Fermilab Today

Wednesday, May 13, 2009

Calendar

Have a safe day!

Wednesday, May 13
11 a.m.
Academic Lecture Series - Curia II
Speaker: Vincenzo Cirigliano, Los Alamos National Laboratory
Title: Kaons as Laboratories for Fundamental Physics: Course 2, Lecture 2
3:30 p.m.
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
4 p.m.
Fermilab Colloquium - One West
Speaker: David G. Stork, Ricoh Innovations and Stanford University
Title: Did Early Renaissance Masters 'Cheat' Using Optics? Computer Science, Physics, and Art History Address a Bold Theory

Thursday, May 14
THERE WILL BE NO PHYSICS AND DETECTOR SEMINAR THIS WEEK
THERE WILL BE NO THEORETICAL PHYSICS SEMINAR TODAY
3:30 p.m.
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
4 p.m.
Accelerator Physics and Technology Seminar - One West
Speaker: Del Larson, University of Texas, Arlington
Title: ECOFusion: An Electron-Cooled, Cellular Approach to Harnessing Fusion Power

Click here for NALCAL,

From Quantum Diaries

To whom neutrinos may concern

Dave Schmitz, Fermilab physicist and Quantum Diaries blogger

Hi everyone. This post is inspired by a letter I received recently written by a remarkable sixth grader who is working on a project about neutrinos. He mailed his letter to the Office of Communication here at Fermilab and I was asked if I could put together a response. In his letter he asks three great questions about neutrinos and the Fermilab neutrino experiments, so I thought I would share my reply here on QD, as others might be interested.

1. How does Fermilab send beams of neutrinos up to the neutrino research lab in Minnesota?
2. How are neutrinos formed?
3. Why are neutrinos not classified as dark matter?

See, great questions, right? Here were my thoughts…

Thank you for your letter with your three questions about the neutrino experiments being done here at Fermilab. Indeed we do send a beam of neutrinos created here at the Laboratory in Illinois to a research laboratory about 450 miles away in northern Minnesota!

Read more

Announcement

Asian dance performance event at 12:15 p.m. Friday

At 12:15 p.m. on Friday, May 15, in Ramsey Auditorium, Fermilab will present a series of cultural dances as part of Fermilab's celebration of Asian/Pacific American Heritage Month. Five professionally trained dancers of the Xilin

From the Accelerator Physics Center

A unique facility for muon collider R&D

Steve Geer, head of Muon Accelerator R&D and co-leader of the Muon Collider Task Force, wrote this week's column.

Steve Geer

Many of you may have wondered why there is a large pile of dirt in the parking lot at the end of the Fermilab Linac. It indicates the final phase in building a new beamline that will help us develop the technology needed for a muon collider.

The new beamline will serve the MUCOOL Test Area, located in a building at the end of the Linac. It will allow us to send a beam of H-ions from the Linac to the MTA. The pile of dirt marks the installation of the last piece of the beamline: the beam dump.

When the final shielding and the beam dump are in place, the MTA will be a unique accelerator R&D facility, equipped with:

- a cryogenic facility that provides liquid helium;
- a clean room to assemble accelerator components;
- power to operate radiofrequency cavities at two frequencies (201 and 805 MHz);
- a 5-Tesla solenoid to enable radiofrequency cavity tests within a magnetic field; and
- the infrastructure to work with liquid hydrogen for muon cooling absorbers.

All of this equipment will enable us to address key muon collider related R&D questions.

In particular, the MTA will allow us to test accelerator components for a critical piece of a future muon collider – the cooling channel. A muon beam would be large right after its creation. The cooling channel would "cool" the beam, reducing its size so that the muons are tightly packed. This

a weekly calendar with links to additional information.

Weather

Thunderstorms likely
71°/52°

Extended Forecast
Weather at Fermilab

Current Security Status

Secon Level 3

Wilson Hall Cafe

Wednesday, May 13
- Chicken noodle soup
- Steak sandwich
- * Maple Dijon salmon
- Mongolian beef
- California club
- Assorted sliced pizza
- Chicken pesto pasta

*Carb restricted alternative

Wilson Hall Cafe Menu

Chez Leon

Wednesday, May 13
Lunch
- Pork braciole w/ chorizo sausage filling
- Roasted poblano pepper cream sauce
- Latin fried rice
- Coconut cake w/rum caramel sauce

Thursday, May 14
Dinner
- closed

Chez Leon menu
Call x3524 to make your reservation.

Archives

Fermilab Today

Result of the Week

Safety Tip of the Week

Chinese Academy in Naperville will perform a Chinese classical dance. Dancer Archana Bokka will perform "Ragamalika," a traditional South Indian classical dance and a Bollywood-styled piece.

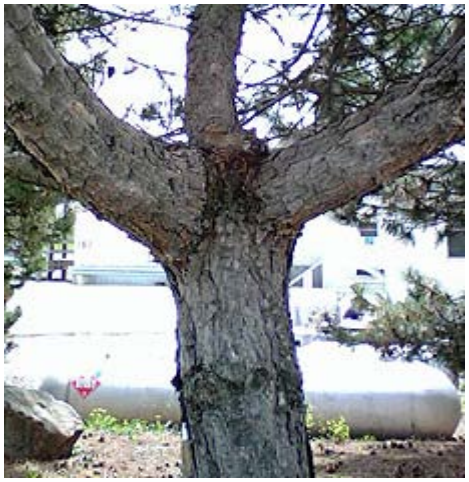
Fermilab Deputy Director Young-Kee Kim will perform a traditional Korean Dance during an Asian/Pacific American Heritage Month celebration on Friday, May 15 in Ramsey Auditorium.

During the same event, Fermilab Deputy Director Young-Kee Kim will perform a traditional Korean folk dance.

Fermilab's Diversity Council will recognize Asian/Pacific American Heritage month through the rest of May. Check out the display items in the atrium, watch video clips on the ROC screen on Fridays, participate in the weekly trivia quiz set up near the cafeteria and plan to attend the Asian Tea Festival and Art Display in Wilson Hall from 3-5 p.m. on Friday, May 29. Pat Read will also give a Brown Bag program from noon-1 p.m. on May 26 in One North titled "Chinese Ceramics from 4800 to 1368 AD."

Photo of the Day

Duck in a tree



Technical Division's Paul Olderr spotted a duck nesting in tree near the CDF trailers.

In the News

Tracking the elusive ghost particle

would allow the accelerator to create more collisions when one beam is steered into a second beam in a muon collider.

The Muon Collider Task Force together with the national Neutrino Factory and Muon Collider Collaboration are guiding Fermilab's R&D efforts for a muon collider. In addition to R&D for a muon accelerator, physicists at Fermilab and other institutions study the potential physics program, work on detector and background issues, and identify the specific detector R&D necessary to advance the plans for a muon collider. A workshop on muon collider physics, detectors and backgrounds will take place later this year. Check *Fermilab Today* for details in the upcoming months.

Safety Update

ES&H weekly report, May 12

This week's safety report, compiled by the Fermilab ES&H section, lists one case reported to the Medical Department last week. An employee received a small laceration after brushing the left side of the head on a rack-shelf support. This case did not result in time away from work. Find the full report here.

Safety report archive

Announcements

Latest Announcements

Accelerated C++ Short Course: registration open - June 8

Jobs at Fermilab: Employee profiles updated

Python training June 17-19

Intermediate/Advanced Python Programming July 22-24

Asthma & Allergy Awareness Lunch & Learn

Vanpool/transit Lunch & Learn today

Argentine Tango classes through today

Rapid Hardware Prototyping and Industrial Control Application Development Seminar today

Co-ed softball season begins

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

From ***The College of William & Mary***, May 1, 2009

The neutrino is an abundant, interesting and mysterious subatomic particle. It has no charge and until recently was believed to have no mass. Because neutrinos have no charge, these “ghost particles” can go pretty much anywhere and through anything.

“Imagine if you shot a stream of neutrinos through a brick of lead one light year thick,” Patricia Vahle said. “More than half of them would come out of the other side.”

Vahle is an assistant professor in the physics department at William & Mary. She is one of a group of researchers participating in NOvA, an experiment that will bring about a greater understanding of the neutrino—and of the universe itself.

Neutrinos are important to physicists because their properties hold the key to understanding a number of questions, such as a fuller understanding of nuclear fusion and fission mechanics and the mystery of why antimatter is so rare in the universe.

“If you want to understand how the universe began and how it evolved and how it is working today, you need to understand as much as you can about the neutrino,” she said.

Read more

today

French, Greek and other ethnic dances in John Parrish workshop, May 14

Toastmasters demonstration meeting - May 14

Concerned about H1N1? Ask a question

Winners of the Asian/Pacific Quiz Contest: Week 1

English country dancing, May 17

May is Motorcycle Safety Awareness month - send in photos - meeting May 19

"Angels & Demons Lecture Night: The Science Revealed" - May 21

Deadline for The University of Chicago Tuition Remission Program - May 22

NALWO - Brown Bag Lunch - Chinese Pottery - May 26

Are you Fit to a T? May 27 event

Nanotechnology Lecture: Crafting of Self-Assembling Materials for Medicine & Energy - Fermilab Arts Series

Science Adventures for children

Discounted Rates at Grand Geneva Resort, Lake Geneva, WI

Summer co-ed volleyball league June 1

Registration for Users' Meeting is open

Conflict Management and Negotiation Skills class - June 3 and 10

Discount tickets to "1964"...Beatles tribute - June 6

Susan Werner - singer/songwriter performs on Arts Series

SciTech summer camps

Additional Activities

Submit an announcement