

## Calendar

### Wednesday, January 26

**11:00 a.m.** Fermilab ILC R&D Meeting - 1 West

Speaker: V. Kuchler, Fermilab

Title: ILC Conventional Facilities Update

Speaker: J. Jackson, Fermilab

Title: Recent Development in ILC Communications

**3:00 p.m.** Proton Driver General Meeting - 1 West

Speaker: D. Bogert, Fermilab

Title: Civil Construction for Proton Driver Linac

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

BREAK - 2nd Flr X-Over

**4:00 p.m.** Fermilab Colloquium - 1 West

Speaker: S. Geer, Fermilab

Title: Physics at a New Fermilab Proton Driver

### Thursday, January 27

**2:30 p.m.** Theoretical Physics Seminar - Curia II

Speaker: J. Santiago, Fermilab

Title: Gravity on Codimension 2 Braneworlds

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

BREAK - 2nd Flr X-Over

THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

## Weather



Chance Flurries **27°/9°**

[Extended Forecast](#)

[Weather at Fermilab](#)

## Gunn Joins Astronomy Stars With AAS Russell Award



Receiving the American Astronomical Society's Henry Norris Russell Lectureship for lifetime achievement means joining a sky-watching pantheon for Jim Gunn of Princeton University, a founder of the Sloan Digital Sky Survey. Among past recipients: Sir Martin Rees (2004), John Bahcall (1999), Vera Rubin (1994), Fred Whipple (1987), Fred Hoyle (1971), Gerard Kuiper (1959), Enrico Fermi (1953), Jan Oort (1951), S. Chandrasekhar (1949), and Henry N. Russell, the first honoree in 1946.

"What an honor to be included in that company," says Gunn, whose own achievements include some of the earliest uses of charge-coupled devices (CCD's) for sky

surveys during the 1980s—previewing the methods and enormous successes of SDSS. Working with Don

Schneider and Maarten Schmidt (himself a Russell recipient in 1978) at Mt. Palomar Observatory, Gunn and



Jim Gunn

## Universities Help on Booster Projects

*This article is the second in a series that will focus on the benefits of Fermilab/University collaboration on different accelerator projects.*



Since 2003, Xiaobiao Huang of Indiana University has been helping to build a model to find possible defects in the Booster due to missing information. (Click on image for larger version.)

With many accelerator projects on the horizon, Fermilab is encouraging university groups to get involved in accelerator projects such as those with the Fermilab Booster, in order to create a better balance between detector physics and accelerator physics. Currently, for example, each large collider experiment at Fermilab has about 600 scientists, while the Accelerator Division has about 150 scientists.

In the past, particle physics detectors have typically been of equal or greater complexity than the accelerators at which they have operated, but that's changing. "It's very valuable for experimenters to understand accelerators and their potential problems," said Eric Prebys of Fermilab's Accelerator Division who works on the Booster. "Working on the accelerators is also a different

## Current Security Status

### [Secou Level 3](#)

## Wilson Hall Cafe

### Wednesday, January 26

Portabello Harvest Grain Soup

Santa Fe Chicken Quesadilla \$4.75

Garlic Herb Roasted Pork \$3.75

Jambalaya \$3.75

Roast Beef on Ciabatta w/ Red Pepper

Mayo \$4.75

Meatlover's Pizza \$2.75

Pesto Shrimp Linguini with Leeks &

Tomatoes \$4.75

### [Wilson Hall Cafe Menu](#)

[Chez Leon](#) will be closed through January and February

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colleagues established records for high red-shift quasars, at  $z=4.75$  and then  $z=4.89$ , before 1990.

"Those stood until SDSS turned on [in 1998]," Gunn says. "Then Sloan toppled all the records like mad. The last few months have been typical, and now we're up to  $z=6.4$ . The power of the Survey is quite well illustrated...I'm sure the successes of the Survey were a major impetus for this award."

Gunn describes SDSS as "the focus of my life" for 15 years. The first conceptual meetings, he recalls, actually date back to 1985, and the apparatus took 10 years to build. "Nothing like this had been tried before," he says. "This was the first time a large collaboration built an observatory as an experiment with a definite scientific prize at the end. This was a new way for astronomers to do business."

With data releases opening its discoveries for wide-ranging access by other researchers, SDSS has made invaluable advances in gravitational lensing, very high redshift quasars, astronomy of the solar system, complex structures of galaxies, and rigorous accuracy and uniformity for astronomical data. "I don't think we've failed to deliver on anything we hoped for from Sloan," Gunn says. "And we've delivered far, far more than we ever expected on a very wide spectrum."

### [Sloan Digital Sky Survey](#)

## In the News

environment than working on the detectors, and some people are attracted to that."

Because Booster performance plays a critical role in the success of the MiniBooNE and NuMI/MINOS experiments, physicists and universities from these groups have offered a great deal of help to the Booster. "MiniBooNE collaborators contributed early on to the development of ramping corrector magnets in the Booster," Prebys said. "Both collaborations have also helped by contributing their machine shops to build components for copper RF cavities, which universities built at a fraction of the price Fermilab would have paid to build the cavities on its own." Other more speculative projects include Columbia University's assistance in developing a robot capable of going into high radiation areas.

Graduate students have also contributed to the Booster through the Fermilab Accelerator PhD program. Xiaobiao Huang, from the University of Indiana, has been working on precision modeling of the Booster, and Bob Zwaska, from the University of Texas at Austin has been working on the synchronization of the Booster with the Main Injector.

**Next:** NuMI

## Announcements

## From *The New York Times*, January 25, 2005

### Brace Yourself! Here Comes Einstein's Year

By Dennis Overbye

"What are you up to, you frozen whale, you smoked, dried, canned piece of soul?"

So did Albert Einstein, then a 26-year-old patent clerk in Bern, Switzerland, begin a letter to his pal Conrad Habicht in the spring of 1905.

Whatever Habicht, a math teacher in Schaffhausen, had been up to was not much compared to his irreverent friend, who had been altering the foundations of physics during the few free hours left to a young father, husband and government worker. As he related to Habicht, Einstein had just finished writing three major physics papers.

[read more](#)

## From the *Chicago Tribune*, January 25, 2005

### The competitive edge

Argonne National Laboratory, near Lemont, is a leading contender for the \$1 billion research facility called the Rare Isotope Accelerator. Its chief competitor for this U.S. Department of Energy project is Michigan State University in East Lansing. The DOE is expected to choose a site late this spring.

This is a critical project--the DOE ranks it third on a priority list of 28 research projects deemed critical to the nation's future over the next two decades. It is expected to be the world's leading facility for nuclear science research.

[read more](#)

## February issue of *symmetry* Available Online

The February issue of [symmetry](#) is now available online. Fermilab employees will receive a print copy of the latest issue in their mailboxes tomorrow.

### Site Listserv Upgrade

The Computing Division will upgrade the site listserv on Thursday morning from 6:30 a.m. to 7:30 a.m. This is a software upgrade and brings the FNAL listserv to the most recent version. Information on the upgrade is [available online](#).

## URA Scholarship Applications Now Available

Applications are available online January 1 through March 1. Scholarships will be awarded in early April. URA Scholarships are awarded on the basis of SAT scores to children of regular, full-time Fermilab employees. Questions about the program may be directed to Jeannelle Smith of Human Resources, x4367.

[more information](#)

### Unix Users Meeting

The next Unix Users' Meeting will be on Wednesday, January 26 from 1:00 p.m. to 3:00 p.m. in Curia II.

Agenda:

Marc Mengel - Ups change to TWW  
Joe Klemencic - Xhosting your security  
Connie & Troy - Linux updates

**January PC Manager Meeting** The next PC Manager Meeting will be on Wednesday, January 26, from 9 to 10 a.m. in WH8X (Hornets Nest).

Agenda:

- Announcements and Updates (Jack Schmidt)  
- FNAL Training Information (Sara

Webber)

- Phishing with Joe: Spyware 101 (Joe Klemencic - main talk!)

- Experiences with the Microsoft AntiSpyware Tool (Andy Lego)

### **Recreation Office Offers Discount to Employee Printing Services**

Employee Printing Services, one of Recreation's discount services, offers a full line of invitations, announcements, social stationery, holiday cards and accessories at a 40% discount to help you celebrate the important milestones in life. Catalogs, for both invitations/announcements and Holiday Cards are available in the Recreation Office and can be checked out for up to a week. For more information contact the Recreation Office, X5427 or X2548

### **International Folk Dancing**

International Folk Dancing will be held at 7:30 p.m. Thursday, January 27, at the Geneva American Legion Post, 22 South Second St. in downtown Geneva, one block west of Route 31 and one block south of Route 38, across from the Geneva Public Library. Newcomers are always welcome. Info at 630-584-0825 or 630-840-8194 or [folkdance@fnal.gov](mailto:folkdance@fnal.gov).

### **[Upcoming Activities](#)**