

Calendar

Wed., June 27

1:00 p.m.

Fermilab ILC R&D Meeting - One West

To Be Announced

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

4:00 p.m.

Fermilab Colloquium - One West

Speaker: P. Singh, Bhabha Atomic Research Centre, India
Title: Accelerator Development in India for ADS Programme

Thurs., June 28

1:00 p.m.

ILC ALCPG Physics and Detector R&D Seminar - WH-8XO, Hornets' Nest

To Be Announced

1:30 p.m.

Particle Astrophysics Seminar - Curia II (NOTE TIME, DATE, LOCATION)

Speaker: I. Shapiro, Universidade Federal de Juiz de Fora, Brazil

Title: The Cosmological Constant Problems and Renormalization Group

2:30 p.m.

Theoretical Physics Seminar - Curia II

Speaker: E. Gamiz, University of Illinois, Urbana-Champaign

Title: B0-B0bar Mixing Parameters in Lattice QCD with $N_f = 2+1$ Sea Quarks

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

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

Feature

Neutrino Physics 101



A former summer student looks at phototubes from MiniBooNE, a neutrino experiment.

Next Monday, an international group of students will converge on Fermilab's campus for the first ever Fermilab/KEK [Neutrino Physics Summer School](#). The program aims to educate up-and-coming physicists in subjects that aren't yet part of any curriculum, because as program Co-Director and Fermilab theorist Boris Kayser said, "The revolution in neutrino physics has only just occurred."

From July 2 - 13, participants in the course will explore the experimental and theoretical challenges that lie on the horizon of neutrino physics. Topics that will be addressed include neutrino oscillations, differences between neutrino-matter interactions and their neutrino-antimatter analogues, and the neutrinos' impact on the structure of a number of Grand Unified Theories.

Why spend a summer studying neutrinos? Kayser pointed to the questions raised by the relatively recent ground-breaking discovery of neutrino mass. It is likely that answering these questions will be the focus of a major international effort in the coming years.

"If we [the international physics community] wish to pursue an effective program, it is timely to have a school that lays out the physics of a neutrino with non-zero mass," he said.

Kayser also emphasized the importance of the social aspects of the school. "Social interaction is extremely important for the future of the field. Students may form professional relationships and collaborations here that

From Facilities Engineering Services

Every effort counts

Today's column is by Randy Ortgiesen, head of the Facilities Engineering Services Section.

You've probably heard it said before: In Illinois there are only two seasons--winter and construction. As you drive around the laboratory this time of year, many work activities indicate that it's no longer winter season. Roads are being paved, building roofs are being rehabilitated, high voltage transmission lines are being constructed and many activities are taking place to keep the ponds, grounds and prairie healthy and attractive.



Randy Ortgiesen

While these outdoor activities are easily spotted, there are many others that can go unnoticed. They get completed in offices, mechanical rooms, tunnels, service buildings and control centers by the engineers, technicians, craft personnel, clerks, operators and other laboratory staff that keep our laboratory safe, operational and reliable.

Carrying out our day-to-day activities in the safest and most effective way is important. An all-hands effort is what it takes not only to maintain the current mission of the laboratory, but to lay the foundation for a long and promising future of our lab.

Recent visits by various high-level officials from the Department of Energy and other governmental offices resulted in many favorable comments that indicate to me our day-to-day efforts are being noticed. Even with these efforts, of course, we aren't guaranteed anything. But without them it would be much more challenging for Fermilab leadership to make the case for new projects at the lab.

In the News

Weather**Thunderstorms 86°/64°****[Extended Forecast](#)****[Weather at Fermilab](#)****Current Security Status****[Secou Level 3](#)****Wilson Hall Cafe****Wednesday, June 27**

- Creamy mushroom chicken soup
- Cajun chicken ranch
- Chicken wellington
- Italian sausage w/peppers
- Smoked turkey panini pesto mayo
- Assorted sliced pizza
- Chicken alfredo fettucine

[Wilson Hall Cafe Menu](#)**Chez Leon****Wednesday, June 27****Lunch**

- Antipasto salad
- Cassata

Thursday, June 28**Dinner**

- Gazpacho
- Seafood paella
- Orange caramel flan

[Chez Leon Menu](#)

Call x4598 to make your reservation.

Archives**[Fermilab Today](#)****[Result of the Week](#)****[Safety Tip of the Week](#)****[ILC NewsLine](#)****Info**

could last a lifetime," he said.

Kayser and the other Co-Directors, Regina Rameika, and Ed Blucher, a physicist at the University of Chicago, plan for the school to evolve into program that moves to a new laboratory each year, making it a truly international institution. The program faculty hopes to instill a new generation of physicists with the same zeal that has led to so many discoveries in the past.

-- J. Bryan Lowder

Profile**A Fermilab Mr. Fix-It**

Robert "Obie" Oberholtzer

On a recent Saturday evening, Robert "Obie" Oberholtzer, Fermilab senior engineering associate in the Accelerator Division's Antiproton Source Department, began to settle into his weekend routine. He turned on some oldies, fired up the grill and was just cracking open an Old Style when a Fermilab colleague called about a problem with one of the accelerator machines. Oberholtzer spent the rest of his Saturday night fixing the machine.

"Obie is probably one of the leading contenders for the person most called to come in during off hours," said Roger Dixon, Accelerator Division head. "He frequently spends a large fraction of his weekend at the lab solving electrical problems. If we come across something difficult, Obie is who we call."

Oberholtzer was involved in the design, construction, installation and commissioning of the Antiproton Source. He continues to help maintain the electrical components of the machine, what he calls an around-the-clock job.

One of Oberholtzer's most memorable weekends was in 1975 when he was called into work during a heavy snowstorm. After explaining that the 12 inches of snow prevented him from driving, the lab sent a snowplow to pick him up. When the plow returned him home, he laughingly said, "While you're here, would you mind clearing my driveway?"

**From *Christian Science Monitor*
June 21, 2007****Einstein's theory is put to the test in space**

Scientists hope new satellite data will show how masses such as Earth affect space and time.

Physicists testing Albert Einstein's relativity theory need abundant patience and exquisite measurement skills. The theory-testing Gravity Probe-B satellite, carrying the most nearly perfect rotating spheres ever made, is rewarding both of those virtues. It took 40 years of work to finally get the spheres into orbit three years ago. This month's update of the analysis of the spherical gyroscope data promises significant scientific results.

Meanwhile, a plan to seek Einstein's predicted gravitational waves, which are ripples in space itself, passed a major milestone June 18. In a ceremony at the Paris Air Show, the heads of National Aeronautics and Space Administration (NASA) and the European Space Agency (ESA) signed a formal agreement to proceed with the first stage of this joint project. For the project to succeed, physicists must be able to guarantee that a mass can float freely in space completely undisturbed by anything but gravitational waves. Engineers must also be able to control the spacecraft position to within a few millionths of a millimeter. The first step is to launch a satellite to test those skills in 2010.

[Read more](#)

Announcements**DASTOW Photos Online**

A selection of this year's DASTOW photos is online [here](#). Photos are also available on the [VMS web site](#).

Deadline for Collaborative Initiative, June 30

Proposals for the Strategic Collaborative Initiatives program, which provides support for collaborative research projects between University of Chicago faculty and Fermilab, need to be submitted by June 30. For more information on the program, please click [here](#).

Sign up for Fermilab Blood Drive

Employees, users and summers students can still sign up for Fermilab's quarterly blood drive, taking place Wednesday June 27 from 8:00 a.m. to 2:00 p.m. Walk-ins will be

Fermilab Today

is online at:

www.fnal.gov/today/

Send comments and suggestions to:

today@fnal.gov

When he first came to the lab in 1968, there was no Accelerator Division. He began working on the beam transfer system and later joined the switchyard group. He helped install the five million feet of necessary cable when the main injector was built, and assisted with installing electrical components when the Linac was upgraded from 250 MeV to 400 MeV.

Each day brings new challenges and Oberholtzer still enjoys his job. Although he could retire, Oberholtzer promised Dixon he would stay until the Tevatron shut down. "My job is interesting because I never have to do the same thing over and over - it's always something new and different."

-- *Amelia Williamson*

welcome. The blood drive will be located in the Wilson Hall ground floor training room. Call Diana at x3771 or Margie at x3411 or sign up [online](#).

NALWO Chicago Boat Tour

NALWO will host a Chicago sightseeing boat tour on Thursday, July 12 from 9:45 a.m. until 4 p.m. From a boat on the Chicago River, attendees can see Chicago architecture and historic landmarks. A bus will leave the Lederman Education Center at 9:45 a.m. and will return at 4 p.m. \$18 for adults, \$8 for children ages 3-11 and free for children younger than three. For more information or to register, contact Selitha Raja by phone at (630) 305-7769 or via [email](#).

June Wilson Hall window washing

Window washing at Wilson Hall will continue through the end of June. Wilson Hall's interior will be washed this week. Please avoid walking through or moving barricades.

[Additional Activities](#)