Fermilab Today

Thursday, July 29, 2004

Calendar

Thursday, July 29

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

Speaker: D. Stockinger, University of Durham

Title: g-2 of the Muon and SUSY

3:30 p.m. DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

Friday, July 30

3:30 p.m. DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

4:00 p.m. Joint Experimental Theoretical Physics Seminar - 1 West

Speaker: V. Jain, Brookhaven National Laboratory

Title: Selected B Physics Analyses from DZero: B_s --> mu mu and B**

8:00 p.m. Fermilab International Film Society - Auditorium

Tickets: Adults $4

Title: Earth

Wilson Hall Cafe

Thursday, July 29

Minnesota Wild Rice with Chicken

Tuna Melt on Nine Grain $4.75

Breaded Veal with Mushroom Cream Sauce $3.75

Sweet & Sour Pork over Rice $3.75

BLT Ranch Wrap $4.75

Cheesey Breadsticks $1.85

Toasted Pecan Chicken Salad $4.75

Wilson Hall Cafe Menu

Chez Leon

Weather

So Long, Greg Lawrence!

After 31 years at Fermilab, Greg "Red Dog" Lawrence, a Senior Operation Specialist in the Accelerator Division, retires next week.

"I want to let people know about my farewell party tomorrow night; everybody's invited," said Lawrence. "August 6 is my last day, and on August 7 I'll be on the road, heading to the Smoky Mountains."

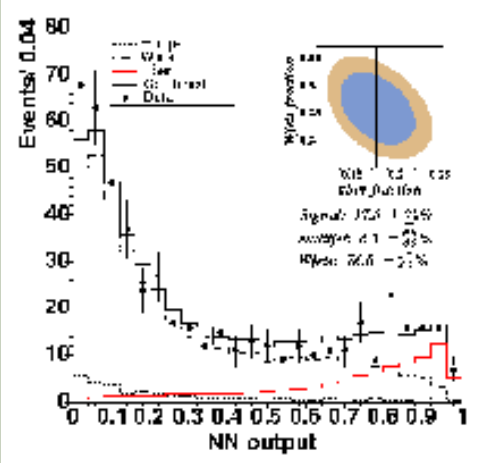
Greg "Red Dog" Lawrence

In the 1970s Lawrence, nick-named "Red Dog" by his colleagues for his formerly red hair, worked on the fixed target experiement in the Meson Lab and helped upgrade the now extinct main ring of the Z/N project. He joined the Accelerator Division in 1979 and has been a floor manager at the NuMI experiment since September, supervising tradesman such as pipe fitters and iron workers.

"I really enjoyed working on the NuMI project," he said. "I can leave now that it's almost finished. I didn't want to leave my coworkers hanging." Lawrence recently purchased a piece of property that overlooks the Smoky Mountains and plans to move there immediately following his retirement next week. "I was going to work for another year and a half, but then my soulmate, Paula, and I found this incredible piece of property with a

Fermilab Result of the Week

A New Look at Top



Distribution of the NN output in W+>=3 jet events, compared to the result of the fit. (Click on image for larger version.)

The production of top-antitop quark pairs at the Tevatron provides a unique arena for tests of the Standard Model and searches for new particles. The top quark was discovered in 1995 by exploiting two main features: it decays exclusively to a W boson and a b quark ("tagged" by finding a secondary b-quark decay vertex), and its decay produces events with large energies due to its extraordinarily large mass.

(Back Row, Left to Right) Radu Marginean, Richard Hughes, and Brian Winer (Ohio State)
(Front Row, Left to Rigth) John Conway (Rutgers), Robin Erbacher and Rob Roser (FNAL), Evelyn Thomson (U. Penn.) (Click on image for larger version.)

Partly Cloudy **86º/64º**

Extended Forecast

Weather at Fermilab

Current Security Status

Secon Level 3

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gorgeous view," Lawrence said. "It was a hard decision to retire. Fermilab is such a great place, and everyone treated me well. I have nothing but great things to say."

Anyone interested in attending Lawrence's retirement party should contact Kathy Gramly at x4736 or gramly@fnal.gov.

Jazz at Fermilab: Free Flight with Jim Walker, July 31

Free Flight with Jim Walker (Click on image for larger version.)

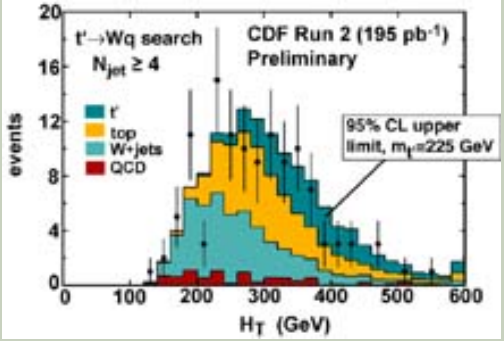
This Saturday, July 31, at 8:00 p.m. the Fermilab Arts Series presents the Jazz quartet Free Flight, led by renowned flute player Jim Walker. The award-winning band has appeared on The Tonight Show and at the Lincoln Center. Free Flight's music blends together flavors of classical music, jazz, new age, and rock into a palatable whole.The interplay between Walker and the other group members is uplifting and entertaining, flowing down into the crowd.

Walker will give a pre-concert talk in room One West beginning at 7:00 p.m., free of charge. Tickets for the concert are $18 ($9 for ages 18 and under.) Call 630-840-ARTS (2787) weekdays from 9:00 a.m. to 4:00 p.m.

more informaiton

A CDF team from Fermilab, Ohio State, and Rutgers has measured the rate of top-antitop production in events with a high-energy electron or muon and three or more jets using only the total transverse energy variable ("HT") to distinguish top events from background (mainly W+jets). This method provides greater statistics than the b-tagged method but has increased backgrounds. They then improved top identification using a neural network with seven *different* kinematic variables. The measured cross section is 6.7 +/- 1.1 +/- 1.5 pb in 195 pb^{-1} of data, in excellent agreement with theoretical predictions.

But is there any indication of new physics in the data? Again using the event HT variable, the team searched for evidence of a new t' quark-- heavier than the top quark but with similar decay signatures. A fit of the observed HT distribution to a combination of W+jets, top-antitop, and t'-anti-t' events rules out a t' quark with mass similar to that of the top quark. With more data, the team will search for t' with ever-higher masses.



Distribution of total transverse energy for observed data (points with error bars) compared with backgrounds and t' signal (colored histograms). The t' signal rate is shown at its 95% CL upper limit, for a 225 GeV t'. (Click on image for larger version.)

Result of the Week Archive

Accelerator Update

In the News

From the *New York Times*, July 27, 2004

After Triumph and Disillusionment, Wonder Re-enters the Story

by Dennis Overbye

When I was a young man, no two dates could have seemed more distant and unconnected than July 16, 1945, and July 20, 1969.

The first, marking the day the initial atomic explosion shattered the dawn at Alamogordo, N.M., belonged to World War II, a conflict so ancient that it might as well have been fought by a previous race. The second date, when Neil Armstrong and Buzz Aldrin put their bootprints on the fine gray lunar soil, belonged to the future, to the bright destiny of humanity. Modern history had started somewhere in between, in 1957, say, when Russia launched Sputnik, or in 1960, when John F. Kennedy was elected president.

read more

July 26 - July 28

- During this 48 hour period Operations established two stores that combined with an existing store provided the experiments with approximately 37 hours and 13 minutes of luminosity.
- Recycler and Main Injector experts conducted many TLG studies
- Main Injector experts conducted many other studies
- The MiniBooNE Horn required a lower rep rate to keep from tripping off

View the current accelerator update

View the Tevatron Luminosity Charts

Announcements

Heartland Blood Drive Next Week

Oberweis Dairy -- Give a pint; get a quart!

The next blood drive will be on August 2 and August 3 from 8:00 a.m. to 2:00 p.m. in the NE Training Room on the Ground Floor of Wilson Hall. Appointments can be scheduled online or by calling Lori at x6615.