Fermilab Today

Monday, August 3, 2009

Calendar

Have a safe day!

Monday, August 3
8 a.m.-6 p.m.

U.S. CMS J-Term IV - One West (plenary sessions)
PARTICLE ASTROPHYSICS SEMINARS WILL RESUME IN THE FALL
3:30 p.m.
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
4 p.m. All Experimenters' Meeting - Curia II
Special Topic: Improvements to the Pbar Source

Tuesday, August 4
9 a.m.-5 p.m.

U.S. CMS J-Term IV - One West (plenary sessions)
12 p.m.
Summer Lecture Series - One West
Speaker: Tom Kroc, Fermilab
Title: Medical/Neutron Therapy
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.

Campaigns

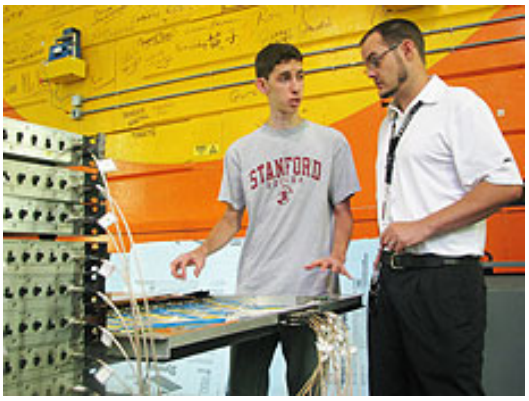
Take Five

Tune IT Up

Weather

Feature

Profile: Jamie Ray, a high schooler on the Higgs hunt



Jamie Ray, a 2009 graduate of the Illinois Math and Science Academy, works with Craig Group at CDF.

When Jamie Ray arrived at the CDF trailers at the start of 11th grade, he was a little overwhelmed.

“Back then, all I knew about particle physics was from books,” he said, “and books don’t talk about sitting down with a million events to analyze.”

That was nearly two years ago, on Ray’s first day in an independent research program for students at the Illinois Math and Science Academy, the magnet high school that Fermilab Director Emeritus Leon Lederman founded in 1985. Through IMSA’s Student Inquiry and Research program, Ray signed up to spend every Wednesday analyzing CDF experiments with a Fermilab scientist.

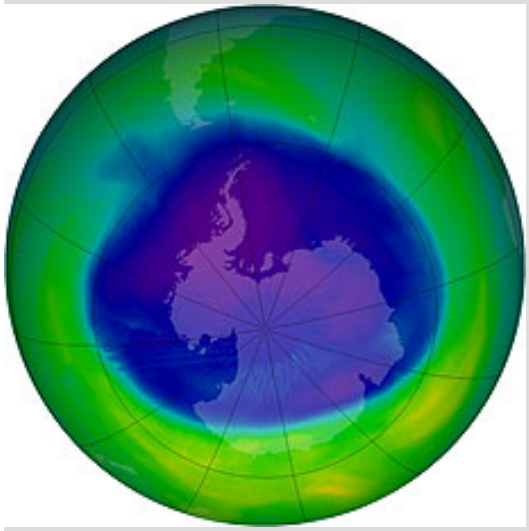
It didn’t take long for Ray to get over his intimidation and get to work. His mentor, CDF scientist Craig Group, was confident that the Ray and fellow IMSA students would make valuable contributions to Fermilab research.

“We don’t give them projects we’ve already worked out, so we learn a lot from the problems they run into,” Group said. “We’re trying to understand things at the same time that they are.”

After a few weeks of learning computer programming languages, Ray delved into some data on his own, initially focusing on Z boson decays. In the summer after his junior

ES&H Tips of the Week - Environment

Reducing the use of ozone-depleting substances



The annual ozone hole over Antarctica in 2005 reached its largest area on Sept. 11. Observations are from the Ozone Monitoring Instrument on NASA's Aura satellite, launched in 2004. Blue and purple areas represent low ozone levels. The U.S. is continuously working to reduce the number of ozone-depleting substances in the atmosphere. *Credit: NASA*

A positive environmental story has been the ongoing reduction in ozone-depleting substances in the atmosphere.

More than 40 years ago, the United States began replacing chlorinated hydrocarbon refrigerants such as Freon™ with compounds that had less ozone-depleting potential, or ODP. One of the most popular of these compounds is R-22, a refrigerant that has largely replaced the older generation of refrigerants.

However, R-22 is an interim step. It still has some ODP, and it also has potential as a greenhouse gas. Provisions in the Clean Air Act mandate that eventually R-22 and similar compounds will be phased out and replaced with an entirely new class of refrigerants that have zero ODP. As of Jan. 1, 2010, no R-22 may be manufactured for new equipment. By Jan. 1, 2020, the manufacture of R-22 will be completely prohibited.

Fermilab is gradually updating its equipment to meet the upcoming Clean Air Act deadline.

Chance of thunderstorms
85°/68°

Extended Forecast
Weather at Fermilab

Current Security Status

Secon Level 3

Wilson Hall Cafe

Monday, August 3
- Spicy beef & rice soup
- Corned beef Reuben
- Honey Dijon glazed pork loin
- Spaghetti w/ meatballs
- Chicken oriental wrap w/ pineapple
- Assorted sliced pizza
- Pacific Rim rice bowl

Wilson Hall Cafe Menu

Chez Leon

Wednesday, August 5
Lunch
- Antipasto salad
- Strawberry mousse w/ butter cookies

Thursday, August 6
Dinner
- Grilled portobello and red pepper salad
- Filet mignon w/horseradish sauce
- Baked potato w/butter & sour cream
- Broccoli
- Cappuccino soufflé

Chez Leon Menu
Call x3524 to make your reservation.

Archives

year, Ray worked full-time at CDF.

“What sets Jamie apart is that he’s not afraid of a hard problem,” Group said. “He’s happy to spend all day on a difficult project without getting frustrated.”

During his senior year, Ray’s focus shifted to one of the hottest topics in modern science -- the hunt for the Higgs boson. His name will appear as a co-author on an upcoming Physical Review Letters paper about that search.

In the fall, Ray will head to Stanford University. Picking a major won’t be easy -- Ray’s interests stretch from engineering to history to philosophy -- but physics is a possibility, he said. In any case, he will not forget his time at Fermilab.

“At first, I didn’t think I’d be able to make a meaningful contribution,” he explained. “It’s satisfying to know I’ve done useful work here.”

-- Rachel Carr

Photo of the Day

New employees - July 20

From left: Sergey Cheban, TD; Michelle Stancari, PPD; Farah Khalid, PPD; David Featherston, PPD; Julie Kurnat, TD; and Sungwon Park, WDRS.

Special Announcement

However, that is not simple because at Fermilab our need for power inevitably produces heat. We have hundreds of individual pieces of equipment, from massive chillers to small window air conditioners to keep things cool. For example, the Grid Computing Center requires more than 1,000 tons of air conditioning capacity to cool the data crunchers. To put that in perspective, an average house requires about 5 tons, so the GCC is the equivalent in cooling terms of about 200 houses.

Fortunately, in the design of cooling for the GCC, about 60 percent of the cooling is provided by equipment that uses the latest generation of refrigerants with zero ODP. A side benefit is that the newer equipment is more efficient, so there is a long-term savings in energy cost.

You can achieve a similar savings at home by converting your air conditioning equipment to use newer refrigerants, such as Puron™.

-- Rod Walton, ecologist

Safety Tip of the Week Archive

Shutdown Update

July 24-31
- Linac: Painting I-Source room
- Booster: Repair leaks in East Gallery LCW system
- Pbar: Kicker tanks developed internal electrical problem
- MI: eCloud components ready for installation
- Recycler: ECool on track for 8/19/09 startup
- TeV: Working two shifts
- NuMI: Hadron monitor fixture installed
- Controls: AD Network isolation test on 8/6/09
- FESS: Kautz Road bus duct cleaning
- Safety: No injuries reported

Read the Current Accelerator Update
Read the Early Bird Report
View the Tevatron Luminosity Charts

Announcements

Fermilab Today

Result of the Week

Safety Tip of the Week

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

Window washing begins today

Interior and exterior Wilson Hall window washing will take place for most of the remainder of August.

Crews will wash exterior windows during phase one of the schedule beginning today and extending through Friday.

Phase two of the schedule will begin Monday, August 10, and will include interior window-washing, including double-paned windows. Crews will work from the top floors down, beginning with floors 15 and 14 on Monday, 13 and 12 on Tuesday, 11 through eight on Wednesday, seven through four on Thursday and three through one on Friday. Phases three and four of the schedule will take place during the week of Monday, August 17, and include the mezzanine and ground floors. Crews will wash the windows in Wilson Hall's atrium during nights the week of August 17.

Please clear all items from in front of windows on days work is scheduled for your floor. Contact Enixe Castro at x2798 with any questions.

In the News

Hunting for neutrinos in Minnesota

From ***DOE Office of Science American Recovery and Reinvestment Act Newsletter***, July, 2009

Construction crews began digging at the future site of the NOvA neutrino detector facility in Ash River, MN, on June 1. The facility is designed to detect neutrinos originating at DOE's Fermi National Accelerator Laboratory (Fermilab) 500 miles away in Batavia, IL.

The Recovery Act provided funds for the civil construction project.

"It's pretty much earth work now," said Davin "Buddy" Juusola, senior project manager for Adolfson & Peterson. But once the dirt is cleared, the construction crew will face the Canadian Shield, a mass of 2.7 billion-year-old Precambrian rock that stretches 3 million square miles across Canada and dips into a small northern edge of the U.S.

Read more (pdf)

Latest Announcements

Next Yoga class begins August 11

Next Muscle Toning class begins August 4

Office 2007 New Features class offered in September

Next Fermi Kyuki-Do Martial Arts session begins today

URA Visiting Scholars Program now accepting applications

Services account password needed for Fermilab Time & Labor reporting

Bristol Renaissance Faire discount tickets

Six Flags Great America discount tickets

Pool memberships available in the Recreation Department

Raging Waves Waterpark online discount ticket program

International folk dancing resumes August 6

Summer intern presentations - August 5

Osteoarthritis(degenerative arthritis) seminar

Accelerated C++ Short Course begins August 6

Health after 50 seminar

The University of Chicago Tuition Remission Program August 17 deadline

What's New in NI LabVIEW 2009? offered August 27

Process piping (ASME B31.3) class offered in October and November

Additional Activities

Submit an announcement