

Calendar

Thursday, Oct. 11

9 a.m. - 6 p.m.

[USCMS First Physics](#)

[Workshop](#)

1 p.m.

[ILC ALCPG Physics and](#)

[Detector R&D Seminar](#) - West

Wing, WH-10NW

Speaker: M. Charles,

University of Iowa

Title: PFA for SiD: Where We
Are and Where We Aren't

2:30 p.m.

[Theoretical Physics Seminar](#) -

Curia II

Speaker: M. Schwartz, Johns

Hopkins University

Title: The Extraordinary

Predictive Power of

Holographic QCD

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO

ACCELERATOR PHYSICS

AND TECHNOLOGY

SEMINAR TODAY

Friday, Oct. 12

8 a.m. - 5 p.m.

[USCMS First Physics](#)

[Workshop](#)

1 p.m.

[Gallery Lecture Series](#) - One

West

Speaker: A. Segami (Artist)

Title: The Art and Science of

Painting on Water: Probability

of Certainty in Creative

Problem Solving Technique

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

[Joint Experimental-Theoretical](#)

[Physics Seminar](#) - One West

Speaker: D. Acosta, University

of Florida

Title: Status of the

Commissioning of CMS

[Click here](#) for NALCAL,

Fermilab Profiles in Safety



Terry Tope - PPD/Mechanical Department/ Process Engineering

"Safety doesn't occur in a vacuum. No one knows the dangers associated with your work better than you do. If you team up with ES&H to write a job safety checklist that is simple and clear, you will reduce the risk of an accident."

From iSGTW

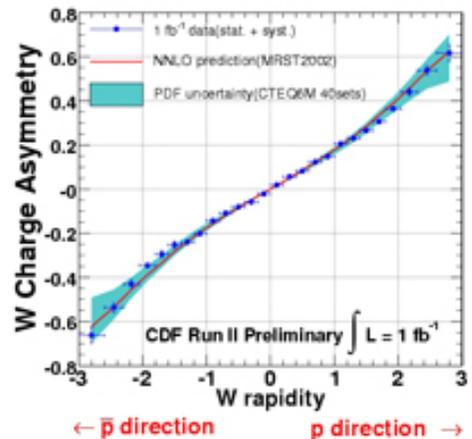
Europe and China working together to optimize network layer



The EC-GIN team, pictured here at a July 2007 conference in Greece, are working to develop tailored network technology dedicated support of grid applications. *Image courtesy of EC-GIN*

Fermilab Result of the Week

Getting a charge from asymmetry



The W charge asymmetry versus the W rapidity for the data (black points). The red curve shows the predicted asymmetry and the blue band shows the uncertainty of that prediction due to the uncertainty in the proton parton distribution functions.

Protons are composed of two up quarks and a down quark and are bound together by the strong force via gluons. In order to explore the structure of the proton, we make measurements of the momentum distributions of quarks and gluons in the proton. This is called the parton distribution function, or PDF. Many analyses at a hadron collider suffer from systematic uncertainties from our limited knowledge of PDFs.

At the Tevatron, one measurement of proton PDFs comes from the W production charge asymmetry. W bosons are produced when the up and down quarks inside the proton and antiproton collide. An asymmetry between W^+ and W^- arises due to differences in the up quark versus down quark PDFs. The up quark tends to carry a higher fraction of the proton's momentum than the down quark, so the W^+ (W^-) tends to follow the initial direction of the proton or antiproton.

Scientists on the CDF experiment have developed a new analysis technique that measures the charge asymmetry as a function of the direction of the W itself -- measured by a quantity called W rapidity -- as opposed to that of the observed electron from W decay.

a weekly calendar with links to additional information.

Weather

 **Few showers 60°/39°**

[Extended Forecast](#)

[Weather at Fermilab](#)

Current Security Status

[Secou Level 3](#)

Wilson Hall Cafe

Thursday, Oct. 11

- Santa Fe black bean
- Sloppy joe
- Chicken cordon blue
- Steak
- Baked ham & swiss on a ciabatta roll
- Assorted slice pizza
- Crispy fried chicken ranch salad

***Carb restricted alternative**

[Wilson Hall Cafe menu](#)

Chez Leon

Thursday, Oct. 11

Dinner
Closed

Wednesday, Oct. 17

Lunch

- Ropa Vieja (Shredded Flank Steak)
- Platano Maduro
- Moro (Rice & Black Beans)
- Mango Flan

[Chez Leon menu](#)

Call x4598 to make your reservation.

Archives

[Fermilab Today](#)

[Result of the Week](#)

[Safety Tip of the Week](#)

[ILC NewsLine](#)

The Internet communication infrastructure—the TCP/IP protocol stack—is designed for broad use and as such does not account for the specific characteristics of grid applications.

This one-size-fits-all approach works for a number of application domains; however, it is far from optimal and is not as efficient as customized solutions. While grid technologies and services are slowly coming of age, the corresponding network infrastructure is still in its infancy.

In an effort to change this, Europe and China are working together to improve the network's ability to support grid applications and services.

Called the Europe-China Grid InterNetworking project, or EC-GIN, the project aims at developing a tailored network technology in dedicated support of grid applications.

[Read More](#)

In the News

Invisible matter won't disappear anytime soon

From *msnbc.com*, Oct. 8, 2007

At least 2.1 million-billion years must pass for dark matter to decay

Dark matter is a mysterious something invoked by scientists to explain mass they know is out there but which can't be seen. The invisible matter, far more prevalent than regular matter, is evident by its gravitational effects on galaxies. And as researchers hunt for the strange stuff, they need not worry about it disappearing any time soon, if that makes any sense.

New calculations show at least 2.1 million-billion years must pass for half of the invisible stuff to decay, if it does at all.

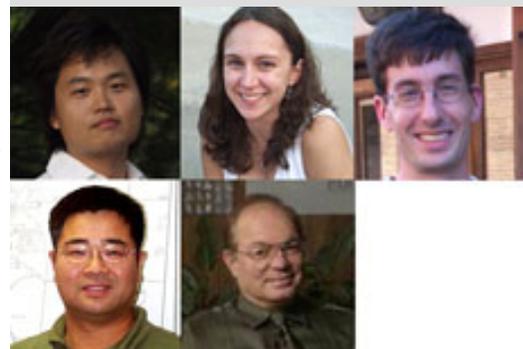
While all this theoretical thinking seems awfully abstract, it represents yet another effort to pin down what the heck dark matter might really be.

[Read more](#)

In the News

They measured the W charge asymmetry, the difference in the W^+ and W^- produced, divided by the total vs. the W rapidity, using 1 inverse femtobarn of data. Since the uncertainties on this measurement are smaller than the current uncertainties on the PDFs, this measurement will provide an improved understanding of the internal structure of the proton.

[Learn more](#)



Clockwise from top left : Bo-Young Han, University of Rochester; Eva Halkiadakis, Rutgers University; Kevin McFarland, University of Rochester; Arie Bodek, University of Rochester; YeonSei Chung, University of Rochester.

[Result of the Week Archive](#)

Announcements

[Have a safe day!](#)

Do not use Fermilab email for political activity

Recently, Fermilab employees and users have received e-mails asking them to support petitions or political campaigns. Fermilab employees and users are not allowed to use their Fermilab accounts ("fnal.gov") to respond to such e-mails or to send out such solicitations. More information on prohibited activities and the appropriate use of the laboratory's computing network is outlined in the [Fermilab Policy on Computing](#).

Brown bag traffic safety seminar Oct. 16

A brown bag traffic safety seminar will be held on Oct. 16 from 11:30 a.m. to 12:15 p.m. in One West. Opening remarks regarding Fermilab traffic safety will be made by Bruce Chrisman. IDOT's Toshi Lukens will address new traffic laws. The seminar also will cover aggressive driving and DUI information. Door prizes will be raffled.

Health and Wellness Fair today

Fermilab's Employee Health and Wellness Fair will take place from 11 a.m. to 2 p.m.

Info

Fermilab Today
is online at:
www.fnal.gov/today/

Send comments and
suggestions to:
today@fnal.gov

**Fermilab: A place of prairies
and particle accelerators**

From *Beep*, Oct. 9, 2007

Physics geeks get all excited when you tell them about Fermilab.

Why? Well that's a no brainer. Fermilab houses the world's most powerful particle accelerator, which scientists use to smash atomic particles together to learn more about our world. And it's located right here in the Chicago suburbs.

But here's the cool part: Because the accelerator is underground, there's a huge nature preserve above ground that even us nonphysics majors will be psyched about exploring.

[Read more](#)

today.

Interpersonal Communication Skills

Learn effective communication strategies by assessing your communication style and developing skills for more productive work relationships through the "Interpersonal Communications Skills" course on Oct. 18. [Learn more and enroll.](#)

Wanted: Graduate students and postdocs for ALCPG07

Are you a graduate student or postdoc who would like free food and a T-shirt? Volunteer to be a scientific secretary at the ALCPG/GDE meeting at Fermilab on Oct. 22-26. For details contact [Andreas Kronfeld](#).

Fermilab Barn Dance Oct. 14

Fermilab Barn Dance will take place at 6:30 p. m. on Sunday Oct. 14 with music by Jennifer Jeffries and Roger Diggle plus calling by Tony Scarimbolo. More information can be found on the [Web site](#).

[Additional Activities](#)