

## Calendar

**Tuesday, Sept. 18**  
**10:30 a.m.**

Summer Lecture Series - Curia II

Speaker: L. Lederman, IMSA/  
 Fermilab

Title: A Crack in the Mirror: A  
 36-Hour Particle Physics  
 Experiment

**3:30 p.m.**

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

**4 p.m.**

[Accelerator Physics and  
 Technology Seminar](#) - One  
 West

Speaker: P. Stoltz, Tech-X  
 Corp.

Title: Modeling Breakdown in  
 Metallic Structures

**Wednesday, Sept. 19**

THERE WILL BE NO  
 FERMILAB ILC R&D  
 MEETING THIS WEEK  
**3:30 p.m.**

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO  
 FERMILAB COLLOQUIUM  
 THIS WEEK

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

## Weather



Sunny 87°/66°

[Extended Forecast](#)

[Weather at Fermilab](#)

[Current Security Status](#)

[Secon Level 3](#)

[Wilson Hall Cafe](#)

## Feature

### ILC Citizens' Task Force tours underground tunnels



Fermilab's Dixon Bogert (pictured with flashlight) gives members of the ILC Citizens' Task Force a tour of the NuMI tunnel on Saturday.

Community leaders and media representatives went underground and toured the NuMI tunnel and halls Saturday to get an up close look at how civil engineering and science go hand in hand.

It also could be a glimpse of the future for Fermilab and its neighbors.

If Fermilab were to host the International Linear Collider, its construction would replicate many elements of the NuMI complex, from access shafts to large assembly areas to tunnels dug by a tunnel boring machine.



PPD's Greg Bock gives a tour to ILC Citizens' Task Force members in the MINOS near detector underground hall.

offers the closest approximation to what the ILC construction

## Director's Corner

### Root cause analysis

All the LHC triplets built at Fermilab are now repaired and several have been pressure-tested in the tunnel at CERN.

There is still work to do in finishing some triplet interconnections and, of course, we will not relax until all sectors are cold and fully powered.



Pier Oddone

Nonetheless, completing the repair is an important milestone. In achieving it, the collaboration between Fermilab and CERN has become even closer and stronger. At Fermilab we greatly appreciate the spirit of our CERN collaborators that rolled up their sleeves to help us repair the triplets with not a word expressing disappointment or recrimination.

Now we need to undertake the repair of the engineering systems at Fermilab that allowed the triplet design errors to propagate through the entire design and construction process. After the failure of the triplet during tests at CERN, I appointed an industrial-strength group to ferret out the root cause and contributing causes for the failure. The group was composed of engineers and project managers with major project management experience as well as experience in carrying out formal root cause analysis. We received outstanding support in this effort from EG&G, other national laboratories and the DOE. The group has worked for the last several months to make a critical analysis of our systems and engineering practices using the LHC triplets as a test case. I want to thank the members of the triplet engineering team for their openness and candor in working with the root cause analysis group to understand what went wrong. Last Friday the root cause analysis team briefed senior managers of divisions and sections, and their report is now posted on the [web](#). We believe the report will be enormously useful to Fermilab and might be useful to other laboratories as well.

We will make important changes in our engineering practices as a result of the recommendations of the root cause analysis

**Tuesday, Sept. 18**

- Golden broccoli & cheese
- Cheesy greek squeeze
- Coconut crusted tilapia
- Spaghetti w/meatballs
- \*Toasted almond chicken salad on croissant
- Assorted slice pizza
- Chicken fajitas

\*Carb Restricted Alternative

[Wilson Hall Cafe Menu](#)
**Chez Leon**
**Wednesday, Sept. 19 Lunch**

- Danish open sandwiches
- Dill cucumber salad
- Cold lemon soufflé w/ shortbread

**Thursday, Sept. 20 Dinner**

- Grilled sea scallops w/maple cream
- Rack of lamb
- Celery root & potato mash
- Vegetable of the season
- Almond, yogurt & olive oil cake

[Chez Leon Menu](#)

Call x4598 to make your reservation.

**Archives**
[Fermilab Today](#)
[Result of the Week](#)
[Safety Tip of the Week](#)
[ILC NewsLine](#)
**Info**

Fermilab Today is online at:

[www.fnal.gov/today/](http://www.fnal.gov/today/)

Send comments and suggestions to:

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

would require based on still evolving design plans.

The group of nearly 40 people asked questions about the complexity of digging a tunnel through five layers of earth including clay, sandstone and rock. They viewed the access shafts into the tunnel and commented that surface buildings were less obtrusive than task force members had expected.

[Read more](#)

-- Tona Kunz



Members of the ILC Citizen's Task Force in the NuMI beam line.

**Milestone**
**Tom Prosapio retires Sept. 25**

Tom Prosapio

Before groundbreaking discoveries can take place at Fermilab, someone has to break ground.

For the past 34 years, Tom Prosapio has been the man for the job.

Prosapio will retire at the end of September. He has coordinated the construction, outfitting and installation of equipment for laboratory facilities including the NuMI beamline tunnel for the Facilities Engineering Services Section / Engineering Department.

group. I am appointing a group of leading engineers at Fermilab and collaborating laboratories to develop the implementation plan. For the most part the effort will not add to the work we already do in projects but rather systematize how we carry out the work. The recommendations are for improvements in five areas: 1) project planning and execution, 2) design and engineering processes, 3) training, 4) quality assurance and 5) management of interfaces and specifications in collaborative projects.

We have outstanding engineers at Fermilab with great experience in building accelerators and detectors and an enviable record of accomplishment over the years. At present, however, we do not have the best engineering systems. I am confident that in the future we can bring Fermilab to the highest standards in the conduct of engineering and become a model for engineering practices - something that will help us realize our ambitions to build new global projects.

**In the News**
**Argonne physicists create landmark accelerator gradient**

From *Web Wire*, Sept. 17, 2007

The Argonne Wakefield Accelerator Group (AWA) works on particle accelerators in much the same way that horsepower junkies work on muscle cars. Although their research doesn't involve turbochargers, stall torque converters or cat back exhaust systems, the AWA group obsesses over the power of their machine.

This past spring, Manoel Conde and his colleagues in the AWA group, led by physicist Wei Gai, crossed a major frontier in accelerator science: They generated an accelerating gradient five times stronger than that of conventional linear accelerators. The gradient – a region of increasing electrical potential – works like an electrical "motor," transferring enormous amounts of energy to charged particles as they shoot through an accelerator. By substituting a dielectric ceramic for the copper medium used to support these accelerating electric fields, Conde and his colleagues generated a gradient of 100 MV/m; conventional linear accelerators generally cannot support a gradient above 20 MV/m.

[Read More](#)

"Tom Prosapio's ability to manage multiple projects well and do whatever it took to ensure successful completion is a testament to his dedication to his work and this laboratory," said Randy Ortgiesen, head of Facilities Engineering Services Section.

Prosapio worked for nearly five years to move men and equipment 300 feet below ground to construct the 4,000-foot NuMI tunnel. "Not too many guys can say that they got to do that," Prosapio said. Prosapio said that the NuMI project was particularly exciting to work on because it brought a new level of construction discipline to the laboratory that had not been seen here before.

Prosapio coordinates with subcontractors, vendors and laboratory personnel to shepherd building construction from permit approval through the final inspections. "I just do what's necessary to support physics," said Prosapio.

Prosapio came to Fermilab from Argonne National Laboratory in 1973. "I heard there was a new accelerator in town," he said. At first, he worked as an electrical technician but after his work with contractors and users, he began to move more towards civil construction projects.

Prosapio spent seven years working on the Superconducting Super Collider Project in Texas until its termination in 1997. He then returned to Fermilab.

After he retires, Prosapio will move to his house in Bloomfield, Iowa, with his wife Karen. Those wishing to bid Prosapio farewell can join him for a buffet luncheon at 11:30 a.m. on Tuesday, Sept. 25, at the Venice Tavern in Batavia. Reservations can be made by calling Maria Martinez, x6598 or Odarka Jurkiw, x4405 by Sept. 19.

-- *Haley Bridger*

## Announcements

### Have a safe day!

#### Women scientists' lunch Thursday

A lunch will be held this Thursday for women scientists working at Fermilab. This monthly activity provides an excellent opportunity to meet Fermilab colleagues from different divisions and experiments. This month's lunch will be held on Thursday, Sept. 20, at 12:15 p.m., at [Venice Tavern](#), 31 N. River St., Batavia. Reservations can be made by contacting [Supriya Jain](#). To receive notifications of upcoming activities and networking opportunities email the [Women scientist mailing list](#).

#### Register for ALCPG07

The joint meeting of the American Linear Collider Physics Group and ILC Global Design Effort will take place at Fermilab Oct. 22-26. The deadline to register is Oct. 12. A block of rooms is reserved for meeting attendees at the Pheasant Run Resort in St. Charles. This block of rooms will be held only until Sept. 19. Meeting attendees are encouraged to book your rooms soon. Questions? Contact [Cynthia M. Sazama](#). [More information](#)

#### Wanted: Graduate students for ALCPG07

Are you a graduate student who would like free food and a T-shirt? Volunteer to be a scientific secretary at the ALCPG/GDE meeting at Fermilab on Oct. 22-26. For details contact [Andreas Kronfeld](#).

#### Pine Street bike path closed

The Pine Street bike path will be closed today, Sept. 18, and Wednesday, Sept. 19, for paving. Paving is scheduled to take two days, weather permitting. The bike path should reopen Thursday, Sept. 20.

#### Scottish country dancing

Scottish country dancing will meet in Kuhn barn today, Tuesday, Sept. 18. Instruction begins at 7:30 p.m. and newcomers are always welcome. Most dances are fully taught and walked through. You do not need to come with a partner. More information is available by calling (630)840-8194 or (630)584-0825 or emailing [folkdance@fnal.gov](mailto:folkdance@fnal.gov).

#### [Additional Activities](#)