

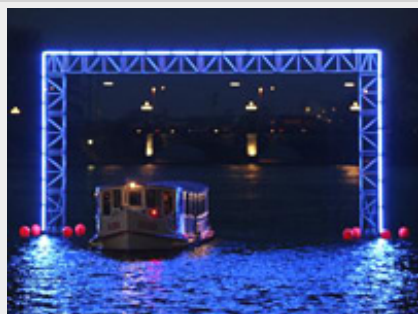
## Around The World

### World Cup Snapshots



SLAC's Italian BaBarians celebrating their team's victory

If you were anywhere in Germany during the last month you couldn't have missed it: it was football world cup. Black-red-and-golden flags flying from windows, fluttering behind cars, decorating t-shirts, socks, beer mats, faces, shop windows, newspapers. If by chance you went to Hamburg you were greeted with a beautiful array of bright blue goals shining from every high-rise roof, harbour crane and all other landmarks in the city, and the public transport system didn't only tell you when the next train was due to arrive – it also had updates on the goals of every match that was on.

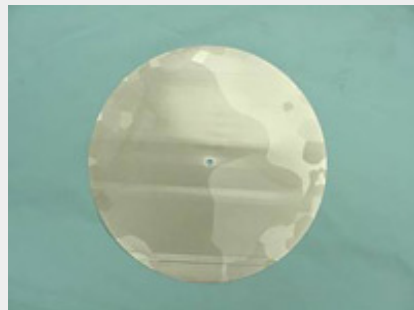


Hamburg was full of blue goals celebrating the world cup (image courtesy of dpa)

And if, while you were in Hamburg, you paid a visit to DESY during a match you could hear the noise from the nearby football stadium through the trees. Sometimes the voice of HCal expert Erika Garutti would drift through the trees as well: on the morning of the day of the Italy – Czech Republic match in the Hamburg stadium, the organisers suddenly appeared at the DESY gates, desperate: they urgently needed an Italian to read and record announcements for the Italian football fans. Erika stopped preparing

## Feature Story

### The Joy of Large Grain Niobium



Like salt crystals, niobium crystals, or grains, can be grown in either larger or smaller sizes. The individual crystals or grains can easily be seen in large-grain niobium.

(Image courtesy of JLab)

With detailed recipes for rolling, baking and rinsing, one might think that gourmet chefs are building, designing and testing the superconducting cavities for the International Linear Collider. On a quest to design the most efficient and cost-saving cavity for the ILC, the physicists who are actually developing the recipes are not a far cry from chefs. And just as chefs experiment by mixing spices to create new flavours, scientists involved in superconducting cavity technology are trying out alternative ingredients by testing such things as large grain and single crystal niobium.

Named after Niobe, the granddaughter of Zeus, niobium is a superconductor – a substance with no electrical resistance in the superconducting state. Because niobium is the elemental superconductor with the highest transition temperature, it has been the choice material for many accelerator projects using superconducting technology; it is therefore also the material of choice for ILC cavities (see [symmetry magazine, September 05](#)). A material made up of crystals or grains, niobium can be grown in larger or smaller sizes – just like salt crystals. Large-grain niobium therefore simply consists of larger niobium crystals. While the cavities in the ILC will all be made out of solid niobium (potentially a cost upwards of 300 million dollars), manufacturing cavities from large grain or single crystal niobium

## Director's Corner

### Vancouver Linear Collider Workshop/GDE Meeting



Vancouver Linear Collider Workshop, 19-22 July 2006

Today's issue features a Director's Corner from Gerry Dugan, GDE Americas Regional Director.

The first GDE meeting in the Americas region since the Snowmass 2005 workshop will take place next week on 19-22 July, as a joint meeting with the American Linear Collider Physics Group (ALCPG) at the University of British Columbia in beautiful Vancouver, Canada. Information about the workshop and a complete agenda are [available online](#).

The meeting will bring together several hundred physicists from around the world, who are working on both the accelerator and detector aspects of the ILC. More than 150 participants have expressed an interest in attending the GDE presentations, which will be held mostly in parallel with the ALCPG sessions. There will be an introductory joint plenary session on the morning of 19 July and a closing joint plenary session on 22 July.



Gerry Dugan

The GDE sessions will focus on the status of the Reference Design Report (RDR) and the accompanying cost estimate. The afternoon of 19 July and the morning of 20 July will be devoted to GDE plenary sessions in

the HCal's shipment to CERN for a while and will go down in history as the voice who says in Italian 'Please have your bags ready for security checks.'

[Read more...](#)

-- Barbara Warmbein

## Calendar

### Upcoming meetings, conferences, workshops

[Vancouver Linear Collider Workshop](#)

Vancouver, Canada  
19-22 July 2006

[ILC GDE Meeting](#)

Vancouver, Canada  
19-22 July 2006

[2006 Linear Accelerator Conference](#)

Knoxville, Tennessee, USA  
21-25 August 2006

[Linear Collider Physics School 2006](#)

Ambleside, UK  
14-19 September 2006

[TTC Meeting \(Tesla Technology Collaboration\)](#)

KEK  
25-28 September 2006

[9th International Workshop on Accelerator Alignment](#)

Stanford Linear Accelerator Center  
25-29 September 2006

[The International Workshop on Thin Films](#)

Legnaro, Padua (ITALY)  
9-12 October 2006

[Single Crystal Niobium Technology Workshop](#) (pdf)

Araxá mine in Brazil  
30 October - 1 November 2006  
[Request Information](#) (email)

[ILC-ECFA Valencia Workshop](#)

Valencia, Spain  
6-10 November 2006

[ILC GDE Meeting](#)

Valencia, Spain  
6-10 November 2006

[USPAS](#)

Texas A&M University  
15-26 January 2007

[Annual WILGA Conference](#)

Warsaw University of Technology

may cut down on expenses by eliminating some of the treatments that are necessary for fine grain cavities.

[Read more...](#)

-- Elizabeth Clements

## In the News

From *Nature Magazine*

13 July 2006

### Rushed decision on collider would limit useful options

SIR — Your Editorial about the International Linear Collider (ILC), "Making collider endorsement count" (Nature 440, 1089; 2006), states that CERN has insisted "that decisions about the siting of the ILC be delayed until an accelerator technology it is trying to develop is ready". This is untrue.

[Read more...](#)

From *SciDev Net*

7 July 2006

### Physics in South Africa: long road to freedom

At what point does a country decide that its economy is strong enough to allow research into particle physics? "We condemn ourselves to permanent second-class status if we decide that we cannot do research into the beginning of the universe," he argues.

[Read more...](#)

From *FYI: AIP Bulletin of Science*

*Policy News*

6 July 2006

### Senate Appropriators Approve 16.6% Increase for DOE Office of Science

The Department of Energy's Office of Science is in an excellent position going into this fall's conference committee that will determine the FY 2007 appropriation.

[Read more...](#)

From *Nature Magazine*

6 July 2006

### Sociologist fools physics judges

After more than 30 years of studying the physicists who work on gravity waves, spending countless hours talking to physicists and writing a book on the history and sociology of the field, social scientist Harry Collins had a question. Could he pass as a physicist?

[Read more...](#)

(subscription required)

which the RDR Area, Technical and Global Systems Leaders will give reports on their work. This will be followed by a series of parallel working sessions on the afternoon of 20 July 20 and all day on 21 July. During these sessions, the working groups will be able to interact with each other, review their current issues, and make plans for the next steps in developing the RDR and cost estimate. Finally there will be three plenary sessions devoted to reports on the global R&D program on 22 July.

[Read more...](#)

-- Gerry Dugan, GDE Americas Regional Director

## Director's Corner Archive

## Announcements

### ALCPG and GDE Host Town Hall Meeting at VLCW06 - Questions Needed!

The Vancouver Linear Collider Workshop is less than a week away, and the organisers need your input now. Please submit your question to [communicators@linearcollider.org](mailto:communicators@linearcollider.org). Organised by the American Linear Collider Physics Group and the Global Design Effort, the purpose of this town hall meeting is to establish stronger communication between the accelerator and detector communities for the ILC. A panel comprised of GDE and ALCPG members will answer questions and moderate the discussion.

[More information...](#)

### ILC Related Preprints

[hep-ph/0607104](#)

10 Jul 2006

Combined LHC/ILC analysis of a SUSY scenario with heavy sfermions

[hep-ph/0607085](#)

7 Jul 2006

Measuring Modular Weights in Mirage Unification Models at the LHC and ILC

### EUROTeV Reports

[EUROTeV-Report-2006-011](#)

Wiggler Magnet Optimization for Linear Collider Damping Ring

[EUROTeV-Report-2006-014](#)

The BDSIM Toolkit

[EUROTeV-Report-2006-015](#)

FLUKA Simulations of Energy Density

Resort, Poland  
21-27 May 2007

[GDE Meetings Calendar](#)

From *New York Times*  
4 July 2006

**Essay: Physics Awaits New  
Options as Standard Model Idles**

For most people, the world is constant naïve novelty. The same cannot be said for professional physicists.

[Read more...](#)

(subscription required)

Deposition from a ILC Bunch in  
different Spoiler Designs

[View All Preprints...](#)