

## Calendar

### [Have a safe day!](#)

Wednesday, Aug. 11  
3:30 p.m.

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

[Fermilab Colloquium](#) - One  
West

Speaker: Greg Engel,  
University of Chicago  
Title: Design Principles of  
Photosynthetic Light Harvesting

Thursday, Aug. 12  
2:30 p.m.

[Theoretical Physics Seminar](#) -  
Curia II

Speaker: Mikhail Stephanov,  
University of Illinois at Chicago  
Title: Conformality Lost  
3:30 p.m.

DIRECTOR'S COFFEE  
BREAK - 2nd Flr X-Over  
THERE WILL BE NO  
ACCELERATOR PHYSICS  
AND TECHNOLOGY  
SEMINAR TODAY

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

### [Upcoming conferences](#)

## Campaigns

### [Take Five](#)

### [Tune IT Up](#)

## H1N1 Flu

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

## Weather

## Feature

### Former Fermilab intern Rodríguez gives back

Last month at a summer  
lecture, speaker César  
Rodríguez-Rosario, a  
postdoctoral fellow at  
Harvard University,  
cheerfully informed  
students of the following:



César Rodríguez

"If a person is quantum drunk, the curve of his  
walk does not look the same as for a person  
who's classically drunk."

Using such trenchant explanations, Rodríguez  
surveyed the world of quantum physics for the  
young standing room-only audience of  
summer interns with an easy clarity. He was  
returning a favor: he was a Fermilab intern  
himself in 2000 when the summer lectures  
sparked his interest in physics.

"I was enchanted by the summer seminars  
then," he said.

While a computer engineering major at the  
University of Puerto Rico, Rodriguez faced a  
choice between a NASA internship and  
Fermilab's Summer Internships in Science and  
Technology (SIST). It wasn't easy explaining  
to his parents how he could choose high-  
energy physics over the higher-profile field of  
space science.

Under the mentorship of physicist  
Chandrashekhara Bhat, Rodríguez worked on  
modeling beams for the Main Injector.



Rodríguez held a SIST  
internship in 2000.

Working in the company  
of other like-minded students helped.

"I recall him saying,  
within the first week of  
his internship, that he  
might not pursue a  
career in physics," Bhat  
said. So he gave  
Rodríguez a two-week-  
long beam dynamics  
crash course. "He  
absorbed quite a bit and  
learned very fast."

## From Center for Particle Astrophysics

### New horizons on the Cosmic Frontier

*Craig Hogan, head of the Center for Particle  
Astrophysics, wrote this week's column.*

Every 10 years or so,  
the entire U.S.  
astronomy and  
astrophysics community  
undertakes a decadal  
survey, a national  
exercise in strategic  
planning chartered by  
three federal agencies:  
DOE, NASA and NSF.  
These reports weigh  
which enterprises and  
large facilities are most  
worthy of support, across a range of science  
from telescopic studies of planets around  
distant stars to interferometric measurement of  
gravitational waves from the edge of the  
universe. A new decadal report, "New Worlds,  
New Horizons in Astronomy and  
Astrophysics," will be unveiled this week.  
Roger Blandford of Stanford and SLAC  
National Laboratory chaired the report  
committee.

We will watch the webcast carefully. Good  
ideas in science vastly outnumber fundable  
ideas. Large scientific ventures require a  
commitment from a large and broad  
community of scientists, and the decadal  
survey is where the hopes and dreams of the  
entire astrophysics community are most  
prominently voiced. More than ever before, the  
difficult choices made in this massive study  
will largely determine which new large projects  
will start in the next 10 years.

At Fermilab we are interested mainly in  
astrophysics projects that further our quest to  
understand profound mysteries of fundamental  
physics. These mysteries include: new physics  
underlying early-universe cosmic inflation, the  
cosmic excess of matter over antimatter and  
the nature of dark energy and dark matter.

Often we can share tools, such as telescopes  
capable of very deep, wide and precise  
surveys of the universe, with other areas of



Craig Hogan

 Chance of  
thunderstorms  
89°/72°

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

[Current Security  
Status](#)

[Secon Level 3](#)

[Wilson Hall Cafe](#)

Wednesday, Aug. 11  
- Breakfast: English muffin sandwich  
- Portabello harvest grain  
- Santa Fe chicken quesadilla  
- Hoisin chicken  
- Parmesan fish  
- Cuban panini  
- Assorted sliced pizza  
- Cavatappia pasta w/Italian sausage

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

Wednesday, Aug. 11  
Lunch  
- Stuffed summer vegetables  
- Tomato & mozzarella salad  
- Vanilla bean cheesecake w/  
fresh strawberries

Thursday, Aug. 12  
Dinner  
- Closed

[Chez Leon Menu](#)

Call x3524 to make your reservation.

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[Result of the Week](#)

[Safety Tip of the Week](#)

[CMS Result of the Month](#)

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“As interns, we would talk about physics until three in the morning,” Rodríguez recalled.

After his Fermilab stint, he attended graduate school at the University of Texas at Austin, where he studied theoretical quantum mechanics. The first year was brutal. As an engineering major, he hadn’t taken the undergraduate quantum physics courses that his peers had.

But he’s done well for himself since, earning an Outstanding Teaching Assistant Award, two American Physical Society scholarships and his current Harvard fellowship, where he researches quantum effects in biological systems.

Even now, 10 years later, Rodríguez’s internship work is still being used on 8 GeV antiprotons in the Main Injector.

“I think choosing SIST was the best decision I’ve made,” Rodríguez said. “I was exposed to really good physics.”

-- Leah Hesla

[Special Announcement](#)

## Club and League Fair today in Wilson Hall atrium

Fermilab has more than 25 employee clubs and athletic leagues. Come and see what these organizations have to offer from 11:30 a.m. - 1 p.m. on Wednesday, Aug. 11, in the Wilson Hall atrium. Entertainment begins at noon with demonstrations from the Folk Club dancers, Fermilab Singers and the International Dancers. Stop by the Recreation Department table and enter your name in the drawing for giveaways. Prizes will be given away every 15 minutes.

[Photo of the Day](#)

## New employees - July 26



astronomy and astrophysics. We are eager to see what priorities are placed on such ambitious projects as the Joint Dark Energy Mission (a satellite survey telescope), the Large Synoptic Survey Telescope (a larger ground-based successor to our Dark Energy Survey), the Laser Interferometer Space Antenna (a 5-million-kilometer Sagnac interferometer in space to study low-frequency gravitational radiation), and new facilities for studying high-energy cosmic rays, such as Pierre Auger North (a larger version, in Colorado, similar to the observatory we now help to operate in Argentina). The rollout of Astro2010 on Friday will trigger a frenzy of discussion and strategizing in the national and international particle-astrophysics community about the next generation of projects on the Cosmic Frontier.

[Special Announcement](#)

## Wilson Hall west side road closed Thursday-Monday

The road on the west side of Wilson Hall leading to the Linac will be closed for resurfacing beginning Thursday morning. The road is scheduled to reopen during the evening on Monday, Aug. 16. Please see the [diagram](#) (pdf) for more information.

[Safety Update](#)

## ES&H weekly report, Aug. 10

This week's safety report, compiled by the Fermilab ES&H section, includes three incidents. One incident involved an airborne particle entering an employee's eye. That employee needed prescription medication, which made the case recordable. No injuries were reported in the other two incidents, which resulted when drivers drivers were backing up their vehicles. Find the full report [here](#).

[Safety report archive](#)

[Announcements](#)

## Info

Fermilab Today  
is online at:  
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Front row from left: Jirawat M. Amorn-Vichet, Alessandro Cattabiani, Caterina Vernieri, Francesco Dragoni, Marco Mariti, Marco Bentivegna, Pierfrancesco Butti and Marco Colo. Second row from left: Francesco Nuti, Alexander Sukhanov, Michael Jeeninga, Xuebing Bu, Vida Goldstein, Gabriele Bertoli, Alessia Marruzzo, Matteo Cremonesi and Pierluigi Vicini. Third row from left: Daniele Bortolotti, Andrea Pisoni, Danilo Caporale, Maria Teresa Grippo, Stefania Vitillo, Elena Gramellini, Eleonora Secchi, Federica Lionetto, Sara Nizzero and Camilla Galloni.

## In the News

### Astronomy without a telescope – strange stars

From *Universe Today*, Aug. 7, 2010

Atoms are made of protons, neutrons and electrons. If you cram them together and heat them up you get plasma where the electrons are only loosely associated with individual nuclei and you get a dynamic, light-emitting mix of positively charged ions and negatively charged electrons. If you cram that matter together even further, you drive electrons to merge with protons and you are left with a collection of neutrons – like in a neutron star. So, what if you keep cramming that collection of neutrons together into an even higher density? Well, eventually you get a black hole – but before that (at least hypothetically) you get a strange star.

The theory has it that compressing neutrons can eventually overcome the strong interaction, breaking down a neutron into its constituent quarks, giving a roughly equal mix of up, down and strange quarks – allowing these particles to be crammed even closer together in a smaller volume. By convention, this is called strange matter. It has been suggested that very massive neutron stars may have strange matter in their compressed cores.

[Read more](#)

## Policy update

[H1N1 temporary sick leave policy removed](#)

## Latest Announcements

[Ask HR: Professional Development at SiDet - Aug. 11](#)

[FTL system downtime 6-8 p.m. Wednesday](#)

[Employee Club & League Fair Wednesday](#)

[Grounding and Shielding of Electronic Systems course - Aug. 12 and 13](#)

[Free piano concert featuring Sandor Feher, Ramsey Auditorium at noon on Aug. 12](#)

[Singer and songwriter Claudia Schmidt performs in Fermilab Arts Series - Aug. 14](#)

[Martial arts classes begin today](#)

[Argentine Tango, Wednesdays, through Aug. 25](#)

[Bristol Renaissance Faire discount](#)

[Aug. 20 deadline for The University of Chicago Tuition Remission program](#)

[Applications for URA Visiting Scholars Awards due Aug. 20](#)

[Regal Movie Theater discount tickets available](#)

[What's New with NI and the latest version of LabVIEW \(NI Week highlights\)? - Aug. 19](#)

[Gizmo Guys - Fermilab Arts Series - Sept. 25](#)

[NIM and Physics Reports now completely online at Fermilab](#)

[Lunch & Learn about the power of preventative health care - Aug. 18](#)

[Submit an announcement](#)

