

Calendar

Monday, July 24

PARTICLE ASTROPHYSICS
SEMINARS WILL RESUME IN THE
FALL

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

4:00 p.m. All Experimenters' Meeting -
Curia II

Tuesday, July 25

12:00 p.m. Summer Lecture Series -
Auditorium

Speaker: H. Ray, Los Alamos National
Laboratory

Title: Neutrinos

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

THERE WILL BE NO ACCELERATOR
PHYSICS AND TECHNOLOGY
SEMINAR TODAY

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

Weather



Chance of Showers **89°/69°**

[Extended Forecast](#)

[Weather at Fermilab](#)

Current Security Status

[Secou Level 3](#)

Wilson Hall Cafe

Will a muon collider push leptons past the Terascale?



Fermilab Director Pier Oddone has charged a new task force with exploring the possibility of a muon collider.

For more than a decade, physicists have searched for a way to achieve lepton collisions above 1TeV. In light of recent technical and conceptual developments, Fermilab Director Pier Oddone has charged a new task force with exploring the possibility of a muon collider, which theoretically has the potential to bring lepton collisions into the terascale and beyond.

"Lepton collisions above 1 TeV are likely to be a big part of the future of particle physics and this is one possibility for doing that," said Steve Holmes, Associate Director for Accelerators. Discussion of a muon collider at the Snowmass '96 conference found the concept to be technically daunting, but new advances in cooling methods and magnet design have sparked renewed interest.

"The greatest challenge we face is how to 'cool' or focus the beam to maximize the luminosity," said Steve Geer, co-leader of the new task force with Vladimir Shiltsev. Two types of magnets must be developed: a helical solenoid, which can

Safety Tip of the Week

Attentiveness



On occasion, people ignore even obvious signs that things are going wrong.

As our lab director pointed out in his column last week, "most accidents at Fermilab are the result of poor work practices, lack of focus or complacency." This observation is consistent with the results of numerous accident prevention studies. In general, attentiveness is a major factor in more than *half* of all accidents. But why is this so?

After repeating a task, people develop an expectation about how things work. They establish "mental shortcuts" to selectively block out unnecessary information. This provides the benefits of reducing stress and improving efficiency. However, the shortcuts can be imperfect and information needed to prevent accidents may be blocked as well. This can easily lead to difficulty if something unusual occurs. On occasion, people will even ignore obvious signs that things are

Monday, July 24

-Minestrone
 -Chicken & Mushroom Cheese Steak
 -Baked Chicken Enchiladas
 -Pot Roast
 -Garden Turkey
 -Assorted Slice Pizza
 -Szechuan Green Bean w/Chicken

The Wilson Hall Cafe accepts Visa, Master Card, Discover and American Express.

[Wilson Hall Cafe Menu](#)

Chez Leon**Wednesday, July 26****Lunch**

-Danish Open Sandwiches
 -Cucumber Salad w/Dill
 -Apple Walnut Cake w/Crème Chantilly

Thursday, July 27**Dinner**

-Grilled Calamari w/Garlic and Peppers
 -Lamb Rib Chops
 -Caponata
 -Cannellini Bean Puree
 -Gran Marnier Soufflé

[Chez Leon Menu](#)

Call x4598 to make your reservation.

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perform six-dimensional cooling, cooling both the particle's position and momentum in three dimensional space; and a final focusing magnet, which will need a field strength of about 50 Tesla, or some six times the strength of LHC magnets.

Plans for a preliminary cooling channel design concept, cooling channel R&D and component developing and testing are due by September 2006. Subsequent reports on research and testing will be due in September 2007, and the design concept will be revised in 2007 and again in 2008. R&D efforts planned for the ILC may also be useful: while the manner of providing collisions between muons and anti-muons is different than between electrons and positrons, the technology needed for accelerating on the beams could be the same. "We have good new ideas and good people are available. The time is right," said Shiltsev. "We will see just how realistic the future of this technology is."

--*Ben Berger*

In Memoriam**Gene Guyer**

Former Fermilab employee Gene Guyer (father of LSS employee Jean Guyer) recently passed away. There will be a wake Monday, July 24, from 4 p.m. to 8 p.m. at the Dieterle Memorial Home at 1120 S. Broadway Street in Montgomery, IL. The funeral will be held Tuesday, July 25, at 10:00 a.m. at St Anne's Church in Oswego. Burial will follow the funeral at Riverside Cemetery in Montgomery.

In the News

going wrong, and they behave, incorrectly, as if all is normal.

Unfortunately, urging people to simply "pay more attention" seldom has a significant or lasting effect. There are three factors to consider in managing worker attentiveness:

- Worker selection - Like other characteristics, people vary in their ability to pick out and use the information that is presented to them.
- Diminished abilities - Vigilance can be adversely affected by fatigue, poor health, major life events or medication.
- Mental workload - Too much or too little can be bad: Too much work can tax abilities, while too little can create complacency.

[Safety Tip of the Week Archive](#)**Accelerator Update****July 19 - 21**

- Three stores provided 26 hours and 33 minutes of luminosity
 - Recycler low-level RF problem
 - Booster heat exchanger clogs
 - Store 4839 aborted due to RF trip
 - Store 4841 aborted due to ramp trip
 - Machine Reports

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

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Science, July 21, 2006: NSF Reopens Competition for Site to Build Underground Lab

The long, strange quest to build a U.S. underground lab has taken another unexpected turn. A year ago, the National Science Foundation (NSF) announced that only two locations remained in the running to house the proposed Deep Underground Science and Engineering Laboratory (DUSEL)-- which would conduct experiments in particle physics, geology, microbiology, and other fields (Science, 29 July 2005, p. 682). But last month, NSF reopened the site competition to all comers. The reversal was prompted by an appeal from a losing group, but that group has now decided not to reapply.

[Read More](#) (subscription required)

Why Work at Fermilab?

The Employment Department is conducting an employee survey to find out why you enjoy working at Fermilab. Some of your answers will be posted on the Employment website as another avenue to help attract candidates to the lab. Click [here](#) to start the survey. It should take you about 2-3 minutes to complete.

[Upcoming Activities](#)