Fermilab Today

Tuesday, Oct. 6, 2009

Calendar

Have a safe day!

Tuesday, Oct. 6
3:30 p.m.
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
4 p.m.
Accelerator Physics and Technology Seminar - One West
Speaker: Dan McCarron, Illinois Institute of Technology
Title: Intensity-dependent beam dynamics studies in the FNAL booster

Wednesday, Oct. 7
3:30 p.m.
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
THERE WILL BE NO FERMILAB COLLOQUIUM THIS WEEK

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

Campaigns

Take Five

Tune IT Up

Weather

Showers
60°/43°

Extended Forecast
Weather at Fermilab

Current Security Status

Secon Level 3

Wilson Hall Cafe

From *symmetry breaking*

Indian institutions, Fermilab team up for SRF technology

From left: Rajeshwar Singh Sandha, RRCAT; Jishnu Dwivedi, RRCAT; Rohan Mittal, Devi Ahilya; Fermilab's Joe Ozelis and Archana Sharma, BARC.

Technical specifications and instructions help, but as Jishnu Dwivedi knows, building a superconducting radio frequency cavity requires more than a few thousand pages of text and diagrams.

"When you read from books, a lot of information does not directly apply to your project," said Dwivedi, a mechanical engineer visiting Fermilab from the Raja Ramanna Center for Advanced Technology in India. "By being here, we can see the components and get a good feel of the design, manufacturing and testing requirements."

In September, Dwivedi finished a three-month stay at Fermilab's Technical Division as part of the collaboration formalized in February between four Indian institutions and Fermilab. Back in India, the collaboration is working on its first single-cell cavity, which will be shipped to Fermilab for processing and testing, Dwivedi said. He expects a more complex multi-cell cavity to be ready in about a year.

Physicists and engineers from Indian institutions are involved in all aspects of Fermilab's SRF development that supports future accelerators. Responsibilities include design and fabrication for a new type of cavity and cryomodule, along with corresponding test stands.

Read more.

— Chris Knight

Director's Corner

Testimony

From left: Harvard physicist Lisa Randall, Associate Director of Science for High Energy Physics Dennis Kovar, Fermilab Director Pier Oddone and Jefferson Laboratory Director Hugh Montgomery give testimony in front of the Energy and Environment Subcommittee of the House Science and Technology Committee last week.

Last week was a busy week for me in Washington, DC. I visited DOE officials in the Office of Science on Tuesday and attended the unveiling of the official portrait of Secretary Bodman. All the official portraits of past secretaries hang together in the corridor outside the DOE Secretary's Office. On Wednesday I visited several Congressional offices and the Office of Management and Budget. Finally, on Thursday, I was a witness along with Dennis Kovar, Harvard physicist Lisa Randall and Jefferson Laboratory Director Hugh Montgomery in front of the Energy and Environment Subcommittee of the House Science and Technology Committee. Two of the Illinois members of the Subcommittee were present: Representative Daniel Lipinski, who presided over the committee for part of the hearing, and Representative Judy Biggert, both great friends of science and Fermilab. You can find the written testimony and, eventually, the Web cast here.

The hearing by all accounts went very well. It was one in a series of hearings by the Science and Technology Committee in connection with authorization legislation that might take different forms. One form would be the re-authorization of the Office of Science and another one the re-authorization of the America Competes Act. While the Science and Technology Committee does not deliver the funds to our program as do the appropriations committees, their authorizing

Tuesday, Oct. 6
- Bagel sandwich
- Chicken and rice soup
- Italian sausage with peppers and onions
- Beef stroganoff
- Chicken lemon
- Peppered beef
- Assorted slices of pizza
- Chicken tostadas

Wilson Hall Cafe Menu

Chez Leon

Wednesday, Oct. 7
Lunch
- White bean rajas soup
- Chicken and cheese quesadillas
- Green salad
- Tres leches cake

Thursday, Oct. 8
Closed

Chez Leon Menu
Call x3524 to make your reservation.

Archives

Fermilab Today

Result of the Week

Safety Tip of the Week

CMS Result of the Month

User University Profiles

ILC NewsLine

Info

In Brief

Call for nominations for the Director's Award


Jean Slaughter received the 2008 Director's Award.

More than 200 Fermilab employees, users and contractors volunteer their time to support Fermilab's K - 12. These volunteers help education programs at the laboratory's outreach programs, classroom activities and with the Lederman Science Center exhibits.

Director Pier Oddone wants to recognize their efforts.

The selection committee is asking for nominations for the Director's Award, an annual award that acknowledges exceptional volunteer work. The winner receives a $1,000 prize.

Employees, users and contractors should nominate volunteers for this award before the Oct. 26 deadline, said Fermilab scientist Herman White, chair of the selection committee.

"We want as big a pool as possible," White said. "We want to not only recognize the award winner, but also some of those others who have been nominated."

Jean Slaughter, of the Accelerator Physics Center, received the 2008 award for her classroom presentations and her role mentoring high school students in research physics.

Nomination forms are available online. Employees, users and contractors are eligible for the award. Submit nominations by e-mail to Gayle Millman or by mail at MS 226.

Director Pier Oddone will present the $1,000 award at the reception, which will take place from 5 to 6 p.m. on Nov. 4 on the second floor crossover.

Learn more.

In the News

legislation is important in setting overall policy both within Congress and the Administration.

The hearing was on the particle physics and nuclear physics programs of the DOE Office of Science. It carried the title *Investigating the Nature of Matter, Energy, Space and Time*. As far as I know, this is the first hearing on particle and nuclear physics in more than a decade. Preparing for a hearing is always an interesting exercise. Thanks to our historian Adrienne Kolb, I obtained the testimony from past directors Wilson and Lederman, and found some treasures. Wilson's testimony in 1977 is quite remarkable and prescient with the vision of colliding protons and anti-protons at 2 TeV!

Some of the more challenging questions came from the Chairman of the Committee, Representative Brian Baird of Washington state. In particular, he was interested in why we should spend $1.3B per year in particle and nuclear physics when the nation has so many other dire needs. He told us this is a question that he feels he has to answer for his constituents. It is question we must be comfortable in answering. We must be ready to explain what the nation gains by expanding the frontiers of knowledge, by deriving applications that come from the extreme requirements as we expand that frontier, and by the influence that these activities have on science, technology, engineering and math (STEM) education at all levels. The record of our discipline in these three areas is outstanding and we must keep it that way to earn our keep.

Shutdown Report

Oct. 2-5
- Three stores provided approximately 51.5 hours of luminosity
- Three TeV quenches during shot setup
- Power supply repairs held off NuMI
- Accumulator magnet LCW leak
- NuMI horn trips
- Backup helium compressor brought online

*The integrated luminosity from Sept. 28 to Oct. 4 was 40.73 inverse pico barns.

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

Announcements

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

Send comments and suggestions to:
today@fnal.gov

Visit the Fermilab
home page

Robert Wilson's weird dream lab: Fermilab part 1

From ***Summer of Science***, Sept. 26, 2009

Perhaps I'm biased, but Fermilab is one of my favorite places. Not only is it home to the biggest kind of Big Science — the Tevatron — but it also manages to be the quirkiest of the National Labs. I went there for the first time as a science writing intern in the summer of 2005 and, as this trip should make clear, never really looked back.

Fermilab was built on a green field site, meaning that there was almost nothing there before the lab. Since building where there is no existing infrastructure is so much more expensive than upgrading (or simply repurposing) existing lab space and equipment, it is rarely done anymore. The Superconducting Super Collider's green field construction contributed significantly to its burgeoning cost estimates and thus played a role in its cancellation. By contrast, Brookhaven's Relativistic Heavy Ion Collider makes use of a myriad of pre-existing accelerator components and the Large Hadron Collider is housed in the tunnel formerly used by CERN's Large Electron-Positron Collider.

Read more

In the News

Neutrinos could encode messages to submarines

From ***New Scientist***, Oct. 5, 2009

Earth-penetrating neutrinos might one day be used to send messages to lurking submarines. The scheme could provide one-way communication with subs without requiring them to surface.

Neutrinos are particles that interact so weakly with matter that they can pass through the planet like light through glass. In 1977, physicists proposed that they might be used to send messages around, or through, the globe. But because neutrinos interact so rarely, the conclusion was that it would be almost impossible to detect a signal.

Now advances in emitters and detectors make a neutrino com-link feasible in the near future, says physicist Patrick Huber of Virginia Tech in Blacksburg, Virginia.

"This whole thing started as a lunch

Latest Announcements

Scottish country dancing in Ramsey Auditorium today

Director's Award nominations accepted until Oct. 26

Fermilab Toastmaster can help you find your voice - Oct. 15

NALWO Seminar - An introduction to neurofeedback - Oct. 14

Yoga class begins today

Muscle Toning class begins today

Discounted Fright Fest tickets begin Oct. 9

Mentors wanted for Diversity Office's FermiLINK program

Scrapbooking Club open house - Oct. 12

Excel Shortcuts class - Oct. 13

Fermilab hosts workshop on Applications of High-Intensity Proton Accelerators - Oct. 19-21

Access 2007: Intro class - Oct. 20

Interpersonal Communication Skills class - Oct. 21

Buttered Rum performs at Fermilab Arts Series - Oct. 24

Conflict Management and Negotiation Skills - Oct. 28, Nov. 11

Facilitating Meetings That Work class - Nov. 4

Fred Garbo Inflatable Theatre at Fermilab Arts Series - Nov. 7

Process Piping (ASME B31.3) class offered in October and November

"The Night Before Christmas Carol" at Fermilab Arts Series - Dec. 5

Scottish Country Dancing Tuesday evenings at Kuhn Village Barn

discussion," says Huber. "You say, yeah people have been talking about that, but it's basically impossible. Then you sit down, do a little calculation, and you find that actually the numbers are not that crazy."

Read more

Weight Watchers at Work coming soon

International folk dancing, Thursday evenings at Kuhn Village Barn

Annual enrollment now running

On-site prescription eyewear technican dates of absence

Thai Village restaurant discount

Additional activities

Submit an announcement