

Calendar

[Have a safe day!](#)

Monday, Oct. 25

2:30 p.m.

[Particle Astrophysics Seminar](#)

- One West

Speaker: Igor Moskalenko,
Stanford University

Title: GALPROP Model for
Cosmic Ray Propagation and
Galactic Diffuse Emission

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

All Experimenters' Meeting -
Curia II

Tuesday, Oct. 26

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

Weather



Sunny
76°/60°

[Extended Forecast](#)

[Weather at Fermilab](#)

Current Security Status

[Secon Level 3](#)

Feature

High school student works on Fermilab experiment



Fermilab scientist Juan Estrada shows Natalie Harrison a CCD in a clean room at SiDet.

Many 16-year-olds learn important life skills at their first summer jobs – the value of a dollar or how to deal with the public. Natalie Harrison learned detector modeling, particle astrophysics and C++.

Harrison, now 17 and a senior, has spent the past two summers working 40 hours a week at Fermilab. She also works during the school year.

A student who regularly enrolls in courses several years above her grade level, Harrison exhausted the available math and science classes at Naperville North High School after her freshman year. She sent letters to every local scientist she knew in search of a way to continue her education.

“I contacted tons and tons of people,” she said. “Most of them never got back to me. At times I thought, ‘I’ll never get an internship. I’ll just work at the pool.’”

Harrison was saved from a summer of scooping chlorine when a Fermilab physicist invited her to work on a poster for the display area in the CDF detector hall at the Tevatron particle collider. The poster needed to contain only basic information for the general public, but Harrison combed scientific papers to learn as much as she could.

It was a habit she picked up as a 7th grader while attending Saturday Morning Physics lectures at Fermilab.

“As nerdy as it sounds, I would go home and

ES&H Tips of the Week - Quality Assurance



To end problems, get to the root



Credit: Department of Agriculture

remove the root cause of the problem to ensure that the problem does not return.

An effective technique to do this is root-cause analysis, which aims to find and fix the root cause of a problem rather than simply containing the problem or repairing or replacing a defective item.

Fermilab uses several root-cause methodologies tailored for specific needs. Ask your Quality Assurance Representative for guidance on using these methodologies. A basic Fermilab-wide methodology called the Fermilab Root Cause Analysis Procedure is available on the Office of Quality & Best Practices website. All Fermilab methodologies rely on the same core steps. To make sure you fix a problem so that it does not reoccur, consider these tips:

- Define the problem: Develop a clear, complete and concise statement.
- Understand the process: Identify the boundaries and the sequence of operations of the system that failed.
- Identify possible causes: Decide on the most logical causes of the problem or on which steps of the process contributed most to the problem.
- Collect and analyze data: Analyze data to determine which of the causes had the greatest impact on the problem. This is the root cause.
- Implement solutions: Identify potential solutions and implement the best ones based on criteria such as risk, feasibility and cost.

If you want help conducting a root-cause

Wilson Hall Cafe

Monday, Oct. 26

- Breakfast: Croissant sandwich
- Spicy beef & rice soup
- Corned beef reuben
- Roast pork loin
- Lasagna
- Chicken Oriental wrap
- pineapple
- Assorted sliced pizza
- Pacific Rim rice bowl

[Wilson Hall Cafe Menu](#)**Chez Leon**

Wednesday, Oct. 27

Lunch

- Chicken satay w/ peanut sauce
- Peapods
- Jasmine rice
- Coconut cake

Thursday, Oct. 28

Dinner

- Closed

[Chez Leon Menu](#)

Call x3524 to make your reservation.

Archives[Fermilab Today](#)[Director's Corner](#)[Result of the Week](#)[Safety Tip of the Week](#)[CMS Result of the Month](#)[User University Profiles](#)[ILC NewsLine](#)**Info**

go to the library and read until I understood what they were talking about," Harrison said. "I thought it was fascinating that you could apply math to physics. This was way cooler than doing math contest problems."

Fermilab scientists noticed her enthusiasm.

"She wants to know everything," said Ben Kilminster, now Harrison's supervisor. "The poster wasn't challenging enough."

[Read more](#)

Special Announcement**Don't be afraid: GSA Halloween party Oct. 29**

[GSA members enjoying Halloween in 2009](#)

You see some strange things at Fermilab. But the scenery on Friday, Oct. 29, might get a little stranger. That's the date of this year's Graduate Student Association annual Halloween party, where you're likely to see ghouls, witches and maybe even a Jersey Shore look-a-like or two, celebrating in the barn.

The party, which takes place at 7:30 p.m. on Friday, Oct. 29, in the Kuhn Barn, is open to everyone associated with the laboratory.

The event will feature a costume contest, free food, candy and beverages and, of course, a performance by the CDF band Drug Sniffing Dogs.

In the News

analysis, contact your area's [Quality Assurance Representative](#) or the Office of Quality and Best Practices.

--edited by John Martzel, quality engineer

Accelerator Update

Oct 20-22

- CALICE T-978 took beam
- JASMIN equipment installed in Pbar
- Pbar target replaced
- Store 8188 aborted due to false quench indication
- Recycler stash lost
- MI low-level RF rebooted
- Store 8194 aborted due to inadvertent voltage change
- TeV quenched during orbit check
- Meson power supply tripped

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements**Latest Announcements**

[Free CERN LHC book](#)

[Scottish country dancing Halloween party Tuesday, Oct. 26](#)

[International Folk Dancing Halloween party, Oct. 28](#)

[English country dancing for Halloween, Oct. 31, with live music at Kuhn Barn](#)

[Nov. 22 deadline for The University of Chicago Tuition Remission Program](#)

[Employee Art Show: April 2011](#)

[Argentine Tango through Nov. 3](#)

[Accelerate to a Healthy Lifestyle program](#)

[Fright Fest discount tickets at Six Flags](#)

[Chicago Blackhawks discount tickets](#)

[Needles and threads introductory meeting schedule](#)

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Galaxies get real when the dark side warms up

From *New Scientist*, Oct. 22, 2010

"Cold, dark matter" has a certain ring to it, but new simulations of our corner of the cosmos suggest that dark matter – the stuff that is thought to underlie the universe – might be warm, with relatively fast-moving and lightweight particles.

In cosmology's standard model, dark matter is cold, made up of relatively heavy low-energy particles, and will happily settle into structures as small as planets. Hot dark matter has already been ruled out because its particles would move too fast for galaxies to form. But warm dark matter has smaller, faster particles that still allow for our familiar starry sky.

Most computer models produce a generic universe that doesn't resemble ours in detail, but Gustavo Yepes at the Autonomous University of Madrid, Spain, and his collaborators on the Constrained Local Universe Simulations (CLUES) project have tuned theirs to resemble the galaxies and clusters nearest Earth.

[Read more](#)

[Facilitating Meetings That Work
class - Nov. 4](#)

[Management and Negotiation Skills
class - Nov. 9 & 16](#)

[Word 2007: Intro class - Nov. 9](#)

[Submit an announcement](#)