

Calendar

[Have a safe day!](#)

Friday, March 19

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

[Joint Experimental-Theoretical](#)

[Physics Seminar](#) - One West

Speaker: Jeter Hall, Fermilab

Title: New Dark Matter Limits

from COUPP

8 p.m.

[Arts and Lecture Series](#) -

Auditorium

Speaker: Dr. Martin Chalfie,

Columbia University

Title: GFP (Green Fluorescent

Protein): Lighting Up Life

Monday, March 22

2:30 p.m.

Particle Astrophysics Seminar

- One West

Speaker: Roni Harnik,

Fermilab

Title: The Entropic Landscape

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

All Experimenters' Meeting -

Curia II

Special Topics: CMS/LHC

Report; AD Plans to Get Beam

to E-906/SeaQuest

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

[Upcoming conferences](#)

Campaigns

Take Five

Tune IT Up

Special Result of the Week

Neutrinos: Heralds of the stars



[Collaborators on the MiniBooNE experiment searched for supernovae using data from neutrinos, which are often emitted when stars explode.](#)

The field of astronomy is one of the oldest sciences, originating in Babylon as early as 1,800 BCE. While the field has advanced greatly since that time, many details about supernovae, or exploding stars, remain a mystery.

It is very difficult to spot a supernova in the sky - if your telescope isn't pointed in the right direction, you'll miss the light it emits. Looking for neutrinos emitted by a supernova is one alternative detection method. A recent search by collaborators from the MiniBooNE experiment at Fermilab was able to set a limit on the Milky Way's supernova rate.

We expect there to be only a few supernovae per century in our galaxy -- the last observed supernova in the Milky Way occurred in 1604. Although scientists using neutrino detectors in 1987 saw data from a visually observed supernova in the Large Magellanic Cloud, it wasn't until 1992 that they began publishing analyses of supernova searches using data from neutrino detectors.

It turns out that certain types of supernovae release a powerful burst of particles in addition to photons, the basic units of light. These particles, the neutrinos interact very weakly with matter - they breeze through the outer layers of supernovae and galactic dust to

Recovery Act Feature

ARRA funds construction for industrial building addition



Subcontractor Fred Huckstorf stands in front of his excavator at the IB3A construction site.

On a recent afternoon, Ken Kleiner slogged through deep mud the color and consistency of peanut-butter pudding. It was a cloudy day, and only about 40 degrees outside.

"You try to capitalize on days like today when it's nice out," said Kleiner, A.J. Maggio Co.'s on-site supervisor for the new IB3A (Industrial Building 3 Addition). He pointed out men pouring concrete and a huge excavator digging a gaping hole in the mud. "We started two weeks ago, and we're right on track."

Using funds from the American Recovery and Reinvestment Act, Fermilab awarded the \$2.7 million construction contract to A.J. Maggio Co., a firm based in Mt. Prospect, Illinois. When complete the addition to the two-story building will run along the southern length of IB3, and will provide more than 13,000 square feet of laboratory and office space.

IB3 has become so overcrowded, said Romesh Sood, Fermilab's IB3A project director, that it's hindering research. "We have to shut down some R&D activities to allow others," he said. "It's a juggling act."

IB3A will be dedicated to advancing R&D for superconducting radio-frequency cavities and for materials used in superconducting magnets —both areas that have potential applications in energy and medicine. According to Giorgio Apollinari, head of Fermilab's Technical Division, the new space will provide the kind of synergy needed for cutting-edge research.

H1N1 Flu

For information about H1N1, visit Fermilab's flu information [site](#).

Weather

 Partly sunny
62°/36°

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

Current Security Status

[Secon Level 3](#)

Wilson Hall Cafe

Friday, March 19
- Chorizo burrito
- Italian vegetable soup
- Teriyaki chicken
- Southern fried chicken
- Mediterranean baked tilapia
- Eggplant parmesan panini
- Assorted sliced pizza
- Assorted sub sandwich

[Wilson Hall Cafe menu](#)

Chez Leon

Wednesday, March 24
Lunch
- Catfish w/coarse ground mustard sauce
- Collard greens
- Parsley potatoes
- Jalapeño cheese cornbread
- Pecan pie w/ bourbon cream

Thursday, March 25
Dinner
- Closed

[Chez Leon menu](#)

Call x3524 to make your reservation.

Archives

arrive at Earth hours before the visible photons. Correspondingly, neutrino detectors are a first point for supernova observation.

So, when scientists observe a supernova using a neutrino detector, they can immediately share the phenomenon's coordinates with observatories across the world, allowing them to align their telescopes in time to observe the supernova's photons.

MiniBooNE's supernova search, led by Matt Fisher and Heather Ray of the University of Florida, covers a recent period of time during which no other experiments have published supernova search data. By looking for anomalously large bursts of consecutive low-energy neutrino interactions occurring in 10 second intervals, MiniBooNE was able to search approximately 73 percent of the Milky Way, even though the comparably small neutrino detector is located on the Earth's surface. After weeding through the background cosmic-ray data, MiniBooNE collaborators set a limit on the rate of core-collapse supernovae in the Milky Way at less than 0.69 supernovae per year at the 90 percent confidence level, within a distance of 13.4 kiloparsecs from the Earth. (Kiloparsecs are common units used in supernova searches. One kpc is equal to roughly 67 million times the distance between the Earth and sun.)

For more information, please see [this article](#).

-- Heather Ray

In Brief

Learn about enhancements to your retirement plans

Fermilab has partnered with TIAA-CREF to enhance your retirement plans. We are excited about adding these new changes, but at the same time realize that the enhancements have made the retirement plans more varied, complex and larger in scope than the plans currently in place. Here are the enhancements:

- Mutual funds and Lifecycle funds are new investment choices. These choices will allow for you to further diversify your portfolio.
- A Roth 403(b) has been added. You can now make an after-tax contribution, which allows tax-free distributions under certain conditions.
- Effective April 1 Fermilab will have a

"Once you have both IB3 and IB3A operational, you can have all the right people in the same place, exchanging ideas and know-how, but without getting in each other's way," he said.

In the meantime, the project is putting people to work. It created man-hours for seven full-time jobs. Ken Kleiner says that may not sound like a lot, but it all adds up for the subcontractors hired to do the work.

"Instead of working three days a week, a guy might be working five days a week," Kleiner said. "So I guess the Recovery Act is working."

-- Andrea Mustain

Photo of the Day

Lone swan among geese



PPD's Leticia Shaddix submitted this image of a swan among geese. The photo was taken on March 11 in the Main Ring near DZero.

Special Announcement

Ask HR - 15th floor comes to AD on Monday

Do you have questions or need information about employee records, the laboratory's compensation system, visas, the Users' Office procedures or the Arts & Lecture Series? Staff from the Human Resources Department will be available to answer questions and provide general information from 11 a.m. to noon (or later) on Monday, March 22, in the Dungeon conference room. Please stop in.

Announcements

[Fermilab Today](#)[Result of the Week](#)[Safety Tip of the Week](#)[User University Profiles](#)[ILC NewsLine](#)[Info](#)[Fermilab Today](#)

is online at:

www.fnal.gov/today/

Send comments and suggestions to:

today@fnal.gov

Visit the Fermilab

[home page](#)

dedicated [TIAA-CREF Web site](#). It will allow easy access to your Fermilab retirement plan information and accounts. TIAA-CREF will now offer online enrollment.

- Investment "advice" services will enable TIAA-CREF's individual consultants to assist you in developing your investment portfolio. They will carefully analyze your goals and needs and provide in detail their investment recommendations.

TIAA-CREF consultant Chad Stein will conduct four seminars covering these new enhancements. Since these are major changes to the retirement plans, we strongly recommend that you attend one of the seminars. You must contact Anna Lowery at (312) 345-5633 to sign up for one of the seminars:

Date	Time	Building	Room
3/23	10 a.m.	Wilson Hall	One West
3/23	2 p.m.	Wilson Hall	One West
4/1	8:30 a.m.	Wilson Hall	One West
4/1	2:30 p.m.	CDF	The Theatre

Since the meetings are scheduled during working hours and will last for an hour, you will need your supervisor's approval to attend.

Please contact Wilma Cardona, x6800, with any questions.

From *symmetry breaking*

CMS event display — decoded!

The LHC is once again moving into world-record-setting territory as it gears up to smash protons at the unprecedented energy of seven trillion electron volts. As the accelerator gets ready to speed up and smash particles, the LHC experiments—which record and analyze the debris from high-energy collisions—are running through their final checks and preparing to take center stage.

Whenever the first 7 TeV collisions happen, particle physicists from the experiments will proudly show off snapshots of the very first collisions in their detectors. These snapshots, known as event displays, show the information recorded by the massively complex detectors. However, much like a baby's first ultrasound image, it can be hard to make heads or tails of the physicists' pictured pride and joy.

[Read more](#)

Latest Announcements

[Fermilab Management Practices Seminar classes begins in April](#)

[Martial Arts classes begins - March 29](#)

[Spring book fair March 24-25](#)

[Toastmaster Meeting March 18](#)

[2009 Flexible spending account claim filing](#)

[SciTech Night at the Museum - March 20](#)

[Robert Oppenheimer play at Waubensee in Sugar Grove - March 20](#)

[Influence and Motivation: The Empowering Leader course - March 24](#)

[PowerPoint 2007 Advanced course - March 25](#)

[Blackberry Oaks Monday night golf league](#)

[Watch your mail station for Fermilab Statement of Benefits](#)

[Qi Gong, Mindfulness and Tai Chi Easy for Stress Reduction](#)

[Fermilab Management Practices seminar began in February](#)

[International Folk Dancing, Thursday evenings at Kuhn Barn](#)

[Argentine Tango through March 31, student discount](#)

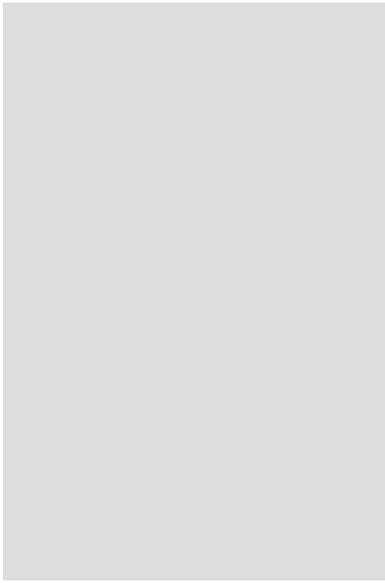
[English country dancing - March 28](#)

[Excel Programming with VBA class - March 30 and April 1](#)

[March 31 deadline to enroll young adult dependents](#)

[Harlem Globetrotters special ticket price - April 15](#)

[Requesting donations for Fermi](#)



[Maternity Closet](#)

[Hiring summer students for 2010](#)

[Calling all softball players](#)

[Intermediate/Advanced Python
Programming - May 19-21](#)

[Additional activities](#)

[Submit an announcement](#)

Classifieds

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