Fermilab Today

Tuesday, October 10, 2006

Calendar

Tuesday, October 10

3:30 p.m. Director's Coffee Break - 2nd floor crossover

4:00 p.m. Accelerator Physics and Technology Seminar - 1 West

Speaker: V. Ranjbar, Fermilab

Title: Analysis of Beam-Beam Diffusion Effects in RHIC and the LHC

Wednesday, October 11

11:00 a.m. Fermilab ILC R&D Meeting - 1 West

Speakers: R. Carcagno and A. Hocker, Fermilab

Titles: ILC Cavity Testing at Fermilab:

- Vertical Test Stand for ILC Cavities
- Horizontal Test Stand for ILC Cavities

3:30 p.m. Director's Coffee Break - 2nd floor crossover

4:00 p.m. Fermilab Colloquium - 1 West

Speaker: N. Weiner, New York University

Title: Neutrino Mass and Dark Energy

Click here for a full calendar with links to additional information.

Weather

Mostly Cloudy **61º/50º**

Extended Forecast

Weather at Fermilab

Current Security Status

Secon Level 3

Wilson Hall Cafe

Particle physics and the press

The media have a central role in telling the story of research in particle physics. We need to put aside our differences and keep our eyes on the big picture if we are to make the most of this vast resource, say members of the InterAction collaboration.

The InterAction Collaboration of particle-physics communicators met at CERN in March 2006.

These are exciting times for particle physics, and the world's press are taking notice. As the Large Hadron Collider prepares to begin operations, as the International Linear Collider becomes an ever more clearly defined project, as programs for neutrino physics and astrophysics flourish, and most of all as long-awaited discoveries reveal the secrets of the universe, our friends in the media will share the adventure. Their stories and articles, TV programs, blogs and podcasts will inform and inspire others with the spirit of excitement that particle physicists are feeling at the start of the 21st century.

The journalists who tell our story will have wildly varying backgrounds, skills and points of view. Their pieces will cover the spectrum of science

Director's Corner

COBE

From left: Pier Oddone, George Smoot, Steve Chu (LBNL Director) and Chuck Shank (LBNL Director Emeritus) at LBNL reception.

I was fortunate to be in the Bay Area last week when the physics Nobel Prize was announced. Early that morning I learned that LBNL's George Smoot and Goddard's John Mather had been awarded the 2006 Nobel Prize in physics for the extraordinary results on the spectrum and on the anisotropy of the cosmic microwave background radiation (CMB) they obtained with the COBE satellite. I joined the throng at LBNL in the afternoon for a very boisterous and warm reception to celebrate George. Many of George's friends and those who supported George over the years were there. In 1989 when COBE was launched I was physics division director at LBNL. I had the good fortune over the ensuing years to witness the COBE results come in and generate a revolution in the field of cosmology, a part of which was revealing the connection between cosmology and particle physics. What came to be known as "the baby picture" (of the universe!) - visible in the photograph above - became an iconic image for the field.

For me the most astounding fact about the discovery of the fluctuations in the cosmic microwave background is that so

Tuesday, October 10
-Tomato Bisque
-Lemon Pepper Club
-Burgundy Beef Tips
-Peppered Beef
-Baked Fish Creole over Rice
-Grilled Chicken Caesar Wrap
-Assorted Slice Pizza
-Rio Grande Taco Salads

Wilson Hall Cafe Menu

Chez Leon

Wednesday, October 11
Lunch
-Rouladen
-Buttered and Dill Egg Noodles
-Steamed Carrots w/Garlic & Thyme
-Apple Walnut Cake

Thursday, October 12
Dinner
-Tapas
-Sangria
-Stuffed Mussels/Grilled Squid
-Grilled Prawns
-Chicken Liver Timbale w/Sherry Mayo
-Tarta de Hongos
-Pork Pimento Turnovers
-Marinated Oranges w/Gran Marnier

Chez Leon Menu
Call x4598 to make your reservation.

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Info

journalism. They will define and describe; compare and contrast; make judgments and express opinions; and praise and criticize. Writing in language that is accessible to their readers, they will at times seem wanting in their grasp of scientific subtleties. Sometimes they will appear to lack appreciation for something that we care deeply about; occasionally they may even give more credit than we deserve.

It is accepted wisdom that the press almost always get it wrong. Actually, in our experience, ultimately they get it just about right. In the months and years ahead, the majority of journalists who tell the story of 21st-century particle physics will do an excellent job. From time to time, inevitably, they will get it wrong--at least as we see it. A true test of our character as a field is how we react to this level of media coverage.

At a time of extraordinary scientific opportunity in particle physics, we must keep our eyes on the science and enjoy the privilege of taking part in discovering how the universe works. We should equally enjoy the opportunity afforded by the media's interest.

Read more

In the News

Hindustan Times,
October 7, 2006:
Why we want to wake up little SUSY
Our goose is cooked, our reputation is shot, wake up little Susie....

Inside a drab building by south Mumbai's seaside, it is not uncommon to walk into a professor humming a 1960s hit on waking up a girl called Susie.

much has come out of so little. The fluctuations themselves are at the level of a few parts per hundred thousand at the very cold temperature of 3 degrees Kelvin. Yet the study of these small fluctuations has given us confirmation of the big bang theory, support for an early era of inflation and powerful new ways of determining cosmological parameters. These fluctuations even provide a powerful tool for the study of dark energy. The initial measurements of anisotropy in the temperature of a few parts in a hundred thousand seemed nearly impossible before COBE went up. In the last decade and a half since the first COBE results these measurements have been extended and improved and have given us a wealth of data, including the discovery of baryon acoustic oscillations, the polarization in the CMB and finally the precision results of the WMAP satellite. An even more powerful set of measurements will come from the European Planck satellite in the years to come. No wonder Stephen Hawking described the COBE discovery of temperature variations in the afterglow of the big bang as "the most important discovery of the century, if not of all time."

One important lesson from COBE is the importance of maintaining a broad physics program. Only a few realized before COBE the potential revolutionary changes in cosmology that COBE could bring about.

Accelerator Update

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But the physicists at the nuclear sciences centre here are not referring to Simon and Garfunkel's Susie who slept at the movies. They long instead to discover SUSY— a nickname for supersymmetric particle — to help physicists better understand the formation of stars, earth and life. SUSY will also help solve a cosmic riddle — the nature of dark matter, part of the invisible mass in the universe.

Read More

October 6 - 9

- Three stores provided 63 hours and 28 minutes of luminosity
- 10/6/06, Pbar sets new stacking record of 20.63mA/hr
- P1 power supply causing NuMI trips
- Accumulator RF cavity fills with water
- H-Source problems
- Booster kicker needs reterminating

Read the Current Accelerator Update

Read the Early Bird Report

View the Tevatron Luminosity Charts

Announcements

Entertainment Books on Sale

Entertainment Ultimate books are now bigger and better for less money. The cost this year is only $20.00. You can get 50 percent off and 2-for-1 savings on local dining, movies, attractions, sports and more. Books are available for the West/Central area. Orders can be placed for North/Northwest and South/Southwest books, as well as other locations in the U.S. Pick up your book today in the Recreation Office, WH15W. (Sample books are available to preview, please ask to see.)

Upcoming Activities