

Calendar

Thursday, June 24

[Lattice 2004](#)

THERE WILL BE NO THEORETICAL PHYSICS SEMINAR THIS WEEK

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY

SEMINAR TODAY

Friday, June 25

[Lattice 2004](#)

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Joint Experimental

Theoretical Physics Seminar (NOTE LOCATION) - Auditorium

(In association with the Symposium "Lattice 2004")

Speaker: V. Lubicz, Universita di Roma III

Title: The Role of Lattice QCD in Flavor Physics

4:45 p.m Speaker: I. Shipsey, Purdue University

Title: An Experimenter's View of Lattice QCD

5:15 p.m. Speaker: M. Wingate, University of Washington

Title: The Status of Lattice QCD Calculations for Flavor Physics

Wilson Hall Cafe

New Peak Luminosity Record

At 11:36 a.m. on Tuesday, the Tevatron hit a new peak luminosity of 8.5 E31.

The Tevatron achieved the last record of 8.3 E31 early Monday morning.

Congratulations!

Property Office Accounts for 100 Percent of Fermilab's Sensitive Assets



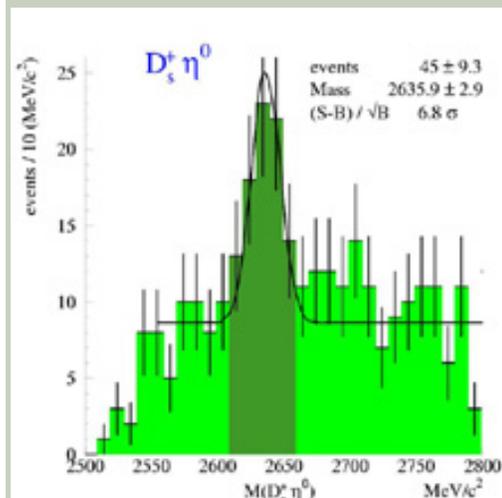
Members of the Property Office who conducted the sensitive item inventory (left to right): Sylvia Trevino, Patty Cameron, Jack Kelly, and Dale Wilderspin (Click on image for larger version.)

This year's fiscal inventory accounted for all of Fermilab's sensitive assets - a major achievement for the lab. Nearly 8,000 sensitive assets worth \$16 million, such as computers, laser printers, and palm pilots, were accounted for by 1450 employees this fiscal year.

"Keeping track of sensitive equipment is everybody's responsibility, from the directorate on down," said Jack Kelly of Property and Inventory Control. "In most cases, computers are stolen from cubicles or unlocked offices. It's very important that employees contact security and the property office immediately if they can't find an

Fermilab Result of the Week

SELEX Announces New Member of the Charm-Strange Meson Family



The distribution of the $D_s^+ \eta^0$ combined mass for all candidates in the data sample including anti-particle combinations ($D_s^- \eta^0$). There is a clear peak at a mass of 2635 MeV^2 with a very high statistical significance (more than 7 standard deviations). The width of this peak is consistent with what is expected from the resolution of the detector. (Click on image for larger version.)

The SELEX experiment recently announced a new member of the charm-strange meson family called the D_s meson, which has already caused a lot of excitement in the last year. In 2003, the e^+e^- collider experiments found two types of D_s mesons that had been expected by the theorists, but their masses were more than inhibiting the state's decay and causing narrow mass peaks. The SELEX state is also narrow, but heavy. The new state, seen in two different decay channels also appears to be inhibited. Some unknown mechanism favors the rare decay mode $D_s^+ \eta^0$ over the expected $D^0 K^+$ channel and conspires to keep

Thursday, June 24

Santa Fe Black Bean Soup

Marinara Meatball Sub \$4.75

Butter Crumb Baked Fish \$4.75

Pork Chop Teriyaki \$3.75

Baked Ham & Swiss on a Ciabatta Roll

\$4.75

Sausage & Sweet Onion Strombolis

\$2.75

Crispy Fried Chicken Ranch Salad

\$4.75

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

Weather



Showers Likely 67°/47°

[Extended Forecast](#)

[Weather at Fermilab](#)

Current Security Status

[Secou Level 3](#)

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asset."

The Department of Energy requires that 98% of Fermilab's sensitive assets are recovered every fiscal year. In 2002 and 2003, the value of lost items was less than .005% of the total cost of sensitive assets, easily meeting this quota. "We've been putting a lot of effort into the management of government property in the last few years, and it's paying off," said Dave Carlson, head of the Business Services Section. "This was our most successful sensitive item inventory ever."

Fermilab Arts Series Presents Muriel Anderson's All Star Guitar Night

Tickets Still Available!

The Fermilab Arts Series presents "Muriel Anderson's All Star Guitar Night" on Saturday, June 26 at 8:00 p.m. in Ramsey Auditorium. Widely respected as the premier woman fingerstyle guitarist on the scene today, Muriel Anderson is the first woman to have won the National Fingerpicking

Guitar Championship. A student of both

Chet Atkins and Christopher

Parkening, her virtuosic guitar work ranges from Spanish flamenco and Japanese Koto music to the Beatles, and to her own adventurous compositions, mixed with a gentle sense of humor. Muriel is the founder of the Muriel Anderson's All Star Guitar Night and the Music for Life Alliance Charity, which provides musical instruments to young people.



[Muriel Anderson](#)

the state narrow.

SELEX is a 600 GeV fixed target charmed experiment in a sigma-hyperon beam which studies the production and decay properties of charmed particles produced in the forward direction ($x_f > 0.1$). In the 1996-97 fixed target running period it recorded 1 billion events having evidence of secondary vertices from 15 billion total interactions.

The new state was found in the $D_s \eta^0$ channel by combining a well identified D_s meson with photon pairs that made η^0 candidates. A clear peak of 45 ± 9.3 events is seen. A corresponding mass peak is also seen in the $D^0 K^+$ channel at the same mass giving a combined mass of 2632.6 ± 1.6 MeV. The state's width is consistent with detector resolution, limiting the width to < 17 MeV. The $D_s \rightarrow \eta$ decay rate is six times the $D^0 K^+$ rate despite having half the phase space.

SELEX reports these peaks as the first observations of another narrow, high-mass D_s state decaying strongly to a ground state charm plus a pseudo scalar meson. Both the very narrow width and the relative rates of these two decay modes are unusual. If this state belongs to the usual heavy-light family, there should be a partner within 40 MeV that decays to $D^* K$ or $D_s^* \eta^0$. To place this new state in the charm-strange meson system will require careful study from a number of experiments in the future.

[more information](#)

Accelerator Update

June 21 - June 23

- During this 48 hour period Operations established one store that, added to an existing store, provided the experiments with approximately 44 hours and 40 minutes of luminosity.
- Tevatron expert made changes to the collimator sequencer that reduced the problems with the colliding beam that has been troubling CDF and DZero.
- Store 3688 set a NEW RECORD with an initial luminosity of 84.78E30.
- The Recycler lost its stash due to a Corrector magnet tripping off

[View the current accelerator update](#)

[View the Tevatron Luminosity Charts](#)

In the News

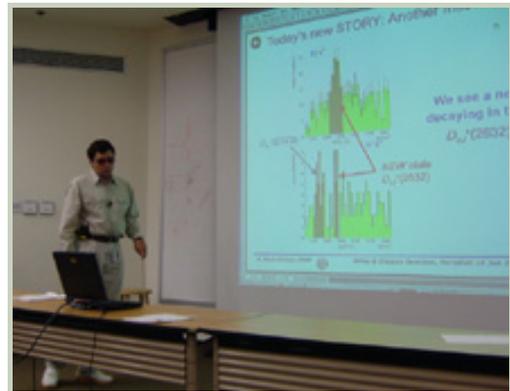
From *Nature Magazine*, June 24, 2004

Requiem for a supercollider

by Geoff Brumfiel

"Gentlemen, the Chinese have got the Higgs boson."

So begins *A Hole in Texas*, Herman Wouk's latest novel, which revolves, rather improbably, around the world of high-energy physics. The 88-year-old Pulitzer Prize-winning author of *War and Remembrance* and *The Winds of War* is famous for his depictions of wars and the men who fight them, but his twelfth novel concerns exotic particles and the men (and women) who discover them. The result is an amusing and at times arcane yarn that will make a good summer read for scientists — especially those who have had a frustrating time explaining



Anatoli Evdokimov of ITEP presenting the SELEX results at the Wine & Cheese talk last Friday. (Click on image for larger version.)

[Result of the Week Archive](#)

Announcements

Fermilab Ultimate Frisbee Club

Annual Fermilab-Argonne Tournament Today

The Fermilab Ultimate Frisbee Club competes against Argonne in its annual tournament at Surrey Ridge Athletic Complex in Lisle today at 6:00 p.m. Contact [Kip Bishofberger](#) for more information.

Muscle Toning Class

The next Muscle Toning Class will be held from July 6 through July 29. This 4 week class is \$32.00. Classes are held on Tuesday and Thursday in the Recreation Facility exercise room. Registration deadline is Friday, July 2. You must be a current facility member to participate. Registration can be made in the Recreation Office, by mail (registration form found on the Recreation webpage) or by phone using a credit card.

[more information](#)

Dave Herzog's Marionette Show

The Recreation Office presents the Dave Herzog's Marionette Show will be held in the upper level of Kuhn Barn

their work to governments or the popular press.

[read more](#)

on July 16 at noon. For 28 years, Dave has performed thousands of shows for audiences nationwide. Dave is a frequent performer at Navy Pier. Not only does Dave perform but he also hand crafts all his marionettes. This event is open to all Fermilab employees, visitors and on-site contractors and their children. This event is free. All we ask is that you do not arrive late. If your spouse is coming from off-site you must notify security.

[more information](#)