

Calendar

[Have a safe day!](#)

Thursday, April 29

2:30 p.m.

[Theoretical Physics Seminar](#) - Curia II

Speaker: Monika Blanke, Cornell University

Title: Testing the SUSY Weak Scale Stabilization at the LHC

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

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

West

Speaker: Sergei Nagaitsev, Fermilab

Title: Toward Super-High Intensity Accelerators

Friday, April 30

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

[Joint Experimental-Theoretical Physics Seminar](#) - One West

Speaker: Andrei Gritsan, Johns Hopkins University

Title: The Power of Spin Correlations: From B-Decays to Higgs and Beyond at the LHC

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

[Upcoming conferences](#)

Campaigns

Take Five

Tune IT Up

H1N1 Flu

Milestone

Young-Kee Kim to get distinguished scholar award



Fermilab Deputy Director Young-Kee Kim

Fermilab Deputy Director Young-Kee Kim was named this year's recipient of the Rochester Distinguished Scholar Award. The University of Rochester presents the annual award to graduates who have gone on to distinguished careers, most often in academia, industry or government.

Kim was selected in recognition of her outstanding scholarship in the field of experimental particle physics. She will accept the award at the University of Rochester's doctoral commencement ceremony on May 15.

University Profile

Brown University



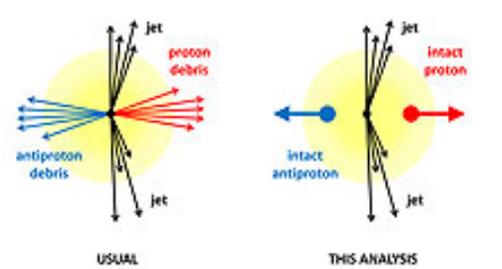
Clockwise from top left. Image 1: Back row from left: Vivek Parihar, Dookee Cho and Gena Kukartsev. Front row from left: David Khatidze, Selda Esen Koylu, Duong Nguyen, Shabnam Jabeen, Saptaparna Bhattacharya and John Paul Chou. Image 2: Brown group at CERN from left: Aram Avetysian, Jeremy Andrea, Thomas Speer, Alexey Ferapontov and Patrick Tsang. Image 3: From left: Tutanon Sinthuprasith, Juliette Alimena, Ulrich Heintz, Greg Landsberg, Dave Cutts, Meenakshi Narain, Michael Segala and Michael Luk.

NAME:

[Brown University](#)

Result of the Week

Very clean collisions



Scientists conducted this analysis to search for a special class of events in which exactly two jets were produced and nothing else.

At the Tevatron, collisions that produce two jets are generally not such a big deal. A typical way in which this can occur might be a quark from the proton shooting a gluon at an antiquark in the antiproton. Today's Result of the Week describes a different type of collision phenomenon.

In the first type of collision, the quark and antiquark are knocked sideways into the detector. Due to the nature of the strong nuclear force, the detector will not see the quark and antiquark, but rather two jets. Jets are created when a quark leaves a particle collision. The strong nuclear force converts a single quark or gluon into a jet, which is many particles, all travelling in more or less the same direction.

The remnants of the proton and antiproton themselves generally turn into jets heading in the same direction as the particle beams. Because of their direction of travel, many of the particles in these jets hit the detector near the beam pipe. These kinds of collisions are among the most common.

In another type of collision, the proton and antiproton pass by one another and interact by exchanging a 'particle' called a pomeron. The pomeron is not an elementary particle like the electron or quark but carries energy and can deflect the beam particles' trajectory. Physicists do not yet know the makeup of the pomeron but suspect it is probably two gluons. Since the pomeron does not carry the strong nuclear charge, the beam particles are not broken up. Physicists have observed these types of collisions for decades.

Physicists predicted that it is possible for the

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

Weather



Sunny
77°/59°

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

Current Security Status

Secon Level 3

Wilson Hall Cafe

Thursday, April 29
- Breakfast: 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

[Wilson Hall Cafe Menu](#)

Chez Leon

Thursday, April 22
Dinner
- Closed

Wednesday, April 28
Lunch
- Crab cakes w/red pepper mayonnaise
- Lemon orzo
- Carrot cake

[Chez Leon Menu](#)

Call x3524 to make your reservation.

Archives

HOME TOWN:
Providence, Rhode Island

MASCOT:
Bruno the Bear



SCHOOL COLORS:
Seal brown and cardinal red

PARTICLE PHYSICS COLLABORATIONS:
DZero, CMS

EXPERIMENTS AT FERMILAB:
DZero, CMS

NUMBER OF SCIENTISTS AND STUDENTS AT FERMILAB:
Five faculty, nine postdocs and eight graduate students

COLLABORATING AT FERMILAB SINCE:
The late '60s, starting with E96.

MAJOR CONTRIBUTIONS TO FERMILAB EXPERIMENTS:
We have made major contributions to the DZero experiment since its inception, starting with the detector design. Contributions include: the data acquisition system, luminosity monitor, Level 2 silicon track trigger, Level 1 track trigger upgrade for Run IIb, b-tagging algorithm development, jet energy scale calibration, vertex reconstruction algorithm development and maintenance.

We joined the CMS experiment in 2004 and have contributed to the following detector systems: silicon tracker, hadron calorimeter and the trigger system. We also contributed to the Jet/MET physics object group, trigger and tracker performance studies, and data quality monitoring for the high-level trigger.

PARTICLE PHYSICS RESEARCH FOCUS: We are interested in high transverse momentum physics, including top quark physics and electroweak interactions, and searching for new physics, in particular for extra dimensions, technicolor, heavy W bosons, fourth generation quarks, charged massive long-lived particles and black holes.

WHAT SETS PARTICLE PHYSICS AT BROWN UNIVERSITY APART?
We focus on a single running experiment and work together as a team to take on key responsibilities and maximize our contributions rather than spreading ourselves too thin. While this strategy may not be unique, we feel it has

pomeron to convert into two jets. In a collision like this, the signature is two jets in the detector and, since the beam particles don't break up, no other energy is observed. This phenomenon has been [observed](#) by CDF in lower-energy collisions

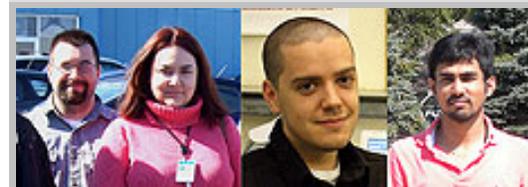
The DZero experiment has just announced the [results](#) of a search for this phenomenon in higher-energy collisions and observed evidence that strongly suggests that this kind of collision occurs even at higher energy.

These types of collisions are interesting because a similar process has been proposed to search for Higgs bosons. In this process, physicists predict that the observed collision will consist of only a Higgs boson and the unbroken beam particles. If observed, this will be a precise way to measure the mass of the Higgs boson.

- Don Lincoln



These physicists worked on this unique analysis.



These physicists are responsible for providing algorithms that accurately measure the missing energy in an event. This quantity plays a crucial role in many exciting analyses. Left to right: Ken Herner, University of Michigan; Lidija Zivkovic, Columbia University; Seth Caughron Columbia University; and Abhinav Dubey, Delhi University, India.

Accelerator Update

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

Info

Fermilab Today

is online at:

www.fnal.gov/today/

Send comments and suggestions to:

today@fnal.gov

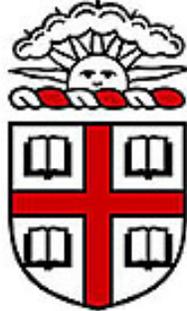
Visit the Fermilab [home page](#)

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been particularly successful for us and enabled a relatively small high-energy physics group to have a disproportionate impact.

FUNDING AGENCY:
Department of Energy

FAVORITE NATIONAL LABORATORY:
Fermilab



BROWN

View all [University profiles](#)

In the News

Q&A: Peer-reviewed physics, at the speed of light

From *iSGTW*, April 28, 2010

Sergio Bertolucci is the director for research and computing at CERN. Over the noise of nearby cathedral bells chiming the hour, iSGTW caught up with him on the steps of the University Building in Uppsala during a coffee break at the EGEE User Forum. We asked him about the spate of new papers coming out from the LHC, and what it all means for science.

iSGTW: We have heard that a lot of papers have already been published in the time since the start-up of the LHC. Is that right?

Bertolucci: Four papers on high-energy physics have already published, and 15 are in preparation as of today, April 14, all based on the collisions that just happened.

One week after the first collisions, the first papers were published electronically. And these were all peer-reviewed.

[Read more](#)

April 26-28

- Four stores provided ~43.75 hours of luminosity
- NuMI kicker fluorinert temperature alarm; more flow fixed the problem
- T977, the MINERvA experiment resumes in the Meson MTest line
- Store 7771's luminosity of $386.5E^{30}$ comes in as third best

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

Latest Announcements

[ACU presents "Retirement Planning for Women"](#)

[National Day of Prayer observance May 6](#)

[NALWO Children's Playgroup international party - May 14](#)

[NALWO Spring Tea - May 20](#)

[Muscle Toning by Bod Squad begins May 6](#)

[Tennis anyone? Outdoor singles league begins May 3](#)

[Outdoor soccer league - May 4](#)

[Ask HR in Wilson Hall atrium - today](#)

[Argentine Tango through today - Student discount available](#)

[English country dancing -May 2](#)

[Next yoga session begins May 4](#)

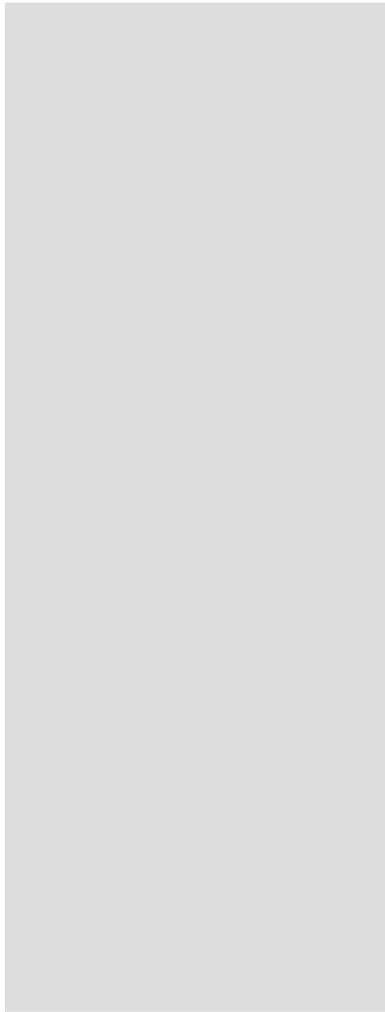
[Celebrate National Humor Month](#)

[Toastmasters meet in cafeteria - May 4](#)

[IMAP users: Configure your e-mail client by May 5](#)

[National Lab Day 2010](#)

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



[SciTech summer camps start June 14](#)

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

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

[Country House discount for Fermilab employees](#)

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

[Fermilab Arts Series presents Leo Kottke - May 8](#)

[Fermilab Arts Series presents Corky Siegel and Chamber Blues June 26](#)

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

[AutoCAD Fundamentals class - June 8 - 10](#)

[Calling all softball players](#)

[Additional activities](#)

[Submit an announcement](#)