

Feature Story

Large-Grain Niobium Cavities Receive Strong Endorsement

Global experts discuss niobium production and progress made on single-crystal and large-grain niobium technology at workshop in Brazil.



Students from the CBMM daycare center, an onsite facility for employees' children, enthusiastically welcomed the workshop attendees. The group also participated in a tree-planting ceremony as part of the niobium manufacturer's nature conservancy program.

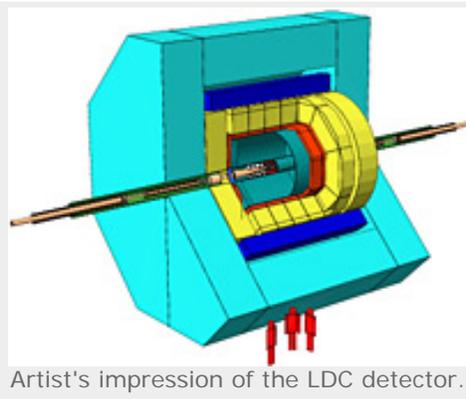
On the pursuit to design and build a superconducting cavity that will consistently reach the required acceleration gradient of 35 megavolts per metre for the International Linear Collider, a group of 30 scientists from eight industrial companies and nine research laboratories recently came together at the world's largest niobium mine in Araxá, Brazil for the [Single-Crystal Niobium Technology Workshop](#). The workshop educated attendees about the niobium production process and facilitated a dialogue about the development of single-crystal and large-grain niobium for ILC superconducting cavities. [Read more...](#)

-- Elizabeth Clements

Calendar

Feature Story

ILC Detectors in the Making: LDC is Going with the Flow



Artist's impression of the LDC detector.

In July, ILC NewsLine provided an overview of the [Global Large Detector \(GLD\) concept](#). In October we took a closer look at the [Silicon Detector \(SiD\) concept](#). This week features the third ILC detector concept LDC, and ILC NewsLine will continue its series about the four ILC detector concepts in the weeks to come. Next: 4th detector concept.

With a concept called particle flow, experimenters at the ILC are getting philosophical. Particle flow, according to them, is the philosophy of event reconstruction. In the future ILC detectors, scientists will not rely on the classical event reconstruction methods of tracks in the tracker and energy dots in the calorimeter. They want more - a complete 3-D reconstruction of every charged and neutral particle that went through their carefully designed layers. One of these detectors is the [Large Detector Concept](#) or LDC, a group that has many European members, but also a large American and some Asian involvement. [Read more...](#)

-- Barbara Warmbein

Image of the Week

Director's Corner

FALC — What's in the Name?



Kenji Saito shows FALC representatives superconducting RF cavity research being done at KEK.

I attended a meeting hosted by KEK Laboratory in Tsukuba, Japan on 19 November of the "Funding Agencies for Large Colliders" (FALC), previously known as "Funding Agencies for the Linear Collider." The change of names for FALC has caused more than a little consternation within the ILC community. At our recently concluded GDE / ECFA meeting in Valencia, Spain, FALC chairman Roberto Petronzio was directly asked about the name change in his opening plenary presentation. He responded with a rather general statement about FALC's mission and goals. This, however, did not put the issue to rest. Richard Wade, PPARC Director of Programmes and Chair of the FALC Resource Group, was even more pointedly challenged during the town meeting a couple of days later with a somewhat rhetorical question concluding that the name change indicates FALC is backing off from its *raison d'être* (e.g. the ILC). Today, I discuss a few highlights from the recent FALC meeting and give my personal view of what's in the name of FALC.

[Read more...](#)

-- Barry Barish

Upcoming meetings, conferences, workshops

ILC Perfume Mountain Meeting-What is the role of China and the International Linear Collider (ILC), a large scientific international project
5-7 December 2006
Beijing, China

[Third symposium on large TPC for low energy rare event detection](#)

11-12 December 2006
Carré des Sciences, Paris, France

[International Workshop on Silicon Sensors for High Energy Physics and Astrophysics](#)

14-16 December 2006
Ewha Womans University, Seoul, Korea

[European LC WS Meeting](#)

8-9 January 2007
Daresbury Laboratory, UK

MAC meeting
10-12 January 2007
Daresbury Laboratory, UK

[USPAS](#)

Texas A&M University
15-26 January 2007

[ILC Detector Test Beam Workshop](#)

Fermilab, Batavia, Illinois
17-19 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

[LCWS 2007](#)

Hamburg, Germany
30 May - 4 June 2007

[GDE Meetings Calendar](#)



Norihiro Ohuchi watching the crew align the position of the support ribs for a 9-cell cavity during assembly work of the STF (Superconducting RF Test Facility) cryomodule at KEK. (Image courtesy of N. Toge)

In the News

From *Beacon News*
24 November 2006
You Can Help Shape Future for Fermilab
[Read more...](#)

From *Nature*
23 November 2006
A Fresh Start for Japan
[Read more...](#)

From *Nature*
22 November 2006
French science after Chirac
[Read more...](#)

From *AIP Bulletin of Science Policy News*
22 November 2006
ITER Agreement Signed
[Read more...](#)

From *El Pais*
15 November 2006
A project as expensive as ITER
[Read more...](#) (In Spanish)

From *Newsday*
26 November 2006
Scoring Perfection on ACT
[Read more...](#)

[Director's Corner Archive](#)

Announcements

Registration for Beijing, 4-7 February 2007

So far there are about 60 people registered for the Beijing ACFA workshop and GDE meeting in February 2007. Your early registration may facilitate the workshop conveners' arrangements for the hotel and other workshop plans.

[Read more](#)

ILC-Related Preprints

[hep-ph/0611351](#)

28 Nov 2006
Small Visible Energy Scalar Top Iterative Discriminant Analysis for Different Center-of-Mass Energies

[hep-ph/0611289](#)

22 Nov 2006
Logarithmic electroweak corrections to $e^+e^- \rightarrow \nu_e\bar{\nu}_e W^+W^-$

[physics/0611272](#)

28 Nov 2006
Radiation Hardness of CCD Vertex Detectors for the ILC

