

## Calendar

Thursday, August 5

10:30 a.m. Academic Lecture Series - Curia II

Speaker: L. Lyons, Oxford University

Title: Practical Statistics for

Physicists: Parameter Determination

2:30 p.m. Theoretical Physics Seminar - Curia II

Speaker: G. Seidl, Oklahoma State University

Title: Large Neutrino Mixings in SU(5) from Deconstruction

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

Friday, August 6

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Joint Experimental

Theoretical Physics Seminar - 1 West

Speaker: M. Rescigno, University of Rome

Title: Branching Ratios and CP

Asymmetries in Charmless

Two Body Decays  $B \rightarrow hh$  in CDF

## Wilson Hall Cafe

## Users Make Fermilab an International Laboratory



Haryo Sumowidagdo is a long way from home. A graduate student at Florida State University working on the DZero experiment, Sumowidagdo grew up 9,800 miles from Batavia, IL in Jakarta, Indonesia -- a city which, amazingly, was also called Batavia before the end of World War II.

"The flight over the Pacific is really exhausting," said Sumowidagdo, who plans to make the 36-hour trip

to Indonesia this winter, the first time he will have visited his family since arriving in the U.S. for graduate school three years ago.



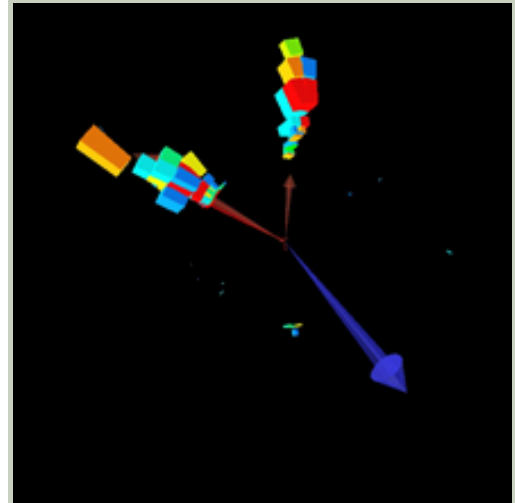
Haryo Sumowidagdo

"I'm the first person in my family to study outside the country for a Ph.D., and the only one in my extended family studying physics."

Long plane rides home are not uncommon among Fermilab researchers. Over half of Fermilab's

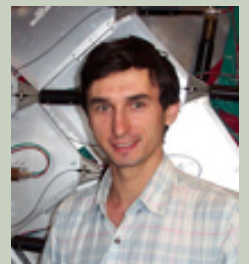
## Fermilab Result of the Week

### DZero: Without a Trace - SUSY



A three-dimensional display of the event with the largest missing transverse energy: 380 GeV (blue arrow). With two high Pt jets (red arrows), this is the typical signature for squark pair production. (Click on image for larger version.)

Particle physicists are convinced that there is more to nature than they have been able to elucidate and astronomers tell us that we have yet to identify most of the constituents of the universe. One hypothesis that could solve these problems is Supersymmetry (referred to as SUSY). SUSY is a new kind of space-time symmetry which relates universe's matter and forces.



One of the consequences is that a new particle is associated to each known particle: squarks and gluinos are the SUSY partners of quarks and gluons, [Viatcheslav Sharry developed calorimeter data quality tools which are important for this analysis.](#)

Thursday, August 5

Tomato Florentine soup

Grilled Chicken Cordon Bleu Sandwich  
\$4.75

Chimichangas \$3.75

Chicken Marsala \$3.75

Maryland Crab Salad \$4.75

Italian Sausage Calzones \$2.75

SW Chicken Salad with Roasted Corn  
Salsa \$4.75

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

### Weather



Mostly Sunny 74°/53°

[Extended Forecast](#)

[Weather at Fermilab](#)

### Current Security Status

[Secon Level 3](#)

### Search

Search the Fermilab Today Archive

### Info

Fermilab Today is online at:

<http://www.fnal.gov/today/>

Send comments and suggestions to

[today@fnal.gov](mailto:today@fnal.gov)

[Fermilab Today archive](#)

[Fermilab Today PDF Version](#)

[Fermilab Result of the Week archive](#)

[Fermilab Safety Tip of the Week  
archive](#)

[Linear Collider News archive](#)

[Fermilab Today classifieds](#)

2,958 experimental collaborators hail from a country outside the U.S. Of the 1,568 foreign nationals representing 63 countries, Sumowidagdo, one other Indonesian collaborator and seven researchers from Australia face the longest trips to Chicago.

Just over 60 percent of collaborators work for 106 universities, colleges, and laboratories in the U.S. representing 37 states of the union. Over 1,100 collaborators work for 153 institutions in 31 different foreign countries. Twenty-eight percent of collaborators are graduate students, 309 from foreign colleges and universities and 524 from U.S. institutions.

### The Best (Sub)Urban Legends About Fermilab

A while back *Fermilab Today* asked readers to send in (sub)urban legends they had heard about Fermilab. We received many enthusiastic responses - the best of which we compiled on a Web page. Here are a few of our favorite Fermilab myths:

The Tevatron is a weather control machine. (Apparently it's never worked).



Fermilab fire hydrants move around at night. They're remote controlled robots (which is why they have antennae).

The Tevatron slows down time (which

the constituents of the proton and the neutron.

If they exist, the reason why we have not yet detected SUSY particles is that they are simply too



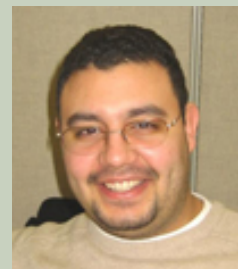
[Jean-Francois Grivaz](#)

heavy.

Furthermore, the lightest SUSY particle (LSP) is stable and it is an ideal candidate to explain the dark matter of the universe. In colliders, events with SUSY particles in them would have two undetected LSP being emitted and the events would appear to violate energy and momentum conservation. Thus we hunt for events with energy/momentum imbalance.

Tevatron experiments are scouring their data looking for evidence that squarks and gluinos exist.

The most promising channel is the one with missing energy and quarks (which manifest themselves as a spray of particles referred to



[Alexandre Zabi](#)

as a jet). The number of events observed in Dzero is in agreement with Standard Model predictions, and limits have been set on squarks and gluinos masses which are higher than those previously obtained. The event in the figure is a candidate with large missing momentum (represented by the blue arrow). It contains two jets (red arrows) resulting from the production

[Subscribe/Unsubscribe to Fermilab Today](#)

is why Fermilab physicists look as though they've been beamed here from the 1970s).

[read more](#)

### Accelerator Update

August 2 - August 4

- During this 48 hour period Operations established one store that provided approximately 24 hours and 47 minutes of luminosity to the experiments.
- Power supply trip caused partial loss of Recycler stash
- MiniBooNE tests showed that ground-faulted Horn can't be run
- TeV suffered quench during dry squeeze
- Pbar stack lost due to over cooling
- TeV vacuum problems required access
- Debuncher kicker trouble halted stacking
- Lightning caused many trips
- Feeder 47 lost two phases

[View the current accelerator update](#)

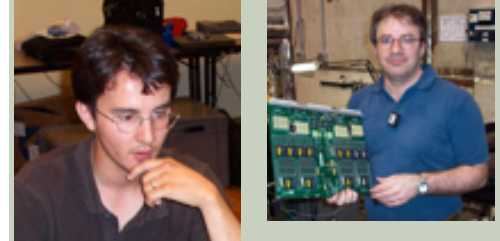
[View the Tevatron Luminosity Charts](#)

### In the News

#### FYI: AIP Bulletin of Science Policy News, August 3, 2004

House of Representatives Supports the World Year of Physics  
The field of physics and its practitioners received commendation on Capitol Hill before Congress left town for August. In recognition that next year has been designated the World Year of Physics by the International Union of Pure and Applied Physics, on July 7 the House of Representatives passed a resolution in support of physics and physics

of quarks. This event may be due to the production of a Z boson (decaying into a pair of neutrinos - which are also undetectable) and two additional jets. As we acquire more data we will be able to improve our tests of the SUSY hypothesis.



Laurent Duflot (right), Patrice Verdier (left), Alexandre Zabi (above right), Jean-Francois Grivaz (above left), (LAL-Orsay) performed the search for squarks and gluinos in the jets and missing transverse energy channel.

[Result of the Week Archive](#)

### Announcements

**New Books in the Fermilab Library**  
New books in the Fermilab Library for the week of August 3 are now on display in the Library near the front desk. An [online list](#) of the of new books is now available. New books may be reserved by using the [online Library catalog](#) or by calling the library at x3401, or by filling out the reserve card in the book.

**International Folk Dancing**  
International Folk Dancing will be held at 7:30 p.m. Thursday, Aug. 5, at the Geneva American Legion Post. Info at 630-584-0825 or 630-840-8194 or [folkdance@fnal.gov](mailto:folkdance@fnal.gov).

**Fermilab Fox Bend Golf Outing**  
Sign up for the August 20 Fermilab August Golf Outing at Fox Bend in Oswego. The format for the outing will be a handicapped, two-Person scramble. The cost is \$49.00 for

education. "This resolution encourages the American public to take note of the physics used every day and encourages them to learn more about it," said its sponsor, Rep. Vern Ehlers (R-MI). "I hope that the American people will observe the World Year of Physics by supporting physics education and research. I encourage physicists and educators to engage the public, especially the children, in physics to inspire the next generation of scientists and engineers."

[read more](#)

**Greens fees and contests.** Tee times start at 1:00 p.m. and are reserved with your team's payment. A half day of vacation is required. Sign up by August 6 by contacting Patrick Liston x2332 or Mike Matulik x4091.

**Naperville Municipal Band to Premiere New Musical Composition**  
Fermilab's Hans Jostlein and his son, Thomas Jostlein, will perform with the Naperville Municipal Band in the Outdoor Concert in Central Park today, Thursday, at 7:45 p.m. The concert features the new musical work, "Romp for Two Horns and Band," composed by Thomas Jostlein. The concert is free to the public. [more information](#)

**Wilson Hall Exterior Window Washing This Week**  
Window washing for the exterior of Wilson Hall will take place this week. Scaffolds will be set up outside the building. Please avoid walking underneath the scaffolds and be aware of the workers. For more information, please call Enixe at x2798.