

## Calendar

### Monday, June 14

THEORETICAL ASTROPHYSICS  
SEMINARS WILL RESUME IN THE FALL

**3:30 p.m.** DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

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

Special Topics: CDF Central Outer

Tracker Status Report

Experimenter Contributions to Booster  
Improvements

### Tuesday, June 15

**Noon** Summer Lecture Series - 1 West

Speaker: E. Kolb, Fermilab

Title: Big Bang / Cosmology

**3:30 p.m.** DIRECTOR'S COFFEE

BREAK 2nd Flr X-Over

THERE WILL BE NO ACCELERATOR  
PHYSICS AND TECHNOLOGY  
SEMINAR TODAY

## Wilson Hall Cafe

### Monday, June 14

Cream of Chicken Rice Soup

Chicken Tenders \$4.75

Chicken Fried Steak \$4.75

Breaded Veal with Mushroom Cream

Sauce \$3.50

American Submarine \$4.75

Pepperoni Mushroom Calzones \$2.75

Stirfry Teriyaki \$4.75

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

## Weather

## Joint Antiproton Accumulator-Recycler Store Achieved

On June 9, the Accelerator Division completed the first "mixed-pbar shot," in which antiprotons from both the Accumulator and the



An aerial view of the antiproton source.

Recycler were transferred to the Tevatron for the same store. Store 3564, which collided from noon Wednesday until Thursday evening, included eight bunches of antiprotons from the Recycler and 28 bunches from the Accumulator.

"Some careful choreography and planning was required to make this happen," said Elvin Harms, head of the Antiproton Source Department. "It took many people in the Accelerator Division to make this work, but special credit goes to Dave McGinnis and Run Coordinator Jim Morgan for championing this mode of operation."

One month of planning by Harms, Dave Capista, Cons Gattuso, Jerry Annala, Brian Hendricks, Stan Johnson and Jean Slaughter preceded Wednesday's event. The Recycler regularly takes antiprotons from the Accumulator for commissioning purposes and has been used to provide antiprotons for two stores since January 2004, but this marks the first time that the two machines were combined for one store. More mixed-pbar shots are planned in order to integrate the Recycler into

## Safety Tip of the Week

### Lightning: The Shocking Truth

In a typical year, 80 people die and 800 people are injured by lightning strikes in the United States. Many of us have actually seen lightning strike



on Fermilab's site, and lightning damage is not unusual here. The cloud-to-ground lightning strike rate is approximately five per km<sup>2</sup> per year in the Midwest. Based upon that calculation, we expect that Fermilab is struck by lightning at least 100 times per year.

The most dangerous place to be during a lightning storm is outdoors. The National Weather Service recommends use of the 30/30 rule to avoid injury. When lightning is seen, count the time until thunder is heard. If it is 30 seconds or less, seek shelter immediately. Stay there for at least 30 minutes after the last rumble. The shelter should be a substantial building such as a home or inside a car with a metal roof. Covered picnic shelters, tents, and convertibles even with the roof up are not safe.

Keep in mind that high points attract lightning and conductors transmit electrical surges. Avoid high locations as well as tall objects such as isolated trees. Metal fences, power lines, water, and less obvious conductors (e.g., rebar) effectively increase your size as a target. If you feel your skin tingle, or your hair stand on end, you are about to be struck



Chance Thunderstorms **82°/60°**

[Extended Forecast](#)

[Weather at Fermilab](#)

### Current Security Status

[Secon Level 3](#)

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normal accelerator operations and possibly increase Tevatron luminosity.

### Correction

Last week's article, "Forty Students from Wylie, Texas Visit Fermilab," contained a typo. Leon Lederman's quote should have said, "A good teacher should be filled with the sense of science and not be blasé about things." *Fermilab Today* regrets the error.

### Accelerator Update

#### June 9 - June 11

- During this 48 hour period Operations established two stores that provided approximately 35 hours and 31 minutes of luminosity to the experiments.
- Accelerator experts establish the first Mixed-Antiproton store on June 9
- Booster suffers from a failed PFN kicker cable
- CDF data taking diminished due to colliding beam problems
- Pbar stack lost

[View the current accelerator update](#)

[View the Tevatron Luminosity Charts](#)

### In the News

#### From EurekAlert, June 11, 2004

**Newly devised test may confirm strings as fundamental constituent of matter, energy**

Santa Barbara, Calif.--According to string theory, all the different particles that constitute physical reality are made of the same thing--tiny looped strings whose different vibrations give rise to the different fundamental particles that make up everything we know. Whether this theory correctly portrays fundamental reality is one of the biggest questions

by lightning! Squat low to the ground on the balls of your feet. Place your hands on your knees with your head between them. Make yourself the smallest target possible, and minimize your contact with the ground.

**Have a great day and let's work safely all week!**

[Safety Tip of the Week Archive](#)

### Announcements

#### Upcoming Classes

- June 15 & 17: HTML Intro, Intro to Web Publishing (two half days)
- June 21-25: LabView Intermediate I: Suc. Dev. Prac. (two sessions AM & PM)
- June 29 -July 1: HTML Intermediate: Enhanced Layout (two half days)
- June 30: Excel Intro
- July 8, 21: Accomplishment Report Writing
- July 30: Excel Intermediate
- August 4 & 11: Adobe Acrobat 6.0 Prof. (two half-days)
- August 4, 12: Goal Setting
- August 5: Performance Appraisal Workshop
- August 10: Access Intro
- August 24: Word Intro
- August 25: Adobe Acrobat 6.0 Prof. - Forms, Security & Accessibility (one half-day)
- Sept. 14-16: JavaScript Programming [more information](#)

#### Free English Classes

NALWO sponsored free English class: Beginners and advanced; Mondays at the Users Center from 9:30 a.m. to 11:00 a.m.

#### Fermilab June Golf Outing

The first golf outing of the year will be on

facing physicists.

In the June on-line Journal of High Energy Physics (JHEP), three theoretical physicists propose the most viable test to date for determining whether string theory is on the right track. The effect that they describe and that could be discovered by LIGO (Laser Interferometer Gravitational-Wave Observatory), a facility for detecting gravitational waves that is just becoming operational, could provide support for string theory within two years.

[read more](#)

Friday, June 25th. This outing is open to everyone (no handicap is required). It will be a 1:00 shotgun start at Mill Creek Golf Club in Geneva. The entry fee is \$55 per person and includes green fees, cart, and all event contests. Deadline to sign up is June 14th. For more information or to sign up, contact [Tim Gierhart](#), x5070 or [Jerry Leibfritz](#), x8779.