

Calendar

[Have a safe day!](#)

Wednesday, Aug. 25
8 a.m. - 8:15 p.m.

[Hadron Collider Physics](#)

[Summer School](#) - One West

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

[Fermilab Colloquium](#) (NOTE

LOCATION) - Auditorium

Speaker: Eric Torrence,
University of Oregon

Title: Results from Atlas

Speaker: Dan Green, Fermilab

Title: Results from CMS (in

conjunction with the [Hadron](#)

[Collider Physics Summer](#)

[School](#))

Thursday, Aug. 26

8 a.m. - 8:15 p.m.

[Hadron Collider Physics](#)

[Summer School](#) - One West

2:30 p.m.

[Theoretical Physics Seminar](#) -

Curia II

Speaker: Hsin-Chia Cheng,
University of California, Davis

Title: Invisible Particle Mass
Determinations at Hadron

Colliders

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO

ACCELERATOR PHYSICS

AND TECHNOLOGY

SEMINAR THIS WEEK

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

[Upcoming conferences](#)

Campaigns

Feature

Fine-tuning the instruments of acceleration



Some members of the automatic cavity tuning machine international collaboration. Front row, from left: Ruben Carcagno, Fermilab; Toshio Sishido, Hotishi Hayano and Ken Watanabe, KEK. Back row, from left: Guennadi Kreps, DESY; Roger Nehring, Sergey Kotelnikov, Dileep Bhogadi, Andrzej Makulski, Bill Mumper and Jerzy Nogiec, Fermilab; Jan-Hendrik Thie, DESY; Cosmore Sylvester, Fermilab; Alessandro Quadrelli, University of Pisa student; Fred Lewis and Warren Schappert, Fermilab.

Achieving resonance in a scientific collaboration is no small feat, but scientists at Fermilab, DESY and KEK have come together to do exactly that: they've improved the mechanism that keeps superconducting radio frequency cavities in tune.

Members of Fermilab's Technical Division and DESY staff, with financial assistance from KEK, recently built four new tuning machines that set SRF cavities to the correct frequency and alignment. More highly automated than their predecessors, the machines save time and labor and ensure greater consistency in RF cavity quality. They do this by squeezing or stretching individual cells in a nine-cell cavity, allowing all of them to perform identically and impart the same acceleration to the beam.

"Now we don't need RF experts to tune them one by one," said Technical Division Head Giorgio Apollinari. "We can put them in a machine, push a button, and let it run."

The teams engineered the new machines with DESY's future X-ray Free-Electron Laser in mind, as well as the proposed Project X and International Linear Collider. If scientists were to build the ILC, it would need 18,000 SRF

From the Computing Division

Service Desk redesigns automatic e-mails

Eileen Berman, Service Desk group leader, wrote this week's column.



Eileen Berman

The Service Desk is cutting down the number of automatic e-mail notifications you receive when you submit a Service Desk ticket. Starting today, the Service Desk ticket system will send two automatic notifications: an e-mail notifying you that a ticket has been submitted about an issue pertaining to you and another notifying you that the issue has been resolved.

We made this change because we have received a lot of feedback about the volume of e-mail people get from the Service Desk. We hope this will be a more efficient way to communicate.

Following your requests, we have also reworded the automatic replies for clarity and removed the bulky graphics. The two automatic e-mails you receive will include information relevant to your Service Desk ticket, a link to use to check on the status of your ticket and information about how to find help.

Of course, your individual service provider may still need to communicate with you through additional e-mails. Please contact the Service Desk at x2345 or by opening a [Service Desk ticket](#) if you have any questions about the new e-mails.

Photo of the Day

[Take Five](#)[Tune IT Up](#)[H1N1 Flu](#)

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

[Weather](#)[Extended Forecast](#)[Weather at Fermilab](#)[Current Security Status](#)[Secon Level 3](#)[Wilson Hall Cafe](#)

Wednesday, Aug. 25

- Breakfast: English muffin sandwich
- Cajun style lentil soup
- Cajun chicken ranch
- BBQ ribs
- Chicken parmesan
- Smoked turkey panini pesto mayo
- Assorted sliced pizza
- Chicken Alfredo fettuccine

[Wilson Hall Cafe Menu](#)[Chez Leon](#)

Wednesday, Aug. 25

- Lunch
- Danish open face sandwiches
 - Cucumber salad
 - Caramel apple shortcake

Thursday, Aug. 26

- Dinner
- Closed

[Chez Leon Menu](#)

Call x3524 to make your reservation.

[Archives](#)

cavities, all of which would require tuning.

"You cannot conceive of doing this by hand," Apollinari said.

Under the technical direction of electrical engineer Andrzej Makulski and software architect Jerzy Nogiec, Fermilab TD staff developed a complete set of control electronics and control software for the tuning machines. In Germany, DESY staff developed the mechanical assembly and electrical devices.

[Read more](#)

-- Leah Hesla

[In the News](#)

A look inside the labs

From DOE's *Energy Blog*, Aug. 23, 2010

Editor's note: *This blog was written by DOE Deputy Secretary Daniel Poneman about his tours to Fermilab and Argonne. [Watch the all-hands talk](#) that Poneman gave at Fermilab.*

Last week, I had the opportunity to visit Argonne National Laboratory and Fermilab – two of the Department's national laboratories that are renowned for their cutting-edge research. There I obtained a firsthand look at some of the most innovative projects in the world of science and technology. The origins of these labs go back to the University of Chicago and the ground-breaking work of Nobel Laureate Enrico Fermi in the Manhattan Project, including the successful production of the world's first self-sustaining nuclear chain reaction. My visit persuaded me that we can expect more transformational breakthroughs from these labs in the years to come.

[Read more](#)

[In the News](#)

New employees - Aug. 23



From left: Yvonne Peters, Michael Kirby, Mike Zuckerbrot, Oleg Lysenko, Nana Segbawu and J. Frederick Bartlett.

[Safety Update](#)

ES&H weekly report, Aug. 24

This week's safety report, compiled by the Fermilab ES&H section, includes one first-aid-only incident. Find the full report [here](#).

[Safety report archive](#)

[Announcements](#)

Latest Announcements

[Toastmasters - Sept. 2](#)

[Workshop on Accelerator-Driven Sub-Critical Systems & Thorium Utilization](#)

[Ask HR: Professional Development at DZero Aug. 26](#)

[Performance Review briefing - today](#)

[Bod Squad Muscle Toning begins Sept. 2](#)

[Card stamping club and scrapbooking club survey](#)

[Sign up for fall Science Adventures](#)

[Fermilab Procard System – New link starting Monday, Aug. 30](#)

[Looking for league bowlers](#)

[Argentine Tango, Wednesdays, through Aug. 25](#)

[Bristol Renaissance Faire discount](#)

[Regal Movie Theater discount tickets available](#)

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

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suggestions to:

today@fnal.gov

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[home page](#)[Unsubscribe](#) from *Fermilab**Today***Einstein, Bohr, and ultimate reality**From **13.7 Cosmos and Culture**, an **NPR** blog, Aug. 24, 2010

How much can we know of the world? Some believe we can go all the way and find the answers to the most penetrating questions, at least those concerned with the natural world. Others think there is only so much we can know, that there are some very concrete limits to how much information we can gather about reality. These limits are not just a consequence of our brains or the tools we use to extract knowledge. They are Nature's trademarks.

So, which one of the two views is the right one?

Perhaps nowhere in the history of science this split is better expressed than in the famous Einstein-Bohr debates. The two giants of twentieth century physics, with a deep intellectual respect for each other, locked horns on several occasions trying to make sense of the puzzling new science they helped developed, quantum mechanics.

[Read more](#)[Fermilab Blood Drive Aug. 30 and 31 \(Walk in only\)](#)[Scottish country dancing in Ramsey Auditorium through Aug. 31](#)[International Folk Dancing in Ramsey Auditorium through Sept. 2](#)[Fermilab Lecture Series presents A Croc Odyssey: Speedy Gallopers with a Taste for Dinosaur](#)[Gizmo Guys - Fermilab Arts Series - Sept. 25](#)[Submit an announcement](#)