

Calendar

Friday, Oct. 24

11:50 a.m. - 12:20 p.m.

[LHC Users meeting lecture](#) - One

West

Title: Perspectives from OSTP

Speaker: Jean Cottam, OSTP

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd

Flr X-Over

4 p.m.

[Joint Experimental-Theoretical](#)

[Physics Seminar](#) - One West

Speaker: Alan Boyle, *MSNBC*

Title: Magnetic Attraction: A

Journalist's View of the LHC's Status in Popular Culture

8 p.m.

[Fermilab International Film Society](#) -

Auditorium

Tickets: Adults \$5

Title: A New Leaf

Sunday, Oct. 26

2 p.m.

Special Seminar - One West

Ukrainian Medical Association of North America

Speaker: Dr. Borys R. Mychalczak, Memorial Sloan Kettering Cancer Center

Title: The Death of Alexander

Litvinenko, Understanding the Health Effects of Polonium 210 Exposure

Monday, Oct. 27

2:30 p.m.

[Particle Astrophysics Seminar](#) - Curia

II

Speaker: Wan-il Park, Korea

Advanced Institute of Science & Technology

Title: Thermal Inflation, Gravitational Waves, Baryogenesis and Dark Matter

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd

Flr X-Over

4 p.m. All Experimenters' Meeting - Curia II

Special Topics: Construction of the New Booster Multipole Correctors at TD; JASMIN T-972 2008 Run; CDF Computing Report

Feature

KTeV crystals to shine again



JPARC graduate students work to pack crystals from Fermilab's former KTeV experiment for shipment. JPARC will use the crystals in an experiment that will look for ultra-rare kaon decays.

From 1997 to 1999, scientists at Fermilab conducted an experiment using the most accurate energy-measuring device ever built for high-energy physics.

Then researchers carefully stored the experiment, KTeV.

Until now.

Graduate students from the Japan Proton Accelerator Research Complex, or JPARC, arrived last Wednesday to help package the 3,100 crystals stored in KTeV's detector for shipping to Japan. The detector's crystals are the key to its sensitivity. They are made of cesium iodide, a heavy and transparent compound that has the density to stop a particle and the ability to generate and conduct light. Scientists from JPARC will use the crystals at in an experiment complementary to those that will be performed at the Large Hadron Collider.

Researchers at JPARC will study ultra-rare kaon decays, outcomes that occur a few times in a hundred billion collisions.

"Rare decays are a very stringent test of the Standard Model," said Hogan Nguyen, PPD Technical Centers Department head. Learning more about the parameters of particle decay will help scientists better understand what they find in collisions in the LHC.

The KTeV experiment used the crystals to measure energy from photons and electrons, Nguyen said. When the particles enter the crystals, the interaction between the crystal and the particles puts the crystals into an excited state. As the crystals de-excite, they emit near-UV light. Photomultipliers measure the electric current the interaction generates.

From iSGTW

Catching quakes with laptops

Inside your laptop is a small accelerometer chip, there to protect the delicate moving parts of your hard disk from sudden jolts.

It turns out that the same chip is a pretty good earthquake sensor, too—especially if the signals from lots of them are compared, in order to filter out more mundane sources of laptop vibrations, such as typing.

It's an approach that is starting to gain acceptance. The project Quake Catcher Network (QCN), already has about 1500 laptops connected in a network that has detected several tremors, including a magnitude 5.4 quake in Los Angeles in July. Led by Elizabeth Cochran at the University of California, Riverside, and Jesse Lawrence at Stanford University, QCN uses the same BOINC platform for volunteer computing that projects like SETI@home rely on.

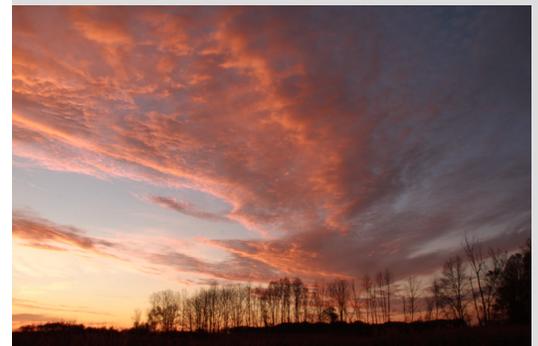
One of the benefits of this new technology is price: Research-grade earthquake sensors typically cost between \$10,000 and \$100,000. Of course, they are much more sensitive, and can detect the subtle signals of far-away quakes that laptops will never pick up. But Lawrence notes that, "with many more cheap sensors, instead of guessing where strong motions were felt by interpolating between sensors, we should be able to know where strong motions were felt immediately, because we have sensors there."

[Read more](#)

—*Francois Grey, for iSGTW*

Photo of the Day

Fall sunrise



AD's Mike McGee submitted this photo of Thursday's sunrise, taken from A2 while facing the Main Ring.

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

Weather



Showers 55°/42°

[Extended Forecast](#)
[Weather at Fermilab](#)

Current Security Status

[Secon Level 3](#)

Wilson Hall Cafe

Friday, Oct. 24

- Smart cuisine: Italian vegetable soup
- Teriyaki chicken
- Southern fried chicken
- Smart cuisine: Mediterranean baked tilapia
- Eggplant parmesan panini
- Assorted sliced pizza
- Assorted sub sandwich

[Wilson Hall Cafe Menu](#)

Chez Leon

Wednesday, Oct. 29
Lunch

- Magnolia chicken jambalaya
- Chocolate pecan bourbon tart

Thursday, Oct. 30
Dinner

- Closed

[Chez Leon Menu](#)

Call x4598 to make your reservation.

Archives

Fermilab Today

[Result of the Week](#)

[Safety Tip of the Week](#)

[ILC NewsLine](#)

Info



Ray Safarik, a technical specialist at Fermilab, shows the partially dismantled KTEV detector.

Moving the crystals will save both institutions money. Sending the crystals to Japan relieves Fermilab of the responsibility of maintaining the sensitive crystals in a useable state and saves Japan from having to purchase new parts.

The materials that make up the detectors cost about \$6 million in 1993, said Ray Safarik, a technical specialist at Fermilab who has been coordinating the move.

"They would cost considerably more today," he said. But transporting them to Japan for reuse costs less than \$80,000.

The ongoing move began in spring of 2007.

-- *Kathryn Grim*

The University of Chicago launches new research catalyst program

From *University of Chicago Chronicle*, Oct. 23, 2008

The University has launched the Arete Initiative, an intellectual incubator program designed to assist faculty in developing innovative, large-scale interdisciplinary research projects.

In announcing the initiative, Donald Levy, the Albert A. Michelson Distinguished Service Professor in Chemistry and Vice President for Research and for National Laboratories, wrote that Arete's primary purpose is "to remove the barriers to success by providing expertise in leading interdisciplinary teams" and ensure that investigators have the resources they need to produce "research innovations, advance what were thought to be intractable problems, influence multiple disciplines and spawn new scholarly fields."...

...Laboratory researchers interested in the possibility of establishing projects in conjunction with a University faculty member(s) through Arete may call (773) 834-9870 or e-mail arete@uchicago.edu. For more information, visit arete.uchicago.edu.

[Read more](#)

Announcements

[Have a safe day!](#)

Lecture on Litvinenko death

Borys Mychalczak, a New York-based associate clinical professor in radiation oncology, will present "The Death of Alexander Litvinenko: Understanding the Health Effects of Polonium 210 Exposure" at 2 p.m. Sunday, Oct. 26, in Wilson Hall's One West. The talk is sponsored by The Ukrainian Medical Association of North America, Illinois Branch, as part of its fall lecture, which coincides with a tour of Fermilab. The lecture is free and open to all Fermilab employees and users.

Word Tips, Tricks & Techniques Nov. 6

A class in tips, tricks and techniques for Microsoft Word will take place Nov. 6. This class will allow attendees to use Word to enable better time management. Learn these tips and shortcuts to enhance task performance and create more appealing documents. [Learn more and enroll](#)

FileMaker Pro course Nov. 19

A course on FileMaker Pro 8.0 Level 1 will take place on Nov. 19. Attendees can learn to create and use databases to store and organize information so that it is available for efficient retrieval. [Learn more and enroll](#).

Traffic safety poster contest for kids

The Traffic Safety Subcommittee is sponsoring a traffic safety poster contest for fourth and fifth grade students of Fermilab employees, users and contractors. The posters should promote increased traffic safety awareness. Entries are due Oct. 31. The contest winner will be announced in *Fermilab Today*. The top posters will be displayed in the Wilson Hall atrium. For more information and an entry form, [click here](#).

English Country Dancing Oct. 26

English Country Dancing will take place Sunday, Oct. 26, at Kuhn Village Barn. Dancing begins at 2 p.m. to live music by Old Fezziwig's Band. A potluck supper will follow around 5:30 p.m. Newcomers are always welcome. All the dances are taught and walked through. No partner is required. For more information please contact folkdance@fnal.gov or call (630) 584-0825 or (630) 840-8194.

Classifieds

Find new [classified ads](#) on *Fermilab Today*.

Additional Activities

Fermilab Today is online at:

www.fnal.gov/today/

Send comments and suggestions to:

today@fnal.gov

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