Fermilab Today

Tuesday, December 11, 2007

Calendar

Tuesday, Dec. 11
3:30 p.m.
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY
4 p.m.
Special Joint Experimental-Theoretical Physics Seminar - One West (NOTE DATE)
Speakers: Z. Pavlovic, University of Texas, Austin; Z. Djurcic, Columbia University
Title: Analysis of Muon and Electron Neutrino Events from the NuMI Beamline at MiniBooNE

Wednesday, Dec. 12
11 a.m.
ermilab ILC R&D Meeting - One West
Speaker: G. Shirkov, JINR
Title: JINR Future Plans and Participation in the ILC
3:30 p.m.
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
4 p.m.
Fermilab Colloquium - One West
Speaker: S. Gruner, Cornell University
Title: Putting the Squeeze on Biology: Biomolecules Under Pressure

Click here for NALCAL, a weekly calendar with links to additional information.

Weather

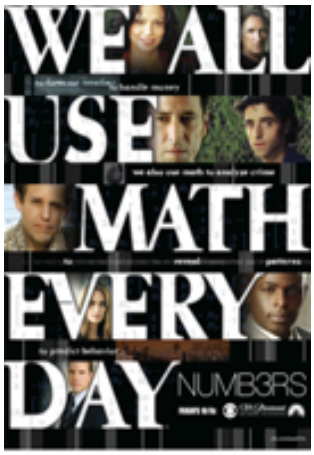
Wintry mix 33°/22°

Extended Forecast
Weather at Fermilab

Current Security Status

Feature

"NUMB3RS" story line could involve DZero experiment



"NUMB3RS," a show on CBS Channel 2, features a fictional theorist physicist who mentioned joining DZero in a recent episode. *Image courtesy of CBS*

On the hit television show "NUMB3RS," where science and math meet crime drama, character Larry Fleinhardt has lived in a monastery and flown into outer space searching for a sense of purpose. Could the fictional theoretical physicist's next step on his quest for meaning take him to Fermilab?

In November, Fleinhardt, played by actor Peter MacNicol, announced to nine million viewers that he was thinking about joining the Fermilab DZero experiment.

That surprised DZero collaborator George Alverson who was watching the television show with his children. He started yelling, "That's DZero!"

Fleinhardt, sidekick and mentor to mathematician Charlie Epps, described a tantalizing offer to join the DZero team to search for the Higgs boson. "Can you imagine?" Fleinhardt said. "Smashing protons at 99.99 percent of the speed of light all to locate a single fragment, which would move us one step closer to unifying all physics, explaining how the old one created the universe? Ah, what could be more spiritual?"

Alverson downloaded the episode so that he could play back the conversation. "I wanted to make sure they got the information right," he said, "And they did."

Other DZero collaborators were pleased, although slightly taken aback, to hear that Fleinhardt is considering joining the collaboration's roughly 650 scientists from 18 countries. "We can always use more 'brilliant

Director's Corner

Short fuse

Pier Oddone

At the last HEPAP meeting, Nov. 29-30, DOE and NSF asked for a 10-year plan for the U.S. particle physics program. Under the leadership of Professor Charlie Baltay of Yale University, the Particle Physics Project Prioritization Panel will undertake this task. P5 faces a very short deadline; the report should be completed by April 2008 in order to provide input for the FY2010 budget process and the 10-year plan under development by the Office of Science.

The request by the agencies requires P5 to develop plans under three different scenarios scenarios. The first scenario would maintain a roughly a constant level of effort in our field, with budgets rising at the rate of inflation or 3.5 percent. The second scenario would increase the particle physics budget by 6.5 percent and would correspond roughly to the doubling of the Office of Science budget over the next 10 years. The third scenario does not have a budget cap and requires setting priorities for programs that could be done with further budget increases beyond the doubling scenario.

The importance of this request is that for the first time we are confronted with scenarios in which it would be impossible for the United States to host the ILC within the time horizon of the exercise. This does not mean that we stop our efforts to build an ILC. It does mean, however, that the agencies are rightly concerned about the vulnerability of U.S. particle physics to an ILC that could be delayed, built abroad or not built at all. The DOE and NSF request specifically asks P5 to analyze the roadmap proposed by the Steering Group that includes Project X.

Over the next few months we have our work cut out for us: we must work with our partner institutions to provide the information that P5 will require in order to make a credible roadmap for the whole field. Above all else we must articulate fully the discovery potential of

Secon Level 3

Wilson Hall Cafe

Tuesday, Dec. 11
- Golden broccoli & cheese
- Southern style fish sandwich
- Coconut crusted tilapia
- Spaghetti w/meatballs
- La grande sandwich
- Assorted slice pizza
- Chicken fajitas

**Carb Restricted Alternative*

Wilson Hall Cafe Menu

Chez Leon

Wednesday, Dec. 12
Lunch
- Stuffed pork loin w/ lingonberry sauce
- Braised red cabbage
- Dilled new potatoes
- Danish apple cake

Thursday, Dec. 13
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

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

Send comments and suggestions to:
today@fnal.gov

but socially awkward' physicists to help us find the Higgs," joked DZero spokesperson Darien Wood, quoting from Fleinhardt's character profile on the "NUMB3RS" Web site.

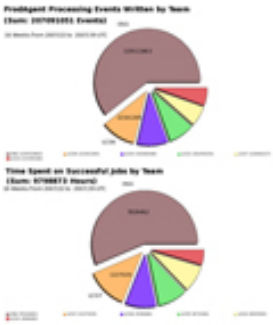
Wood hopes the DZero story line will continue. "We should get them to film scenes here at Fermilab," he added.

But Alan Stone, who works for Fermilab's PPD and has watched the show for the past four years, has concerns about "NUMB3RS" using Fermilab as a film location. "In every episode, there is a crime," said Stone. "One can imagine the kind of story line they would need in order to film here. There's just no possible positive spin."

-- Haley Bridger

From iSGTW

Open Science Grid crunches through CMS simulations



OSG-based event production accounting for over half of all fully simulated CMS events produced in 2007. The remaining production was done by regional teams working on LCG sites. The CMS collaboration involves 37 countries, 155 institutes and more than 2000 scientists. *Images courtesy of Open Science Grid*

In the lead-up to the launch of the Large Hadron Collider and the four massive physics projects that depend on it, scientists around the world have been giving their data-processing muscle a serious workout, with superb results.

As part of the Compact Muon Solenoid experiment, Open Science Grid scientists are crunching through Monte Carlo simulations of what might happen when protons collide inside the CMS detector. Millions of proton collisions must be simulated to gather a meaningful result.

The use of OSG resources to simulate these events continues to be a spectacular success, with OSG-based event production accounting for over half of all fully simulated CMS events produced in 2007.

Read More

Project X and demonstrate that the human resources exist in the national program to carry out both the R&D and the construction of the new facilities.

Announcement

Eleventh annual URA Thesis Award Competition underway

Fermilab and the Universities Research Association invite submissions for the 11th annual URA Thesis Award Competition. The award recognizes the most outstanding thesis related to work conducted at Fermilab or in collaboration with Fermilab scientists. Work must be completed in the 2007 calendar year.

Nominations must be submitted to Richard Tesarek by March 1, 2008, and should include at least two letters supporting the merits of the thesis being nominated. At least one letter should be from the thesis committee of the Ph. D. granting institution. Selection will be made by the Thesis Awards Committee. Each thesis will be judged on clarity of presentation, originality and physics content. To qualify, the thesis must have been submitted as partial fulfillment of the Ph.D. requirements in the 2007 calendar year, be written in English and it must have been submitted in electronic form to the Fermilab Publications Office in accordance with Fermilab policy.

Accelerator Update

Dec. 7 - 10
- Three stores provided 53 hours and 55 minutes of luminosity
- Recycler conducts electron cooling drag rate measurements
- Linac adds vacuum pump and resumes sending beam
- Linac experts fix low level RF problem
- Duty Mechanic repairs F4 LCW pump
- Cryo repairs C2 wet engine
- Switchyard experts prepare MTest for next experiment, T970

Read the Current Accelerator Update
Read the Early Bird Report
View the Tevatron Luminosity Charts

Announcements

In the News

Dark matter in newborn universe doused earliest stars

From *Science Daily*,
Dec. 3, 2007

Perhaps the first stars in the newborn universe did not shine, but instead were invisible "dark stars" 400 to 200,000 times wider than the sun and powered by the annihilation of mysterious dark matter, a University of Utah study concludes.

The study calculated how the birth of the first stars almost 13 billion years ago might have been influenced by the presence of dark matter -- the unseen, yet-unidentified stuff that scientists believe makes up most matter in the universe.

Read More

In the News

Relativity: Still special

From *nature.com*,
Dec. 5, 2007

Is special relativity a clapped-out classical theory, to be replaced by a shiny new quantum model as soon as possible? On the contrary, it would seem: the theory still has a youthful ability to surprise us.

Since Albert Einstein introduced it to the world in 1905, the special theory of relativity has embodied the journey of modern physics from an 'intuitive' description of the world to a deeper level of understanding - an understanding at first profoundly baffling to established ways of thinking. Concepts such as the equivalence of mass and energy, embodied by the formula $E = mc^2$; the existence of an unbreakable speed barrier, the speed of light in vacuo, c; and the paradox of two twins who, by dint of experiencing different accelerations through space, can age by different amounts, have all stamped themselves on the public's consciousness. At the same time, special relativity has provided a reliable description for an ever-growing list of physical phenomena.

Read More

Dec. 14 deadline for The University of Chicago Tuition Remission Program
The deadline for applying for the tuition remission program at The University of Chicago for the Winter 2008 quarter is Dec. 14. More information and enrollment forms. Contact Nicole Gee at x3697 with any questions.

Wilson Hall maintenance
Ground floor maintenance work will continue through Friday, Dec. 14, in Wilson Hall. Painting, patching and re-carpeting of selected high-traffic public areas will be performed through Friday between 4 p.m. and midnight. Please do not disturb the repairs or equipment.

FNALU cluster meeting Dec. 19
There will be a general meeting for experimenters using the FNALU cluster on Dec. 19, in Wilson Hall One West from 1:30 - 3:00 p.m. The purpose of the meeting is get input from experiments on what resources are needed and to identify experiments using FNALU. Also the status of support and other changes to FNALU will be discussed.

EAP Office hours
The EAP office will be open on Tuesday, Dec. 11, and Thursday, Dec. 13, instead of Wednesday, Dec. 12, and Friday, Dec. 14, as usual. Regular office hours will resume the week of Dec. 17. The EAP is available 24/7 by calling 1-800-843-1327 or online at www.vmceap.com.

New IT job descriptions
Open meetings for questions and answers will be held in Wilson Hall One West for employees affected by this process:
Wednesday, Dec. 12, 1:30 -3 p.m.
Thursday, Dec. 13, 9 - 10:30 a.m.
Friday, Dec. 14, 10:30 a.m.- noon
Monday, Dec. 17, 1:30 - 3 p.m.
Tuesday, Dec. 18, 9 - 10:30 a.m.
Wednesday, Dec. 19, 9 - 10:30 a.m.
Before attending, please review the presentation

Blood Drive Dec. 18, 19
Mark your calendars. Heartland Blood Centers will be here for the Fermilab Blood Drive on Dec. 18 and 19, from 8 a.m to 2 p.m. in the Wilson Hall Ground Floor NE Training Room. Appointments can be scheduled on the Web or by calling Diana at x3771 or Margie at x5680. More information can be found here.

Scottish Country Dancing Tuesday

Scottish Country Dancing will meet today, Dec. 11, at Kuhn Barn on the Fermilab site. Instruction begins at 7:30 p.m. and newcomers are always welcome. Most dances are fully taught and walked through. You do not need to come with a partner. For more information call (630) 840-8194 or (630) 584-0825 or e-mail folkdance@fnal.gov.

Additional Activities