

Calendar

Monday, April 20
2:30 p.m.

[Particle Astrophysics Seminar](#)

- Curia II

Speaker: Enrique Gaztanaga,
ICE/CSIC, Barcelona

Title: Baryon Acoustic
Oscillations with Luminous
Red Galaxies and the PAU
Survey

3:30 p.m.

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

4 p.m.

All Experimenters' Meeting -
Curia II

Special Topics: Fuzzing and
Main Injector Losses; Linac
Low-Level RF Upgrade; CMS
FPIX Reinstallation/
Commissioning

Tuesday, April 21
3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over
4 p.m.

Accelerator Physics and
Technology Seminar - One
West

Speaker: Eliana Gianfelice-
Wendt, Fermilab

Title: Accelerator Physics
Developments for Tevatron
Run II: Lecture 2: Part 2:
Linear Optics Measurements
(Closed Orbit Distortion, Turn-
by-Turn)

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

Weather



Chance of showers
51°/36°

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

Feature

Lunchtime conversation may help combat global warming



AD's Todd Johnson built this thermoacoustic engine, which converts sunlight or any other heat source into acoustic energy. The engine has no moving parts. Johnson brought the engine to the last Sustainable Energy Club meeting as an example of sustainable energy technology.

For years, RF accelerator engineer Brian Chase talked with his Fermilab colleagues during lunch about the need for sustainable energy. The discussion has gained enough momentum to launch a new Fermilab club whose first goal is an education exhibit.

Chase, the president of the club, hopes to tap the intellectual resources of individuals at the laboratory to develop environmentally clean energy for a sustainable future.

"The Sustainable Energy Club is a good way to get Fermilab employees thinking about how to contribute to energy self-sufficiency," said Erik Ramberg, Fermilab experimental physicist and one of the club's two vice presidents. Ramberg helped found the club in March because of his interest in wind and solar power.

"We also hope the club helps the laboratory further its mission of education. Our vision fits within the Department of Energy goals to develop and promote alternative energy technologies," Chase said.

The club is collaborating with the Lederman Science Center to install a small 400-500 watt windmill and two solar panels this summer as a new exhibit.

ES&H Tips of the Week - Computer security



The Internet's dark alleys



[Protect yourself from the Internet's dark alleys.](#)

When I first got onto the Internet in 1985, Internet crime was non-existent. Commercial spam wouldn't happen for almost a decade. For most of us, the first glimpse of malicious activity on the network was the infamous Morris Worm of 1988, which required large amounts of effort to remove from crippled machines, but caused no other damage.

When I became formally involved in computer security, the adversaries were a mixture of adolescents "counting coup" on as many computers as possible, promulgators of political messages and occasional spies or would-be spies stealing files from poorly secured government computers.

Now Internet crime has gone commercial. Methodical and well-paid attackers infect home or office computers and bundle them up as collections of thousands of compromised machines that can automatically run command and control software. Control of these machines is sold in a shadowy marketplace for about five cents a computer. The buyers use them to steal bank or credit card information, to send out spam and to attack more computers. Validated bank or credit card information is sold in lots of 100 for well under a dollar an item. Unwitting middlemen are solicited through lucrative sounding work-at-home e-mail advertisements.

It's easy to laugh at the fraudulent e-mails from Nigerian widows, who are as fictional as the millions they beg to share with you. But it's much harder to defend against the million silent and highly professional grabs at your

Current Security Status

[Secou Level 3](#)

Wilson Hall Cafe

Monday, April 20

- *Potato leek soup
- Monte Cristo
- *1/2 roasted chicken
- Alfredo tortellini
- Chicken ranch wrapper
- Assorted slice pizza
- Szechuan style pork lo mein

*Carb restricted alternative

[Wilson Hall Cafe Menu](#)

Chez Leon

Wednesday, April 22
Lunch

- Assortment of quiches
- Cucumber salad
- Fresh fruit plate

Thursday, April 23
Dinner

- Spinach & bacon salad
- Grilled swordfish w/ lime cilantro
- Sauce
- Rice pilaf
- Lemon cake

[Chez Leon Menu](#)

Call x3524 to make your reservation.

Archives

Fermilab Today

[Result of the Week](#)

[Safety Tip of the Week](#)

[ILC NewsLine](#)

Info

"We would like the community to know that people at Fermilab are interested in working on sustainable energy," Chase said.

Since the club started, CD's Margaret Greaney, vice president, has worked with BSS to expand recycling options. The club has also worked on a plan to propose an energy audit of the laboratory.

The club now has a blog, Web site, and a shelf in the library with books dedicated to living green. Meetings draw 15-20 people.

The club meets at 5:15 p.m. one Tuesday a month at the Users' Center. For more information, visit <http://www-org.fnal.gov/fsec>. Contact Brian Chase at chase@fnal.gov to join the mailing list.

-- Tia Jones

Feature

Cancer survivor's Fermilab visit to see therapy origins



Mary Koskie, 91, of Aurora, and her son Michael, 62, who now lives in Clayton, Georgia, visited Fermilab on Friday, Jan. 30.

When Michael Koskie was growing up in Aurora, he never thought that Fermilab would help to save his life.

Koskie was cured of prostate cancer in 2007 by proton therapy that he received at the University of Florida Proton Therapy Center.

He came to Fermilab with his mother, 91-year-old Mary, in January for a tour.

banking, credit card and identity information. The clock can't be turned back to 1985, so you, the alert computer user and your well-managed computer are the first line of defense against these crimes.

- Stay alert while reading your e-mail. Be skeptical of links and files from questionable sources.
- Antivirus software does not detect the very latest attacks. Be careful when you encounter any unexpected content in e-mail or on the Web.

-- Matt Crawford, Computing Division

Special Announcement

Deadline for employee art show applications today

Anyone interested in exhibiting artwork in this year's employee art show must submit an application by the end of business today. The "Artist Within" art exhibit will begin on May 15 and run through July 6 in the Fermilab Art Gallery in the second floor crossover. Georgia Schwender, art gallery curator, will accept [applications](#) via inter-office mail (MS 232) today. Contact Georgia Schwender, georgia@fnal.gov, x 6825, with any questions.

Accelerator Update

April 15-17

- Four stores provided ~44.5 hours of luminosity
- Meson MTest experiment T971 begins taking beam
- Helium transfer line pressure drop stabilized

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

Latest Announcements

[Word 2007: New Features class offered May 5](#)

[Excel 2007: New Features class offered May 7](#)

[English country dancing, May 3](#)

[Summer co-ed volleyball league begins June 1](#)

[Administrative Professionals Day](#)

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

Send comments and
suggestions to:
today@fnal.gov

"We wanted to tour a laboratory that contributed to the development of proton therapy," Michael Koskie said.

Fermilab currently offers neutron therapy. But staff at Fermilab designed and built the proton accelerator used by the nation's first hospital-based treatment center to use protons against cancer cells, Loma Linda Proton Treatment Center in California, which opened in the early 1990s. Fermilab helped pioneer the use of particle beams from a compact proton accelerator to treat cancer.

The differences between the two types of cancer therapy are described below.

Neutron therapy works best on large, slow growing tumors. In large tumors, a lack of blood flow to the center of the tumor can cause it to go dormant, which then resists traditional gamma or X-ray radiation but not neutron radiation. Neutron therapy is favored for melanoma, locally advanced prostate cancer, and tumors in the nasal, head, sinus, neck and salivary area.

Proton therapy works best on 1 to 1.5 cm in diameter tumors or those next to sensitive areas because the protons can stop precisely in the tumor, eliminating exit doses of radiation. Proton therapy is favored for many tumors at the base of the skull, near blood vessels in the brain and behind the eye.

Neutron therapy deposits energy more densely to destroy the nucleus of the DNA of the dormant portion of the tumor cell where as proton therapy causes a chemical break in the tumor DNA, which can repair itself overtime.

Neutron radiation is three times as powerful as proton radiation so patients get one-third the dose. Typically, neutron therapy requires three doses a week for four weeks while proton therapy requires five doses a week for six to eight weeks.

[April 22](#)

[National Day of Prayer observance
May 7](#)

[Have a safe day!](#)

[April is National Humor Month...click
on the link for the joke of the day](#)

[Free 30-Minute Ab Workout](#)

[Fermilab club & league fair](#)

[Blackberry Oaks Golf League](#)

[Got golf? Join the Fermilab Golf
League](#)

[Argentine Tango classes through
May 13](#)

[Artist Within - employee art show '09](#)

[Fermilab blood drive April 21 and 22](#)

[MathWorks seminar - April 21](#)

[NALWO - Mexican cuisine cooking
demonstration](#)

[Word 2007: Styles and Templates
class April 23](#)

[Lederman Science Center to host
outdoor fair - Apr. 26](#)

[Greek folk dance workshop - Apr. 30](#)

[NALWO - spring tea - May 1](#)

[Best of Dance Chicago - Fermilab
Arts Series - May 9](#)

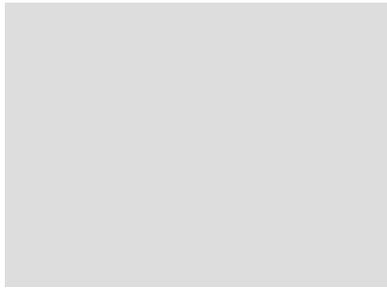
[Rapid Hardware Prototyping and
Industrial Control Application
Development seminar May 13](#)

[Co-ed softball season begins May 13](#)

[Summer co-ed volleyball league June
1](#)

[Conflict Management and
Negotiation Skills class offered on
June 3 and 10](#)

[Discount tickets to "1964"...Beatles
tribute - June 6](#)



[SciTech summer camps](#)

[Additional Activities](#)

[Submit an announcement](#)