \$20; working TV. Call Jun at x2125 leave message.

Macintosh SE, 1M RAM, 20M HD,

\$320; Aria bass guitar w/washburn 25W amp, \$250; 2 girls bikes, \$10 ea.; 3 speed box fan, \$5; 2 baby back carriers, \$3 ea.; Brother sewing machine, \$30; JVC dual speed turntable, \$20; tons of baby clothes. Call Kevin at x8034 or 708-910-7423.

Computer, 286, monitor, 20M hard drive, \$150. Call 708-778-6872 after 6 p.m.

Marantz stereo cassette deck, dolby stereo, hi-speed synchro dubbing, auto tape selector, one touch dubbing & microphone port, \$60. Call Paul at x8114.

Baldwin Spinet piano, walnut finish, excell. cond., \$1,500 o.b.o. Call Gerry at x8580 or 815-895-3095 or Ray at 708-544-6216.

Audio books, large variety of authors, \$5 & \$10. Call 708-365-2168.

## ■ REAL ESTATE

House for sale. Live close to work. 3 bed, 2 bath, family room, living room w/cathedral ceiling and large eat-in

kitchen, solarium & brick patio overlook large fenced yard w/utility barn. C/A, april-air, programmable thermostat, many unique features, \$172,900. Call Dean at x2799 or 708-879-2630.

Apartment Sublet, Fox Valley's Chesapeake Landing, Ogden Ave & RT 59. Available 3/15-6/30. Lease can be renewed. Large 1 Bedroom w/den (can be used as 2nd bedroom). New carpet, washer/dryer, dishwasher, fireplace, balcony, price includes 1 car garage rental. Clubhouse out your front door w/pool, tennis courts, racquetball courts, whirlpool, workout room, \$785/month. Call Mark at x8303 or 708-978-2504.

Condo for sale, Batavia, 20 min. from Lab by bicycle, 3 yrs. old (1992 construction), very clean, like new, 1500 sq. ft., 2 bedrms. plus den, 2 bath, lots of closets, big kitchen, private laundry room, balcony, 1 car att. garage, quiet neighborhood, \$127,000 (negotiable). Call Nina at 708-879-0658.

## FermiNews

*The Newsletter of the  
Fermi National Accelerator Laboratory*



FermiNews is published by the Fermilab Publications Office

MS 107, PO Box 500 Batavia, IL 60510 • 708-840-3278 • TECHPUBS@FNAL

Fermilab is operated by Universities Research Association, Inc.

under contract with the U.S. Department of Energy

The deadline for the  
Fri., April 7, 1995  
issue is WED., MAR. 29.  
Please send your article  
submissions or ideas to  
the Publications Office.

