

Calendar

[Have a safe day!](#)

Thursday, April 1
10:30 a.m.

[Particle Astrophysics Seminar](#)

- One West (NOTE DATE and TIME)

Speaker: Andrea Lommen,
Franklin and Marshall College

Title: The North American
Nanohertz Observatory of
Gravitational Waves
(NANOGrav)

2:30 p.m.

[Theoretical Physics Seminar](#) -

Curia II

Speaker: Julius Kuti, University
of California, San Diego

Title: Lattice Studies of the
Nearly Conformal Composite
Higgs Mechanism

3:30 p.m.

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

[Accelerator Physics and Technology Seminar](#) - One

West

Speaker: Mohammed Awida,
University of Tennessee,
Knoxville

Title: Twisted Waveguide
Accelerating Structures:
Potential and Challenges

Friday, April 2

3:30 p.m.

DIRECTOR'S COFFEE
BREAK - 2nd Flr X-Over
THERE WILL BE NO JOINT
EXPERIMENTAL-
THEORETICAL PHYSICS
SEMINAR THIS WEEK

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

[Upcoming conferences](#)

Campaigns

Feature

Dmitri Denisov re-elected as DZero co-spokesperson



Dmitri Denisov

Dmitri Denisov will lead the DZero collaboration for two more years. He was recently re-elected to another term as the collaboration's co-spokesperson.

Fermilab Director Pier Oddone congratulated Denisov and said he was delighted Denisov would continue in the position.

"There was a very large consensus in the collaboration that Dmitri has been doing an excellent job as a spokesperson," said DZero co-spokesperson Stefan Soldner-Rembold.

Soldner-Rembold, who has worked with Denisov as co-spokesperson for the past year, believes that Denisov's broad experience within the collaboration makes him an invaluable asset.

"His detailed knowledge of all aspects of the experiment and his vision of what we should do are very important," Soldner-Rembold said.

Denisov has worked on almost all areas of DZero. He began working with the collaboration when he was a graduate student during the experiment's Run I construction. He has served as a spokesperson for the collaboration since 2006.

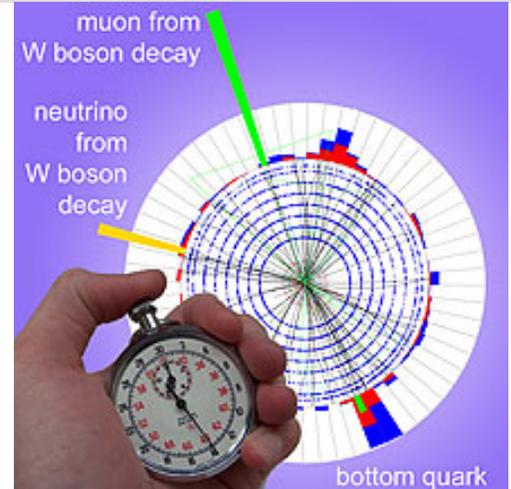
Denisov said he would like to continue serving in the leadership role to take advantage of both the chance to work with such talented physicists and the bevy of exciting measurements to come.

"I'm excited by the breadth of our physics program," Denisov said. "We have well over 100 different analyses underway."

Soldner-Rembold, a University of Manchester professor, thinks that his close-knit working relationship with Denisov and their appointments exemplify the collaboration's strength – the joined forces of the Fermilab and university research communities.

Result of the Week

Top quarks live fast and die young



The lifetime of a top quark is a tenth of a trillionth of a trillionth of a second, far beyond the ability of stopwatches to measure. Top quarks are identified by their characteristic decay into a bottom quark and the unstable W boson. By determining the range of masses a top quark can have, scientists can work out its fleeting lifetime.

If you go to a high school track practice, you'll see coaches using stop watches to time the young athletes. A world-class 100-yard dash can take just shy of 10 seconds and, for a time interval like that, a stop watch is entirely adequate. Of course there are things that are much faster, such as a blink of an eye or a beat of a hummingbird's wings. But compared to the subatomic realm, these brief instants might as well be an eternity.

Most of the subatomic particles made at the Tevatron have a fleeting existence, but it is rare for one to live as briefly as the top quark. DZero scientists have [announced](#) that they have determined the lifetime of the top quark and found it to be an ephemeral 3×10^{-25} seconds. This is a mind-bogglingly tiny number, and there are no good analogies to describe something that small.

This result is accomplished by exploiting a principle of quantum mechanics, called the Heisenberg Uncertainty Principle. In its most basic form, it states that you can't accurately know the position and the velocity of an object at the same time. However, a variant of the principle says that similarly you can't accurately

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

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

[Weather](#)

Breezy
79°/53°

[Extended Forecast](#)
[Weather at Fermilab](#)

[Current Security Status](#)[Secon Level 3](#)[Wilson Hall Cafe](#)

Thursday, April 1

- Apple sticks
- Santa Fe black bean soup
- Steak tacos
- Chicken Wellington
- Chimichangas
- Baked ham & Swiss on a ciabatta roll
- Assorted sliced pizza
- Crispy fried chicken salad

*Carb restricted alternative

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

Thursday, April 1
Dinner

- Brochettes of melon, prosciutto & fresh mozzarella
- Lobster tail w/Champagne butter sauce
- Saffron rice & red pepper pilaf
- Honey-glazed peach tart w/ mascarpone cream

Wednesday, April 7
Lunch

- Spiced pork tenderloin w/ bourbon reduction sauce
- Whole wheat couscous
- Steamed broccoli

"You can't get a sheet of paper between us. We work very closely and we exchange opinions daily on what needs to be done," Soldner-Rembold said. "We complement each other very well, and I'm really happy about Dmitri's re-election."

-- *Rhianna Wisniewski*

[Photo of the Day](#)[Unusual visit](#)

AD's Greg Vogel submitted this photo of a group of pelicans stopping by AE Sea on March 30. Although historically pelicans rarely visit the site, this is the second year in a row that they have stopped at Fermilab in early spring. The normal migration route for these birds is west of the laboratory, although they have been spotted at other Kane County locations in the past few years. Vogel saw about 15 of the birds on Tuesday morning, when he took this photo.

[In the News](#)[Fermilab reacts with excitement after particle collision](#)

From *Kane County Chronicle*, March 31, 2010

BATAVIA – Fermilab physicist Ian Shipsey is still giddy with excitement after seeing the Large Hadron Collider at CERN in Geneva, Switzerland, on Tuesday move closer to re-creating the conditions that existed shortly after the Big Bang.

From Fermilab's LHC Remote Operations Center, Shipsey and other scientists watched the LHC set record-breaking particle collisions of 7 trillion electron volts.

"It was emotional to see," Shipsey said. "It was a very exciting moment for everyone at Fermilab."

By using accelerators, scientists hope to re-create the conditions that existed shortly after the Big Bang. The big-bang theory holds that all the matter and energy in the universe

know simultaneously the energy and lifetime of a particle. Remember that Einstein showed that mass and energy are the same thing. DZero scientists were able to use subtle methods to determine a range of possible masses for top quarks and to therefore infer the particle's lifetime.

Another interesting feature of this result is that it uses events in which a single top quark was produced. This accomplishment is particularly noteworthy because top quarks are most commonly produced in pairs and the first observation of events in which a single top quark was produced was [a mere year ago](#). This new measurement dramatically underscores the ongoing process of scientific exploration, where one discovery leads to another.

- *Don Lincoln*

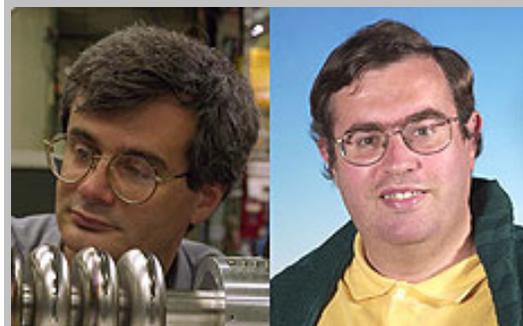


Aran Garcia-Bellido
Univ. Rochester

Christian
Schwabenberger
U. Manchester, UK

Reinhard
Schwienhorst
Michigan State

These scientists combined the observation of the production of single top quarks with the principles of quantum mechanics to measure the mind-bogglingly-short lifetime of the top quark.



Leo Bellantoni
Fermilab

Christophe Royon
Saclay
France

[Without a detector, no measurements are possible. These two physicists are joint leaders of the group of scientists who are working to identify electrons, photons, neutrinos and jets using the DZero calorimeter.](#)

[Accelerator Update](#)

- Banana cream puff w/
chocolate sauce

[Chez Leon Menu](#)

Call x3524 to make your
reservation.

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[Fermilab Today](#)

[Result of the Week](#)

[Safety Tip of the Week](#)

[CMS Result of the Month](#)

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suggestions to:
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originated from a state of enormous density
and temperatures that expanded or exploded
in a finite moment.

"We are trying to make primordial soup,"
Shipsey said.

[Read more](#)

[In the News](#)

Swiss collider puts Fermi physicists to work

From *Chicago Public Radio*,
March 31, 2010

*A massive proton collider in Europe
successfully smashed its first protons early
Tuesday morning. That means more work for
some physicists in Chicago's western suburbs.*

When it comes to proton colliders, bigger is
better. And now that it's operational, the Large
Hadron Collider in Geneva, Switzerland is the
world's biggest - more than four times bigger
than the collider at Fermi Lab in Batavia. And
it'll be able to smash protons with seven times
the energy.

Don Lincoln is a senior scientist at Fermi. He
seems disappointed that Fermi no longer rules
the sub-atomic roost, but he says he's excited
by the Swiss collider's capabilities.

[Read more](#) or listen

March 29-31

- Four stores provided ~43.25 hours of
luminosity
- Linac LCW pump at CUB failed - backup
brought online
- Preaccelerator personnel will remove H-
Source for cleaning

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

[Announcements](#)

Latest Announcements

[Argentine Tango thru April 28 -
Student discount available](#)

[Country house discount for Fermi
employees](#)

[Martial Arts classes - March 29](#)

[Celebrate National Humor Month](#)

[Retiree club](#)

[Cross-step waltz workshop - April 11](#)

[Bulgarian dance workshop and live
music party - April 8](#)

[Tartan Day party at Scottish dancing](#)

[Toastmasters at Fermilab - today](#)

[Excel Programming with VBA - today](#)

[Fermilab blood drive April 19-20](#)

[The Recipe Exchange Potluck lunch](#)

[AutoCAD Intermediate classes - June
22 -24](#)

[AutoCad Fundamentals class - June 6-
8](#)

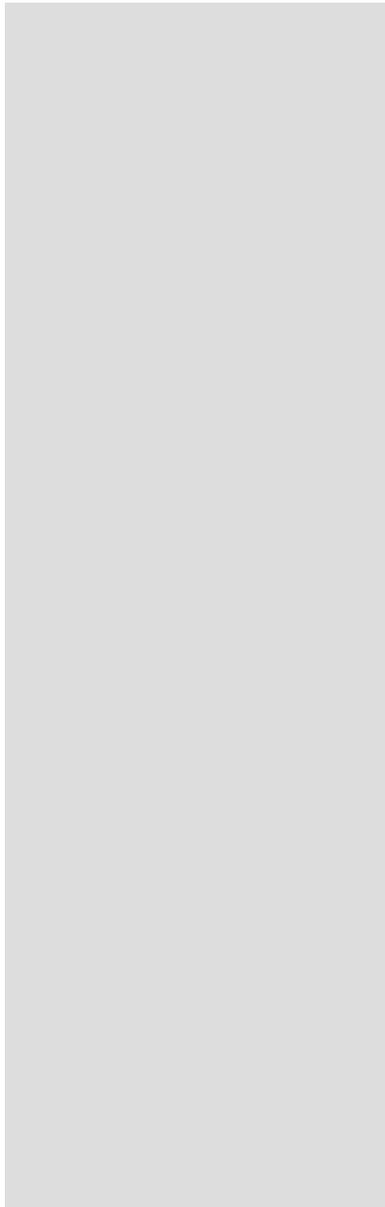
[FORE! The 2010 golf season is about
to hit you](#)

[SciTech summer camps start June 14](#)

[Butts & Guts class - sign up now](#)

[Blackberry Oaks Monday night golf
league](#)

[Watch your mail station for the arrival](#)



[of your Fermilab statement of benefits](#)

[Employee discount at Batavia Rosati's](#)

[Fermilab summer daycamp registration deadline April 2](#)

[Harlem Globetrotters special ticket price - April 15](#)

[Qi Gong, Mindfulness and Tai Chi Easy for Stress Reduction](#)

[Argentine Tango through Wednesday, student discount](#)

[Hiring summer students for 2010](#)

[Calling all softball players](#)

[Requesting donations for Fermi Maternity Closet](#)

[Fermilab Management Practices seminar classes begin in April](#)

[NALWO bus trip to The Museum of Science and Industry - April 24](#)

[Intermediate /Advanced Python Programming - May 19-21](#)

[Additional activities](#)

[Submit an announcement](#)