

## Calendar

### Monday, August 28

PARTICLE ASTROPHYSICS  
SEMINARS WILL RESUME IN THE FALL

**3:30 p.m.** Director's Coffee Break - 2nd  
floor crossover

**4:00 p.m.** All Experimenters' Meeting -  
Curia II

Special Topics: Meson Roof Repair  
Tevatron Electron Lens (TEL-2)

### Tuesday, August 29

**12:00 p.m.** Wellness Works Brown Bag  
Seminar - 1 West

Speaker: B. Svazas, Fermilab

Title: Avian Flu (Bird Flu)

**3:30 p.m.** Director's Coffee Break - 2nd  
floor crossover

THERE WILL BE NO ACCELERATOR  
PHYSICS AND TECHNOLOGY  
SEMINAR TODAY

**4:00 p.m.** Accelerator Physics and  
Technology Seminar - 1 West

Speaker: M. Woods, Stanford Linear  
Accelerator Center

Title: MDI Studies at the ILC and Related  
Test Beam Program at SLAC's End  
Station A Facility

Click [here](#) for a full calendar with links  
to additional information.

## Weather



Chance of Showers **59°/80°**

[Extended Forecast](#)

[Weather at Fermilab](#)

## Current Security Status

## Evidence of string theory written across the sky?



"We call them cosmic strings because they would be so big they would stretch across the whole sky," said astrophysicist Mark Jackson.

Usually, string theory conjures images of things that are very small. But given enough energy, says Fermilab astrophysicist Mark Jackson, there's no reason strings couldn't stretch out be really big. That's the idea behind "cosmic strings," which are very long strings from the early, energetic universe. "We call them cosmic strings because they would be so big they would stretch across the whole sky," said Jackson.

Jackson recently published a paper that refines calculations for detecting cosmic strings. Like cracks in frozen water, strings created just after the Big Bang might still stretch across the sky as imperfections frozen into our cooling universe. "But they don't just sit there,

## Safety Tip of the Week

### Accident investigation



Jerry Harbour is the manager of Defense Technologies at Idaho National Laboratory. He has a PhD in human performance and 25 years of safety management and accident investigation experience.

Last week, 25 Fermilab employees participated in a one-day accident investigation course with Jerry Harbour, manager of Defense Technologies at DOE's Idaho National Laboratory. Harbour stressed the importance of not interpreting an accidents until all the facts are known. He suggested a time-line as a good way to collect data, with three questions to be asked for each event along the line: What do I know? How do I know it? And what does it mean?

Harbour has found that most people believe they were doing the right thing when the accident occurred. Therefore, investigators should always look at the decision-making of participants based on what they understood at the time. Through his study of accidents, Harbour has identified the attributes that represent a safety culture focused on accident prevention, which are important

[Secou Level 3](#)**Wilson Hall Cafe****Monday, August 28**

- Wisconsin Cheese
- Corned Beef Reuben
- Stuffed Chicken Breast
- Mostaccoli Al Forno
- Chicken Oriental Wrap Pineapple
- Assorted Slice Pizza
- Pacific Rim Rice Bowl

The Wilson Hall Cafe accepts Visa, Master Card, Discover and American Express.

[Wilson Hall Cafe Menu](#)

**Chez Leon****Wednesday, August 30****Lunch**

- Wild Rice and Grilled Duck Salad
- Steamed Snow Peas
- Amaretto Cheesecake

**Thursday, August 31****Dinner**

- Melon and Prosciutto
- Grilled Duck w/Zinfandel Fig Sauce
- Wild Rice and Orzo
- Oven Roasted Tomatoes and Goat Cheese
- Lemon Napoleons

[Chez Leon Menu](#)

Call x4598 to make your reservation.

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**Info**

they wiggle around at the speed of light," said Jackson. "Every so often they might hit." As they hit, cosmic strings might snap. "Straight bits might fly toward each other, then re-form into a pattern," Jackson said, sketching a variety of near-right angles formed from longer, perpendicular lines.

Physicists can predict what kinds of angles they should see in the sky, then look for them in two ways: by watching how light bends, and by using gravity-wave detectors like LIGO and VIRGO. "The string has energy, has tension, and so we know from Einstein's theory of gravity that whenever you have energy, it warps the space around it," said Jackson. When the string warps the space around it, light traveling into that space gets distorted. It bends light so you see a double image. Jackson's refinements might help physicists recognize cosmic string patterns when they find these double images. "It might be the first evidence for string theory if we actually saw these things," said Jackson.

--*Siri Steiner*

You can read more about Jackson's cosmic strings paper [on his webpage](#).

**Photo of the Day**

**It's that time of year again:** PPD's Dave Huffman found this praying mantis near DZero. "A yearly guest outside the Dzero assembly building," wrote Huffman, "this guy, or gal, was close to 10 cm long."

in evaluating any organization:

- **Uneasiness** - Are people uneasy that things are not safe enough? Top performing organizations worry about safety.
- **Creep** - Are processes allowed to change through a series of incremental shifts without review? Are non-compliant practices and/or un-reviewed workarounds tolerated?
- **Safety** - Are there solid independent resources for ES&H information and oversight?
- **Assessment** - Is there an effective self-assessment program? Are decisions based on subjective input or on objective data (e.g., indicators)?
- **Communication** - Is there good communication throughout the organization? Are workers comfortable about bringing bad news to their supervisors?
- **Improvement** - Are recurrent problems investigated? Do the same problems keep popping up?

[Safety Tip of the Week Archive](#)

**Announcements****Benefits survey**

Would you like to give feedback about your benefits? The Benefits Office invites you to participate in a survey, and will use your feedback to enhance customer service and review benefit offerings. You may complete the survey [electronically](#) or come to the Benefits Office to pick up a paper copy. The survey ends September 8.

Fermilab Today is online at: <http://www.fnal.gov/today/>

Send comments and suggestions to [today@fnal.gov](mailto:today@fnal.gov)

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## In the News

### **CNN.com, August 25, 2006: Telescope set to reveal 'Big Bang'**

(CNN) -- An ambitious project to build the world's largest radio telescope high in the Chilean Andes looks set to give astronomers their best ever view of deep space -- and provide them with a dramatic window back through time to the formation of the universe itself.

The Atacama Large Millimeter Array (ALMA), currently being built in the Atacama Desert, northern Chile, will enable scientists to observe sub-millimeter radiation waves, giving them a far more detailed picture of the universe than has previously been possible with either optical or infrared telescopes.

The telescope, which is due to be completed by 2012, will consist of 66 radio antennae spread across the Llano de Chajnantor plateau, 5,000 meters above sea level.

[Read More](#)

## Blood drive

Fermilab's blood drive will be held on August 28 and 29 from 8:00 a.m. to 2:00 p.m. On August 28, the drive will be held in Wilson Hall's ground floor NE training room. On August 29, the drive will be held in the Industrial Center Building east ground floor (follow the signs).

Appointments can be scheduled [on the web](#) or by calling Margie at x3411 or Lori x6615.

## Brown Bag Seminar on Avian Flu

Wellness Works presents a Brown Bag Seminar on Avian Flu (Bird Flu) on Tuesday, August 29, from noon to 1 p.m. in 1 West. The seminar will be presented by Brian Svazas, director of Occupational Health for Fermilab. Learn facts vs. fiction, how to limit exposure, importance of hand washing and preparedness supplies.

## [Upcoming Activities](#)