

## Feature Story

### Industry Corner: Linear Collider Forum of Japan



*A meeting of the Linear Collider Forum of Japan.*

For many decades, Japanese industrial companies have been interested in accelerator technology development in collaboration with the physics community. Accelerator technology is the mother of high technology, which is applicable to industrial products. Superconducting technology, for example, has been transferred to electric power business, high field magnet technology, scientific apparatus, ultra high vacuum technology, and semiconductor business to name a few. As a result of this collaboration, the industries played a very important role in accelerator system construction in Japan, mainly from component fabrication and system integration.

TRISTAN and KEKB are good examples of accelerator systems constructed in Japan. Other examples are SPring-8 in the synchrotron radiation research and HIMAC in medical applications. High-tech components made in Japan such as superconducting magnets and their iron core materials have been installed in U.S. and European accelerator systems. One Japanese company also recently started constructing a medical proton synchrotron accelerator for cancer therapy in the U.S.

The Linear Collider Forum of Japan

## Feature Story

### First Day of ILC Industrial Forum Educational; Working Group Discussions to Follow Today



*DESY's Nick Walker reported on European ILC Industrialization at yesterday's meeting.*

After the first day of the International Linear Collider Industrial Forum, more than fifty industries from across the United States and Canada have a clearer picture of the physics behind the ILC and the road ahead for making the proposed project a reality. Hosted by the Linear Collider Forum of America, this first industrial meeting in the United States aims to educate interested industry members and begin to establish an industrialization process for all three regions involved in the ILC.

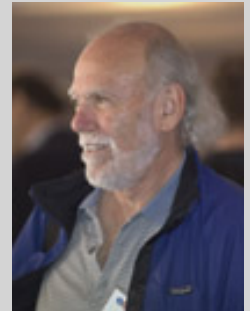
"The ILC is a major international project, and the industrial issues must be integrated throughout all phases of the project", said Ken Olsen, President of the LCFOA. "We are really just getting started. If we can get a real communication started now between scientists and industry, we can avoid many future pitfalls."

One of the questions on everyone's mind was siting. "The ILC will be built as an international project, and at some point, there will be a site selection," said Fermilab Director Pier Oddone. "It could happen that the ILC is not built here in the U.S. In that case, the ILC would still be Fermilab's highest priority, and the lab would play a large role in the technical

## Director's Corner

### External Entities

My job as GDE Director has been defined by the International Linear Collider Steering Committee (ILCSC) in the Annex of the MOU between collaborating institutions. This document, which is still being finalized, lists as one of my responsibilities in Section 5.3 of the Annex "he/she will be the primary representative for the project in interactions with external entities ...". This turns out to be a rather



*Barry Barish*

consuming but not uninteresting part of my job, as these "entities" turn out to vary from various scientific or technical groups to press, school kids and the public.

In the past couple of weeks, I have given presentations to two of these "external entities" that I thought were worth sharing with the ILC community today. In both cases the interest relates to how the growing ILC design effort will fit into the broader context of the worldwide high energy physics program. To achieve our goals for the GDE, we will require increased resources over the coming few years, if we are to accomplish a design and costing effort, initialize partnerships with industry and continue our R&D program to support the baseline and alternatives for the machine. How do our ILC/GDE ambitions fit into the other ambitions for particle physics projects in the coming years?

In 2001, a HEPAP subpanel that I co-chaired with Jon Bagger of Johns Hopkins was charged with the job of creating a long range plan for particle physics for the U.S. One outcome of that study was the realization that there was no mechanism in place that involved the scientific community in

was officially founded on 1 October 2002. More than 100 people from 43 leading industrial companies, including electric machinery, heavy industry, iron and steel, utilities, electronics and computer, architect engineering, and general construction participated in the meeting. The number of member companies has gradually increased since the first meeting to 62 industries at present.

Major activities of the Forum are to provide the opportunity for information exchange between the physics community, industries and the member companies. The Forum looks forward to working together with the Linear Collider Forums of other regions in the future.

--Norihiro Ozaki, Secretary-General of Linear Collider Forum of Japan

## Calendar

### Upcoming meetings, conferences, workshops

#### [ILC Industrial Meeting](#)

Fermilab, USA, 21-22 September, 2005

SMTF Collaboration Meeting Fermilab, USA, 5-7 October 2005

#### [Nanobeams 2005](#)

Kyoto, Japan, 17-21 October 2005

European GDE Meeting  
Oxford, England, 24-25 October 2005

#### [ECFA ILC Workshop](#)

Vienna, Austria, 14-17 November 2005

TESLA Technology Collaboration Meeting  
Frascati, Italy, 5-6 December 2005

GDE Meeting  
Frascati, Italy, 7-10 December 2005

2006 LCWS 2006  
Bangalore, India, 9-15 March 2006

## Image of the Week

components and coordinate the U.S. contributions. From the industrial perspective, if the ILC gets built anywhere, there will be heavy involvement of industries everywhere."

DESY's Nick Walker and Dieter Proch, who joined the meeting via teleconference, reported on ILC industry activities in Europe. Norihiko Ozaki, Secretary-General of the Linear Collider Forum of Japan, reiterated the importance of scientists working closely together with industries in this early stage of the project. "Don't climb Mt. Everest without setting a base camp first," Ozaki said. "Industry will provide you with the harness that you will need for climbing."

The second day of the forum will include talks on the European Linear Collider Forum and ILC Communications. Working groups on technical subsystems will spend the afternoon having smaller meetings. A complete agenda and talks are [available online](#).

--Elizabeth Clements

## In the News

From *FYI: AIP Bulletin of Science Policy News*,  
19 September 2005

### Recent Data on U.S. and Foreign Graduate Students

Graduate physics departments across the country report that foreign students are facing fewer problems due to visa restrictions than two years ago. The departments also report experiencing recent increases in the number of highly-qualified applicants who are US citizens, according to a report from the American Institute of Physics (AIP). Another report, from the National Science Foundation (NSF), found that enrollment by US students in science and engineering graduate programs across the country has turned upward in the last few years, after declining through the 1990s.

### AIP Report: "Physics Students from Abroad: Monitoring the Continuing Impact of Visa Problems":

A September 2005 report from AIP's

determining priorities nationally between projects that cost approximately \$100-500M. Projects could be approved by one laboratory, and then end up competing for funding with other such initiatives from another laboratory. In order to insure sufficient community input into the resulting difficult and important priority decisions, the HEPAP long range subpanel recommended the creation of the "Particle Physics Project Prioritization Panel (P5)."

[Read more](#)

--Barry Barish

[Director's Corner Archive](#)

## Announcements

### European GDE Meeting

The European GDE members will meet at Oxford University, England 24-25 October 2005 to discuss matters of a specifically European interest, in particular optimisation of R&D and preparation for further bids to the EU and elsewhere, and outreach. There will be a dinner on the night of 24 October. Accommodations can be arranged in Oxford, either in a hotel or a guest room in a college. The meeting is intended for European GDE members, but all GDE members are invited to attend. If you would like to attend, respond to [Brian Foster](#) and [Sue Geddes](#) by October 10.

### SMTF Collaboration Meeting, 5-7 October 2005

There will be an SMTF Collaboration Meeting at Fermilab on 5-7 October 2005. Barry Barish and Gerry Dugan will attend the first day of the meeting and participate in some of the working group discussions. A proposed agenda is still being written and will be available on the ILC Web site soon. Stay tuned to *ILC NewsLine* for more information about this meeting.

### ILC Jobs

Several ILC job openings are now posted on the [ILC Web site](#). If you have a job opening that you would like posted, send it to [webmaster@ilcgde.org](mailto:webmaster@ilcgde.org).

### Recent ILC Related Preprints

[hep-ph/0509159](#) - Physics at Future

## ILC Industrial Forum at Fermilab



Representatives from more than fifty industries in the U.S. and Canada are attending the ILC Industrial Forum, hosted by the Linear Collider Forum of America.

Statistical Research Center indicates that the impact of post-9/11 visa restrictions on physics graduate departments has lessened between the Fall of 2002 and the Fall of 2004. The report suggests that recent declines in the percentage of incoming physics graduate students who are foreign may be largely due to other factors, including an "increase in the number of well-qualified US-citizen candidates."

[Read more](#)

Linear Colliders, 15 Sept. 2005

[hep-ph/0509160](#) - Probing the Universal Randall-Sundrum Model at the ILC, 15 Sept. 2005

[hep-ph/0509161](#) - Event shape discrimination of supersymmetry from large extra dimensions at a linear collider, 15 Sept. 2005

[physics/0509051](#) - TPC Performance in Magnetic Fields with GEM and Pad Readout, 7 Sept. 2005

If you recently released a preprint related to the ILC, [let us know!](#)