

Calendar

Have a safe day!

Thursday, Feb. 11

1:30-4 p.m.

Special LPC lecture - One West

Speaker: Dan Green, Fermilab

Title: Early LHC Data

2:30 p.m.

[Theoretical Physics Seminar](#) -

Curia II

Speaker: Elvira Gamiz, Fermilab

Title: Phenomenology of

Neutral B-Meson Mixing and

Decays Constants

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

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

West

Speaker: Eliana Gianfelice-Wendt, Fermilab

Title: Abort Gap Cleaning at LHC

Friday, Feb. 12

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

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

Speaker: Jason Steffen, Fermilab

Title: First Results from the Kepler Mission

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

[Upcoming conferences](#)

Campaigns

[Take Five](#)

[Tune IT Up](#)

H1N1 Flu

Photo of the Day

Fermilab kicks off lab's Engineers Week 2010



Fermilab's engineers gather for a group photo in celebration of Engineers Week 2010.

To kick off Engineers Week at Fermilab on Wednesday, Feb. 10, Director Pier Oddone addressed all engineers at a talk in Ramsey Auditorium.

Oddone gave an overview of Fermilab's future projects and highlighted how crucial engineers are to the laboratory.

"All the big dreams we can cook up would not be realized if we didn't have your help," he said.

Fermilab's Engineers Week celebration will continue throughout the week of Feb. 15 with tours, discussions and other events. View the [schedule of events](#)

From *symmetry*

Preserving the data harvest

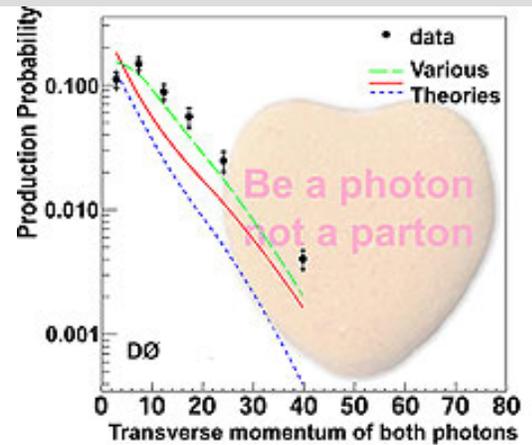


Canning, pickling, drying, freezing—physicists wish there were an easy way to preserve their hard-won data so future generations of scientists, armed with more powerful tools, can take advantage of it. They've launched an international search for solutions.

When the BaBar experiment at SLAC National

Fermilab Result of the Week

Seeing clearly with photons



Events in which two photons are produced are natural laboratories in which to study collisions between quarks. These studies can unambiguously rule out certain theoretical calculations.

With Valentine's Day just around the corner, this Result of the Week draws what might seem an unlikely analogy between physics and dating.

Contrary to Mom's best advice, some people on a first date might try to appear smarter, richer or better than they really are. Indeed, a big point of dating is to see through the façade to get a sense of the real person.

The situation is similar at a hadron collider. The Tevatron collides the partons (quarks and gluons) in the particle beam, and DZero tries to study the details of these collisions. The problem is that physicists never see a parton coming out of the collision. Interactions after the collision convert the partons into jets, which are sprays of particles going in the same direction. Thus experimenters do not see the bare collision but rather something distorted by these secondary interactions.

One way physicists can get a view of the real collision is to study events in which photons are generated. Photons undergo no secondary interactions and thus reveal precisely what happened in the initial interaction.

In addition to seeing a clear picture of the interaction between quarks and gluons, experimenters at the LHC plan to study events in which two photons are created. LHC physicists are confident that this is a good way for them to find the Higgs boson.

DZero has recently [presented at a Fermilab](#)

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

Weather



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

Current Security Status

[Secou Level 3](#)

Wilson Hall Cafe

Thursday, Feb. 11

- Breakfast: Apple sticks
- Minnesota wild rice w/chicken
- Tuna melt on nine grain
- Italian meatloaf
- Chicken casserole
- Buffalo crispy chicken wrap
- Assorted sliced pizza
- Mandarin chicken

[Wilson Hall Cafe Menu](#)

Chez Leon

Thursday, Feb. 11

- Dinner
- Closed

Wednesday, Feb. 17

- Lunch
- Spicy honey-brushed chicken
- Garlic roasted potato wedges
- Tossed salad
- Sticky toffee pudding

[Chez Leon Menu](#)

Call x3524 to make your reservation.

Archives

Accelerator Laboratory shut down in April 2008, it brought an end to almost nine years of taking data on the decays of subatomic particles called B mesons. But that was hardly the end of the story for the 500 scientists working on the experiment. In November they celebrated the publication of their 400th paper, and they expect the next few years will yield at least 100 more.

These BaBar results and discoveries stem from more than two million megabytes of data. As impressive as this number is, it's only a fraction of the data that will come out of the next generation of high-energy physics experiments. For instance, the ATLAS detector at CERN's Large Hadron Collider will produce a whopping 320 megabytes of data every second, surpassing BaBar's total output within three months.

BaBar's treasure trove of data, which may contain answers to questions we don't even know how to ask yet, raises an increasingly important question in highenergy physics: When the party's over, what do you do with the data?

In the past, this was not so much of a concern. New experiments came along in a regular drumbeat, regularly superseding one another in terms of what could be done with the data they produced. Today, as experiments get bigger, more complex, and much more expensive, the drumbeat has slowed considerably, and physicists are starting to realize the value of wringing as much insight out of every experiment as they possibly can.

But without a conscious effort to preserve them, data slowly become the hieroglyphs of the future. Data preservation takes a lot of work, and with that, a lot of resources. Researchers have to think not only about where to store the data, but also how to preserve it in a way that it can still be used as technology and software change and experts familiar with the data move on or retire.

[Read more](#)

In Brief

[seminar](#) an analysis of collisions in which two photons are produced. These studies unambiguously demonstrated the weakness of the simplest calculations and showed the need for a more careful theoretical treatment, including a technique called resummation. This clear picture of the underlying collision is invaluable.

If you happen to be going on a first date this Valentine's Day, remember your Mom's advice and "just be yourself." Or, in keeping with the theme of this article, be a photon, not a parton.

-- Don Lincoln



Dmitry Bandurin
Florida State

Xuebing Bu
USTC
China

Liang Han
USTC
China



Aurelio Justo
Fermilab/FAE
Spain

Yanwen Liu
USTC
China

Junjie Zhu
SUNY
Stony Brook

[These physicists were responsible for this important analysis.](#)



Left to Right: Bruce Merkel, John Foglesong, Mike Marulik, Mike Cherry, Victor Martinez
Not Pictured: Tim Martin

The electrical operations and support team are literally responsible for keeping the lights on. Their primary role is to support the wide variety of electronics that make up the DZero detector.

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.govVisit the Fermilab [home page](#)**URA submissions for annual Thesis Award due March 1**

Fermilab and the Universities Research Association invite submissions for the thirteenth annual URA Thesis Award competition. The award recognizes the most outstanding thesis related to work conducted at Fermilab or in collaboration with Fermilab scientists. The thesis submitted must be completed in the 2009 calendar year to qualify.

Nominations must be submitted to sbrice@fnal.gov by March 1, and should include at least two letters supporting the merits of the thesis. At least one letter should be from a member of the thesis committee of the Ph.D.-granting institution.

The thesis awards committee will select the winners. The committee members will judge each thesis on clarity of presentation, originality and physics content. To qualify, the thesis must have been submitted as partial fulfillment of the Ph.D. requirements in the 2009 calendar year, be written in English and it must have been submitted in electronic form to the Fermilab Publications Office in accordance with Fermilab policy.

For further details, consult the [URA Thesis Award Web site](#).

Photo of the Day**Fun in the snow**

BSS employee Julius Borchert submitted this photo of a snowperson in front of 41 Nequa in the Village.

In the News

Feb. 8-10

- Three stores provided ~34 hours of luminosity
- TeV access to repair magnet lead
- MI vacuum problems required access to repair
- Feynman Computer Center suffered power outage
- MI RF cavity replaced
- Store 7590 lost due to local earthquake

[Read the Current Accelerator Update](#)[Read the Early Bird Report](#)[View the Tevatron Luminosity Charts](#)**Announcements****Latest Announcements**[Staff appreciation massages offered](#)[Fermilab Management Practices seminar beginning - today](#)[March 5 deadline for The University of Chicago Tuition Remission Program](#)[Blood drive sign-up](#)[Service Award program](#)[2010 standard mileage reimbursement rate](#)[Chicago Bulls discount tickets available online](#)[Introduction to Argentine Tango series of classes - FREE](#)[Qi Gong, Mindfulness and Tai Chi Easy for Stress Reduction](#)[Excel 2007 Advanced class - Feb. 18](#)[Ukrainian egg decorating class - Feb. 22](#)[Weight Watchers at Work new session](#)[BLAST! The Movie: intro, film and Q&A - Feb. 19](#)[Applications accepted for awards in URA Visiting Scholars program](#)[Fermilab Family Open House - Feb. 21](#)[Python Programming class - Feb. 24-26](#)[Conflict Management and Negotiation Skills - March 3 and 10](#)

First results from Large Hadron Collider published

From **BBC News**, Feb. 9, 2010

The results from the highest-energy particle experiments carried out at the Large Hadron Collider (LHC) in December have begun to yield their secrets.

Scientists from the LHC's Compact Muon Solenoid detector has now totted up all of the resulting particle interactions.

They wrote in the *Journal of High Energy Physics* that the run created more particles than theory predicted.

However, the glut of particles should not affect results as the experiment runs to even higher energies this year.

The LHC is designed to smash together particles and atoms circling its 27km-tunnel in a bid to find evidence of further particles that underpin the field of physics as it is currently formulated.

[Read more](#)

[Adobe Acrobat Professional 9.0 Level 1 class - March 4](#)

[On-site housing for summer 2010 - March 8 deadline](#)

[DreamWeaver CS3: Intro offered March 9 or March 16](#)

[Adaptive Leadership: Coaching for Individual Differences class - March 9](#)

[Excel Power User/ Macros class - March 11](#)

[Hiring summer students for 2010](#)

[FRA Scholarship 2010](#)

[Additional activities](#)

[Submit an announcement](#)