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.

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

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
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...

-- 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.

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
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| Deposition from a ILC Bunch in different Spoiler Designs | | View All Preprints... |

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