

Calendar

[Have a safe day!](#)

Monday, April 27
11 a.m.

[Academic Lecture Series](#) -

Curia II

Speaker: Bill Marciano,
Brookhaven National
Laboratory

Title: Muon Physics: Past,
Present, and Future: Course 1,
Lecture 1

2:30 p.m.

[Particle Astrophysics Seminar](#)

- Curia II

Speaker: Jamie Holder,
University of Delaware

Title: Recent Results from the
VERITAS Gamma-Ray
Observatory

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

All Experimenters' Meeting -
Curia II

Special Topic: DZero Off-Line
Computing Update

Tuesday, April 28

2 p.m.

[Particle Astrophysics Seminar](#)

- Curia II (NOTE DATE and
TIME)

Speaker: Angela Olinto,
University of Chicago

Title: The Highest Energy
Cosmic Particles

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO
ACCELERATOR PHYSICS
AND TECHNOLOGY

SEMINAR TODAY

4 p.m.

[Extreme Beam](#) - Physics at the

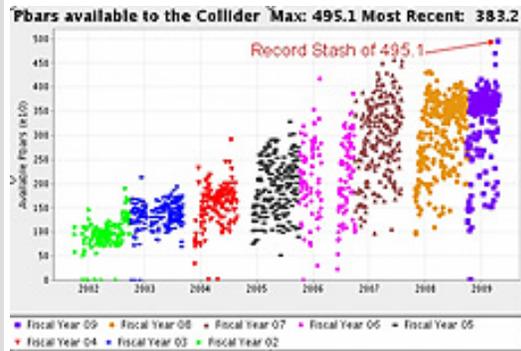
Intensity Frontier Lecture
Series - One West

Speaker: Bill Marciano,
Brookhaven National
Laboratory

Title: The Moun g-2 and New

Milestone

Upward and onward: Tevatron, NuMI reach records



The plot shows the record antiproton stash from April 19.

Just when Accelerator Division staff thought they couldn't do any better, the laboratory, with their help, gets a trio of records.

Fermilab is producing and storing more antiprotons and colliding them with protons faster than ever. The laboratory achieved three records within the last two weeks: for Tevatron delivered record luminosity, antiprotons stashed in the Recycler and most protons sent to the NuMI target.

The latest record was reached between April 13 and 20, when the Accelerator Division achieved 73.1 inverse picobarns of weekly integrated luminosity, a 25 percent increase from the same time last year.

Cons Gattuso, Fermilab's run coordinator, attributed the record to a handful of factors, including improved antiproton stacking rates and the abundant supply of antiprotons. The extra antiprotons were produced during an equipment failure that prevented them from being used then. Along with good stable running, each of the 10 stores the we put into the Tevatron survived to termination.

He also attributes the record to improved antiproton production.

"Integrated luminosity is a function of how fast we make antiprotons," Gattuso said. "We get more luminosity when we utilize more antiprotons per shot."

The record for the number of antiprotons

ES&H Tips of the Week - Environment



Landscaping with nature



[Use plants native to the area for landscaping.](#)

Fermilab is justly proud of its tradition of caring for the land in a way that recognizes the importance of functional ecosystems and embodies a respect for nature, and provides a good model for how to make your yard more ecofriendly.

Since 1975, we have managed a significant part of the laboratory by mimicking the natural ecology of tall grass prairies – the ecosystem that once dominated northern Illinois until the 19th century. We also nurture and develop wetlands, woodlands and open water ecosystems.

Fermilab has been recognized twice by Chicago Wilderness and U.S. Environmental Protection Agency with Natural Landscaping Awards for specific projects.

Aside from the benefit of increasing natural areas, there are multiple good reasons for using this approach to land management. The annual cost to maintain our 1,100 acres of prairie is significantly less than the expense of mowing. Across the country, it is estimated that more than 600 million gallons of gasoline are used to power lawn mowers each year. Maintenance of turf grass is expensive, and not just in dollars. Americans use more pesticides on turf lawns than on farmland. Most lawns use large amounts of nitrogen fertilizer, which finds its way into streams and

Physics

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

Weather

 Chance of showers
78°/54°

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

Current Security Status

[Secon Level 3](#)

Wilson Hall Cafe

Monday, April 27
- unavailable

[Wilson Hall Cafe Menu](#)

Chez Leon

Wednesday, April 29
Lunch
- Asian marinated flank steak
- Jasmine rice
- Peapods & water chestnuts
- Orange flan

Thursday, April 30
Dinner
- French onion soup
- Filet mignon w/ cabernet sauce
- Buttermilk mashed potatoes
- Asparagus
- Marzipan cake w/ chocolate sauce

[Chez Leon Menu](#)

Call x3524 to make your reservation.

Archives

stashed at one time ,498e¹⁰ was set on April 19. That record, Gattuso said, was possible because of the application of a new technique: partial mining.

Partial mining allows the operators more freedom to extract only the portion of the beam they need, leaving antiprotons behind in the Recycler, and reducing the risk of losing large stacks of antiprotons from the Accumulator.

“We normally mine all of the beam out into the recycler,” Gattuso said. “But we had too many antiprotons and we needed to come up with a way to leave some beam behind.”

The most accumulated protons on target, 7e²⁰, was reached by the NuMI experiment on Monday, April 6. The Accelerator Division also provided the NuMI experiment with the most beam in a single day on Tuesday, April 14.

“The experiment continues to work really well, and we continue to get a lot of beam from the Accelerator Complex,” said NuMI/MINOS spokesperson Rob Plunkett.

-- *Rhianna Wisniewski*

Special Announcement

Lecture Series on Intensity Frontier starts today

Students and postdocs are invited to attend a five-part academic lecture series on physics and experiments at the intensity frontier. Bill Marciano, Brookhaven National Laboratory, will give his lectures on muon physics today at 11 a.m. and Wednesday, April 29. Vincent Cirigliano, Los Alamos National Laboratory, will speak about kaon physics on May 11, 13 and 15. For details, see the [Web site](#) for this lecture series.

Special Announcement

groundwater. All that fuel emits significant pollution into the air as well. One hour of mowing emits air pollutants comparable to driving 350 miles in the average car.

You can take advantage of the natural approach in your yard by replacing turf grass with more natural alternatives that don't require mowing. One key is to choose plants native to your region and the conditions of your yard. Minimizing the use of pesticides and inorganic fertilizers will improve your environmental “footprint”, and your plants will appreciate rain water over treated tap water, so consider a rain barrel.

[Learn more](#) about natural landscaping.

-- *Rod Walton, ecologist*

Accelerator Update

April 22-24

- Four stores provided ~44.5 hours of luminosity
- Recycler injector coolant pump repaired

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

Latest Announcements

[Starbucks gift cards from Heartland Blood Centers](#)

[April is National Humor Month...click on the link for the joke of the day](#)

[Fermilab club & league fair](#)

[Muscle toning classes](#)

[Argentine Tango classes through May 13](#)

[New Fermilab Service Desk online](#)

[Discounted rates at Grand Geneva Resort, Lake Geneva, WI](#)

[NALWO - Mexican cuisine cooking demonstration](#)

[PREP counter moving - closed April 28](#)

[Spinal Cord Injury Awareness](#)

[Fermilab Today](#)[Result of the Week](#)[Safety Tip of the Week](#)[ILC NewsLine](#)**Info****Fermilab Today**

is online at:

www.fnal.gov/today/

Send comments and suggestions to:
today@fnal.gov

Extreme Beam lecture Tuesday, 4 p.m. in One West

The fourth lecture of the Extreme Beam lecture series will take place at 4 p.m. Tuesday in One West. Bill Marciano, from Brookhaven National Laboratory's High-Energy Physics Theory Group, will give a talk titled "The Muon g-2 and New Physics."

The lecture series, which will feature talks at Fermilab throughout 2009, will give in-depth information about the science and accelerator and detector technologies that will create a world-leading physics program at the Intensity Frontier.

Visit the [Extreme Beam Web site](#) for more information.

LHC Update**The latest from the LHC**

Watch the video!

[Watch a video of the last repaired dipole magnet for Sector 3-4 going underground.](#)

The 39th and final repaired dipole magnet was lowered into Sector 3-4 and installed on Thursday, April 16. This is the last of the LHC's easily recognizable 15-metre-long blue superconducting dipoles required for the 3-4 repair. Only two more Short Straight Sections (SSS) remain to be installed in 3-4.

Since the start of the repair work in Sector 3-4, the Vacuum Group has been cleaning the beam pipes to remove metallic debris and soot created by the short circuit last September. Firstly all 4800 m of the beam pipes in Sector 3-4 were surveyed cm by cm to document the damage before the cleaning work started. The cleaning process involves passing a brush through the pipe to clean the surface mechanically, followed by a vacuum to remove any debris both inside and outside the beam pipe.

[Read more](#)

[Seminar - April 29](#)[Greek Folk dance workshop - April 30](#)[NALWO - spring tea - May 1](#)[English country dancing, May 3](#)[Word 2007: New Features class May 5](#)[Excel 2007: New Features class May 7](#)[National Day of Prayer observance May 7](#)[Best of Dance Chicago - Fermilab Arts Series - May 9](#)[Rapid Hardware Prototyping and Industrial Control Application Development seminar May 13](#)[Co-ed softball season begins May 13](#)[Summer co-ed volleyball league begins June 1](#)[Registration for Users' Meeting now open](#)[Conflict Management and Negotiation Skills class June 3 and 10](#)[Discount tickets to "1964"...Beatles tribute - June 6](#)[SciTech summer camps](#)[Additional Activities](#)[Submit an announcement](#)

