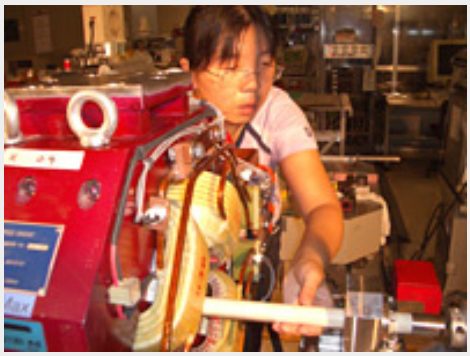
ILC NewsLine

Around The World

IHEP Magnet Engineers Visit KEK



View from the encoder side, Xianjing Sun puts a coil on the harmonic coil system.

Electrons and positrons travel several tens of kilometres nearly at the speed of light, needing to stay on course as they zoom through various components of the machine. How, you ask? Electrons have a negative charge and positrons have a positive charge, and moving charges receive forces in the magnets when they travel in magnetic fields. In the International Linear Collider, there will be about 17,000 magnets – and knowing precisely all of their field properties is the key to success for beam control. A challenge arises, however, because some of the ILC magnets are extremely hard to measure – 1 metre long magnets with an aperture of only 12 milimetres.
Read more...

-- Nobuko Kobayashi

Calendar

Feature Story

Fermilab ILC Task Force Evaluates How to Increase Future Participation and Collaboration with University Community

The ILC Test Area - Meson Detector Building is one of the new facilities that will help Fermilab's user community participate in R&D activities.

As time marches closer to making a decision on siting and building the International Linear Collider, the number of scientists working on the project will have to dramatically increase. From the graduate student to the senior physicist, large numbers of scientists will have to be recruited to design, build and eventually operate the machine. Over the past year, particle accelerator schools have taught new students about the ILC, but other efforts beyond the classroom are also happening, such as Fermilab's ILC Task Force.
Read more...

-- Elizabeth Clements

Feature Story

Director's Corner

The Evolving ILC Design: Changing the Crossing Angles

Optimising cost to performance for the ILC design is a challenging task. Our working groups have identified a number of possible design changes, motivated by large potential cost savings. Changing the crossing angles for the final focus interaction regions is one item that has been under discussion for some time now.

Andre Seryi, a task leader for ILC Beam Delivery Systems

Last fall, we adopted an ILC baseline that had two beam lines -- one with a crossing angle of 2mrad and the other with 20mrad. The design of the resulting beam delivery system staggered interaction points in two separate detector halls. Motivated by the significant cost savings, as well as lower risk, we recently decided to change the beam line configuration to having two beam lines with 14mrad crossing angles. It is a particularly notable change, because of the potential physics impacts, which had to be weighed against the cost savings and lower risk.
Read more...

-- Barry Barish

Director's Corner Archive

In the News

Upcoming meetings, conferences, workshops

CALICE meeting
CERN
20-22 September 2006

TTC Meeting (Tesla Technology Collaboration)
KEK (Information on schedule and logistics)
25-28 September 2006

9th International Workshop on Accelerator Alignment
Stanford Linear Accelerator Center
25-29 September 2006

ILC Damping Rings R&D Workshop - ILCDR06
Cornell University
26-28 September 2006

ILC Positron Source Meeting
Rutherford Appleton Laboratory
27-29 September 2006

The 17th International Spin Physics Symposium (Spin 2006)
Kyoto, Japan
2-7 October 2006

The International Workshop on Thin Films
Legnaro, Padua (ITALY)
9-12 October 2006

LCFOA Fall 2006 Membership Meeting
Argonne, IL and Batavia, IL
16-17 October 2006

EUDET Annual Meeting 2006
MPI Munich
18-20 October 2006

Single Crystal Niobium Technology Workshop (pdf)
Araxá mine in Brazil
30 October - 1 November 2006
Tentative Program (pdf)
Request Information (email)

ILC – ECFA Valencia Workshop and GDE Meeting
Valencia, Spain

Fermilab and Argonne Host Next LCFOA Meeting


LCFOA President Ken Olsen

The Linear Collider Forum of America, a not-for-profit industrial forum , will hold their fall 2006 meeting on 16-17 October. The meeting will start at Argonne on the afternoon of Monday 16 October and will continue all day Tuesday 17 October at Fermilab.

Following the last LCFOA meeting at SLAC in May, this next session will focus on progress made by the ILC program over the last several months, cavity and surface polishing R&D at Argonne and an opportunity to tour the new ILC facilities being developed at Fermilab. Industry members will have the opportunity to provide feedback and recommendations on needed user facilities and such issues as manufacturing, scheduling and contracting during a panel discussion at the end of the meeting. There will also be a smaller, detailed technical workshop for companies interested in magnet manufacturing on Wednesday 18 October.
Read more...

-- Elizabeth Clements

Announcements

ILC Glossary Updated

View the new, expanded ILC glossary. This is an ever-evolving page, and we need your help to keep it updated. See something missing? Send it to communicators@linearcollider.org.

Register for ILC-Valencia '06

ILC-ECFA and the GDE will host a joint meeting in Valencia, Spain on 6-10 November 2006. Register electronically by 6 October. Hotel rooms are going fast!
Read more...

ILC-Related Preprints

From *Interactions.org*
19 September 2006
UK Particle Physics Steps on the Accelerator Pedal
Two major research centres opened today (19th September), bringing the UK to the forefront of international efforts in Accelerator Science and Technology.
Read more...

From *USA Today*
19 September 2006
String theory: Hanging on by a thread?
String theory is on the ropes. After decades of prominence as the key to physics' elusive "theory of everything," challengers say the hypothesis is unraveling.
Read more...

From *Manchester Evening News*
18 September 2006
£110m boost for science projects
"...Meanwhile, more than £50m has been invested by the North West Regional Development Agency into the Daresbury Science and Innovation campus near Warrington. The centre, which will create more than 370 jobs, was officially opened by science minister Lord Sainsbury."
Read more...

From *Parsons*
19 September 2006
Parsons Awarded Professional Engineering Services Contract By International Linear Collider Team
The U.S. Department of Energy's Fermi National Accelerator Laboratory, Batavia, Illinois, has retained Parsons to develop cost models, estimates, and constructability reviews in support of the proposed International Linear Collider.
Read more...

Image of the Week

6-10 November 2006

CARE06 Annual Meeting
Frascati National Laboratories, Italy
15-17 November 2006

USPAS
Texas A&M University
15-26 January 2007

The 9th ACFA ILC Physics & Detector Workshop & ILC GDE Meeting
IHEP, Beijing
4-7 February 2007

Annual WILGA Conference
Warsaw University of Technology Resort, Poland
21-27 May 2007

GDE Meetings Calendar

hep-ph/0609200
19 Sep 2006
T-quark effects in Top Pair Production Associated with A Higgs Boson at Linear Colliders in Little Higgs Model

hep-ph/0609180
19 Sep 2006
Testing the SUSY-QCD Yukawa coupling in a combined LHC/ILC analysis

hep-ph/0609119
12 Sep 2006
Distinguishing Little-Higgs Product and Simple Group models at the LHC and ILC

A Particle's View
If they had eyes, this is what electrons and positrons would see as they accelerate through a 9-cell cavity in the ILC's main linacs.
Photo: Nobu Toge