

Calendar

[Have a safe day!](#)

Thursday, August 13
2:30 p.m.

[Theoretical Physics Seminar](#) -

Curia II

Speaker: John Laiho,
Washington University, St. Louis

Title: The Neutral Kaon Mixing
Parameter from Lattice QCD
3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO

ACCELERATOR PHYSICS
AND TECHNOLOGY

SEMINAR TODAY

Friday, August 14

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

3:30

[Joint Experimental-Theoretical](#)

[Physics Seminar](#) - One West

(NOTE TIME)

Speakers: Arnaud Duperrin,
CPPM Marseille

Kevin Pitts, University of
Illinois, Urbana-Champaign

Title: New Results for Lepton-
Photon from DZero and CDF

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

Campaigns

[Take Five](#)

[Tune IT Up](#)

Weather

University Profile

State University of New York at Stony Brook



Left to right at the DZero assembly building: Yuan Hu, postdoc; Feng Guo, graduate student; Jun Guo, graduate student; Dmitri Tsybychev, faculty; Ken Herner, graduate student at time of photo; John Hobbs, faculty; Emanuel Strauss, graduate student; Dean Schamberger, senior scientist; Paul Grannis, faculty; and Junjie Zhu, postdoc. Not pictured: Subhendu Chakrabarti, postdoc; Michael Rijssenbeek, faculty; and Katy Tschann-Grimm, graduate student.

NAME:
[State University of New York
at Stony Brook](#)

HOME TOWN:
Stony Brook, New York

MASCOT:
The university mascot is the Seawolf, but the
High Energy Group mascot is the friendly
DZero dog.

SCHOOL COLORS:
Red and white

PARTICLE PHYSICS
COLLABORATIONS:
Currently DZero, ATLAS, SuperK and T2K

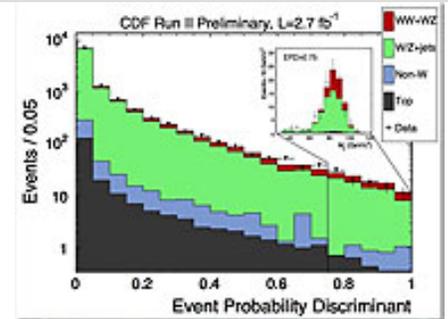
EXPERIMENTS AT FERMILAB:
DZero. Past experiments include: CZero
internal target diffractive scattering; 15-foot
and 30-inch bubble chambers with neutrino
and hadron beams; E288, E494 and E605
studying dihadrons and dimuons.

SCIENTISTS AND STUDENTS AT
FERMILAB:
Three students, two postdocs and frequent
travellers



Fermilab Result of the Week

CDF scientists observe rare diboson process



Event Probability Discriminant Authors

Left: Observation of WW and WZ events with one boson decaying to two quarks was accomplished by defining an "Event Probability Discriminant," or EPD. This variable tends to have a higher value for signal events (in red). The inset demonstrates that events' high EPD values have an invariant dijet mass near the W mass, consistent with what scientists expect for the signal. Right: Also shown on a log scale, the scientists who contributed to the EPD analysis. From left: Bernd Stelzer, UCLA and Simon Frazier University; Ricardo Eusebi, Enrique Palencia and Craig Group, Fermilab; Florencia Canelli, Fermilab and University of Chicago; Bruno Casal, Cantabria; Martina Hurwitz, University of Chicago; Barbara Alvarez, Universidad de Oviedo. [Learn more](#)

Searching for rare particles and interactions is an exciting part of experimental particle physics.

It is also a way that scientists can prove they have the ability to look for signals that prove or refute theories.

Single W and Z bosons, the carriers of the weak force in the Standard Model, are produced at high rates at the Tevatron. But events with two bosons produced at the same time (WW or WZ events) are very rare. A recent analysis at CDF searched for and observed WW and WZ events where one of the W bosons decayed to leptons and the other W or Z decayed to quarks. This



Sunny
86°/62°

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

[Current Security Status](#)

[Secon Level 3](#)

[Wilson Hall Cafe](#)

Thursday, August 13
- Southwestern chicken tortilla
- Philly style cheese steak
- *Garlic herb roasted pork
- Mardi Gras jambalaya
- *Southwestern turkey wrap
- Assorted sliced pizza
- *Marinated grilled chicken Caesar salads

*Carb restricted alternative

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

Thursday, August 13
Dinner
- Closed

Wednesday, August 19
Lunch
- Cumin and chipotle glazed pork loin w/apple salsa
- Roasted sweet potatoes
- Pear tart

[Chez Leon Menu](#)

Call x3524 to make your reservation.

[Archives](#)

COLLABORATING AT FERMILAB SINCE:
About 1972

MAJOR CONTRIBUTIONS TO FERMILAB EXPERIMENTS:

First ring imaging Cerenkov detector (E605), discovery of the Upsilon (E288); central drift chamber, calorimeter electronics, layer 0 silicon detector and silicon track trigger (DZero). Also provided a DZero spokesperson; physics convener; physics group leaders for electroweak, b-physics, new phenomena and QCD groups. Leading roles in top quark discovery, W boson mass and B_s mixing measurements.

PARTICLE PHYSICS RESEARCH FOCUS:

Constraining the Standard Model through measurements of the W boson mass and direct searches for the Higgs boson. Also, studying the symmetries and new states in hadrons containing bottom quarks.

WHAT SETS PARTICLE PHYSICS AT STATE UNIVERITY OF NEW YORK AT STONY BROOK APART?

A broad program touching most aspects of physics at the energy frontier as well as neutrino oscillations and proton decay.

FUNDING AGENCY:
National Science Foundation and the Department of Energy

FAVORITE NATIONAL LABORATORY:
Fermilab



View all [University profiles](#)

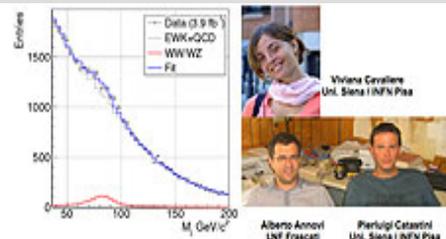
Feature

signature closely resembles that of an important channel used in the current search for a light Higgs boson at the Tevatron.

Much like in the search for the Higgs, one of the main challenges in the WW and WZ search was separating the few real signal events from the large number of background events resembling the signal. To overcome this challenge, scientists applied sophisticated techniques that took advantage of small differences between the expected signatures of signal and background events. The observation of WW and WZ events in this decay channel proves that rare processes can be isolated at the Tevatron and brings us yet another step closer to finding the Higgs boson.

CDF scientists calculated the rate, or cross section, of WW and WZ production from the number of observed signal events. Many theories of physics beyond the Standard Model would affect the size of this cross section. The result of the CDF measurement agrees well with Standard Model predictions, and scientists can use the result in the future to constrain these new theories.

-- edited by Craig Group



The scientists shown above used the dijet mass distribution on the left to measure the diboson cross section. The signal (shown in red) shows a distribution peak at the boson mass, while the background is smooth and steeply falling. [Learn more](#)

In the News

Orson Welles' residence is cleared for demolition

From **Chicago Tribune**, August 12, 2009

Editor's note: Fermilab founding director Robert Wilson attended school at the Todd School campus.

Woodstock City Council does not protect dormitory on former Todd School campus

A yearlong effort by residents and preservationists to protect a building where

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

is online at:

www.fnal.gov/today/

Send comments and suggestions to:

today@fnal.govVisit the Fermilab [home page](#)**New co-spokesperson begins term at DZero**

Darien Wood, recent DZero co-spokesperson, poses with Stefan Soldner-Rembold, DZero's new co-spokesperson, in front of a model of the DZero detector. Soldner-Rembold will serve a two-year term as co-spokesperson.

In his three years as DZero co-spokesperson, Dmitri Denisov has gotten used to communicating with his counterpart through a window between their offices. Starting this month, he's been seeing a new face through that window.

Denisov's new neighbor is Stefan Soldner-Rembold, a DZero collaborator and physics professor at the University of Manchester. On Aug. 1, Soldner-Rembold began a two-year term as co-spokesperson of the DZero experiment. He replaces Darien Wood, who will remain on DZero while returning to teaching at Northeastern University in Boston.

After a stint as DZero's physics coordinator, Soldner-Rembold will now serve as a key communicator between the experiment and a wide web of other groups—the press, Fermilab's Directorate, other experiment groups, funding agencies and the 90 institutions that send scientists to work on DZero. Along with Denisov, he will also appoint colleagues to leadership positions within DZero and review all papers the collaboration submits for publication.

"It's like leading a small country with its laws, regulations, successes and issues," Denisov said of a spokesperson's responsibilities. But he underscored Soldner-Rembold's readiness for the job.

"The experiment is getting an extremely good spokesman in Stefan," Denisov said. "He went through many important DZero positions before this one. He became very familiar with what this position involves, particularly as

Orson Welles once lived apparently has come up short, following a decision by the Woodstock City Council that clears the way for demolition of the property.

Running out of options, opponents say they still hope to find a benefactor to allow them to move Grace Hall to an adjacent property, at a cost of about \$1 million.

Caryl Lemanski of Woodstock is leading the effort to save the building and admits it will be hard to raise the money after the council's vote late last month.

Tucked amid a sprawling senior community in Woodstock, Grace Hall was a dormitory at the Todd School, a renowned private academy for boys that closed more than 50 years ago. Built in 1920, one of its earliest residents was Welles, who became a famed actor who went on to direct "Citizen Kane."

...Other famous Todd alumni include and Fermilab founder Robert R. Wilson.

[Read more](#)**Announcements**[Fred Garbo Inflatable Theatre - family fun on Fermilab Arts Series - Nov. 7](#)[The Night Before Christmas Carol - Holiday fun at Fermilab Arts Series - Dec. 5 tickets available now](#)[Buttered Rum performs at Fermilab Arts Series Oct. 24](#)[Mosaico Hispanico - Celebrating Hispanic music and dance - Sept. 19](#)[Bike rack etiquette](#)[URA Visiting Scholars Program now accepting applications](#)[Bristol Renaissance Faire discount tickets](#)[Six Flags Great America discount tickets](#)[Pool memberships available in the Recreation Department](#)[Raging Waves Waterpark online discount ticket program](#)

physics coordinator.”

Denisov also commended outgoing spokesman Darien Wood.

“Darien has the highest standards in human relations and in scientific results,” Denisov said. “It’s been a pleasure to work with him.”

With the Tevatron’s run now extended into 2011, Denisov, Wood and Solder-Rembold are enthusiastic about the discoveries DZero may make in the next few years.

“It’s a fantastic opportunity to be in this position at a time when the experiment is producing so much physics,” Soldner-Rembold said, explaining that DZero expects to nearly double its data set during his term as spokesperson. “The next years might be the most interesting ones for the experiment.”

-- Rachel Carr



Stefan Soldner-Rembold, DZero's new co-spokesperson, poses with current co-spokesperson Dmitri Denisov.

[Yoga Class - Aug. 11 - Sept. 29](#)

[Muscle Toning Class - Aug. 4 - Sept. 28](#)

[Health after 50 seminar](#)

[The University of Chicago Tuition Remission Program Aug. 17 deadline](#)

[Fermilab Blood Drive Aug. 25 and 26](#)

[What's New in NI LabVIEW 2009? Aug. 27](#)

[Office 2007 New Features class offered in September](#)

[Process piping \(ASME B31.3\) class offered in October and November](#)

[Additional Activities](#)

[Submit an announcement](#)