

Calendar

Have a safe day!

Thursday, July 8
2:30 p.m.

[Theoretical Physics Seminar](#)

Speaker: Sanjib Kumar Agarwalla, Virginia Tech
Title: A New Approach to Anti-Neutrino Running in Long Baseline Neutrino Oscillation Experiments
3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

Friday, July 9

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
4 p.m.

[Joint Experimental-Theoretical Physics Seminar](#)

One West
Speaker: Holger Meyer, Wichita State University
Title: Particle Production Results from the MIPP Experiment

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

[Upcoming conferences](#)

Campaigns

[Take Five](#)

[Tune IT Up](#)

H1N1 Flu

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

Weather


Chance of showers
84°/67°

[Extended Forecast Weather at Fermilab](#)

Current Security Status

[Secon Level 3](#)

Wilson Hall Cafe

Thursday, July 8

- Breakfast: Apple sticks
- Tomato Florentine
- BBQ pork sandwich
- Kielbasa & sauerkraut
- Chicken Marsala
- Smoked turkey melt
- Assorted sliced pizza
- SW chicken salad w/roasted corn salsa

[Wilson Hall Cafe Menu](#)

Chez Leon

Milestone

Accelerator Complex reaches delivered luminosity milestone

As of July 7, the Accelerator Complex delivered nine inverse femtobarns of data to both the CDF and DZero experiments. The measurement is cumulative from when data delivery began for Run II in 2001.

Photo of the Day

New employees - June 28



Front row from left: Ricardo Angeli, Reka leher, Amy McGoogan, Christina Magee, Amanda Early, Aaron Bossert, Amber Betzold and Mai McClintic. Second row from left: Audrey Grammas, Will Parkin, David Craymer, Victor Martinez, Ryan Guinn, Ethan DeJongh, Kharkov Yaroslav, Bob Ren, Emily Setchell, Ruth Ann Smith and Karen Kolloway-Smith. Third row from left: Jack Creed, Josh Kilmer, Eugeny Bulushev, Anna Yagodnitsyna, Adam Ball, Peter Chinetti, Alexey Nikulkov, Momot Ruslan, Yulia Maxinenko, Boris Shteynas and Ming Wu.

From symmetry breaking

CERN opens dazzling new public exhibition

It's like stepping into a science fiction film: Eerie blue and green lighting; spherical white chairs with black cushions; touch-operated computer information stations; a full-wall projection of stars and galaxies; and a calming voice coming over a loudspeaker and asking, "Why are we here?"

If the architectural firm behind the new exhibition, Atelier Bruckner, wanted to get their audience excited about science, they have certainly succeeded. The new CERN public exhibition Universe of Particles will make a fantastic starting point for lab visitors. In dramatic fashion, it presents them with the big, exciting questions that CERN scientists would like to answer, like "What is dark energy?" and "What will be the fate of our universe?" These questions alone will inspire excitement in many people, but the design group has used a dramatic setting to ramp up visitors' excitement. Like a good sci-fi flick, it ignites the feeling of excitement that comes with the start of a great adventure.

[Read more](#)

In the News

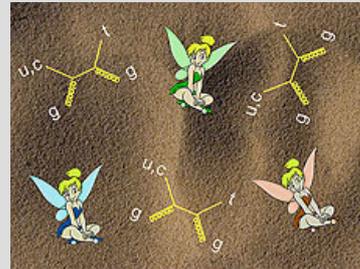
Boost for investment in UK science and technology

From *Interactions.org*, July 2, 2010

Inward investment in UK science and technology received a boost today (Friday 2 July) with the signing of an agreement to extend one of the largest research collaboration projects between the UK and Japan until 2018. The seven and a half

Result of the Week

Searching for impossible top quarks



This analysis looks for a type of process that is impossible according to known physics. However, because the Standard Model says it can't happen, if we do see it, it will mean we've discovered something totally new.

We're pretty sure that fairies don't exist. We think this because nobody has captured one and we have some ideas on the minimum size of a sentient, humanoid life form.

But suppose someone were adamant that very small sand fairies existed. We could go to a beach and take a child's sand sifter and sift buckets and buckets of sand. We'd check the sieve to see if we found any. After a day of work and no success, we might conclude that the fairy hypothesis was disproven. However to be precise, all we could conclude was only that, if fairies existed, they are smaller than the holes in the sifter.

This Result of the Week has similar characteristics. In the analysis it describes, we looked for events in which an up or charm quark emits a gluon and turns into a top quark. This is called a Flavor Changing Neutral Current (FCNC) search. The Standard Model tells us that this transformation is totally forbidden for the simplest calculations. We also know how such a transformation could occur using some known, but complex and exceedingly rare, mechanisms. These mechanisms are so rare that, according to the Standard Model, we know that this kind of FCNC process will not be observed at the Tevatron according to the Standard Model. Earlier searches also looked for this process and failed to find it. We might then conclude that this kind of particle production is impossible. However, this would be unwise. All we can conclude is that if this kind of FCNC process exists, we haven't found it yet and, if it exists, it must be smaller than our equipment could find. Maybe we just need a smaller metaphorical sieve. Since big discoveries are often found by looking more carefully in places that have already been searched, DZero performed a more careful study.

This [analysis](#) did not find these kinds of FCNC events, but it nearly doubled the limits from the last such search. Given that the discovery of FCNC would revolutionize our physics theories in the same way that finding microscopic sand fairies would upend biology, it's a sure bet that physicists will be back, next time with an even finer sieve.

- Don Lincoln



Edward Boos

Lev Dudko

Liang Li

Thursday, July 8 Dinner

- Pasta carbonara
- Stuffed fillet of sole with crabmeat
- Sautéed spinach
- Pecan rum cake

Wednesday, July 16 Lunch

- Spicy sausage & cheese stuffed portobello mushroom
- Baby greens w/mango & marinated onions
- Fruit tart

[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](#)

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year extension of the partnership between the Japanese research institute, RIKEN and the UK's Science and Technology Facilities Council (STFC) enables vital research to continue in areas such as superconducting materials for computing and medical technology and the science underpinning fusion energy.

The agreement, which was signed at a celebratory event at STFC's Rutherford Appleton Laboratory (RAL) in Oxfordshire, builds on 20 years of collaboration between scientists and engineers at the RIKEN Nishina Centre for Accelerator-based Science in Japan and the ISIS Neutron and Muon Facility at RAL. To date, this collaboration has resulted in tens of millions of pounds of investment into ISIS by RIKEN over the 20 year period.

[Read more](#)



Maxim Perfilov
Moscow State U.
Russia

Reinhard Schwienhorst
Michigan State Univ.
Riverside

[These physicists were the driving force behind this difficult analysis.](#)



One of an experiment's most fundamental needs is to be able to turn on the electronics and download the software into them to make them operate properly. These Fermilab physicists are responsible for this critical functionality. Left to right: Geoff Savage, Fritz Bartlett and Vladimir Sirotenko.

Announcements

Latest Announcements

[Walking program weekly drawing winner announced](#)

[Argentine Tango - July 7-28](#)

[Format change for new personnel requisition form](#)

[Deadline approaching for requests for fall 2010 & spring 2011 on-site housing](#)

[Day Camp payments due](#)

[All supervisors: Do you need help preparing for performance reviews?](#)

[Time to complete accomplishment reports](#)

[10,000 Steps-a-Day walking program](#)

[Introduction to LabVIEW course - July 13](#)

[Embedded Design with LabVIEW FPGA and CompactRIO seminar - July 13](#)

[Interaction Management coaching forum - July 27](#)

[SciTech summer camps started June 14](#)

[Submit an announcement](#)