Around the World

From KEK: A world of researchers joins hands and hardware

The particle physics community is accustomed to global collaboration, and here at KEK, one of those collaborations has just begun on a core technology for the International Linear Collider (ILC), the superconducting accelerating system.

Prof. Kaoru Yokoya, the ILC Asian regional director and a Head of Linear Collider Project office at KEK, in his office discussing the future of the ILC accelerator design.

From the Enlightenment to the present day, science has been opening doors to the unknown. Recent physics experiments and observations continue to unveil a universe filled with even more mysteries to solve than we ever imagined: dark matter, dark energy, extra dimensions, supersymmetry... and more surely to follow. Particle physicists are on a quest to tackle those mysteries, learning about the origin and nature of the universe from the smallest to the largest scales. One of the most powerful tools for this quest is the accelerator, particularly large-scale collider, which re-creates conditions that existed shortly after the Big Bang.
Read more...

BlogLine

7 February 2010 - *Frank Simon*
Heat to kill the pain

Follow all Quantum Diaries

Calendar

Upcoming meetings, conferences, workshops

International Linear Collider Workshop 2010 (LCWS10 and ILC10)

Feature Story

ILD concept detector group plan future work

"...what looks like a good idea at some time might prove to be superfluous later." *Image: Perrine Royole-Degieux.*

Some 100 members of the International Large Detector (ILD) group gathered from 27 to 30 January 2010 in Paris, France, deep in the academic Latin Quarter area. This fourth ILD workshop was the first dedicated ILD meeting after the concept was validated in 2009 by the research directorate.

The goal of the workshop was to discuss a plan how by the end of 2012 the ILD concept can present a well understood detector design, with technical solutions which are "ready".
Read more...

--Perrine Royole-Degieux

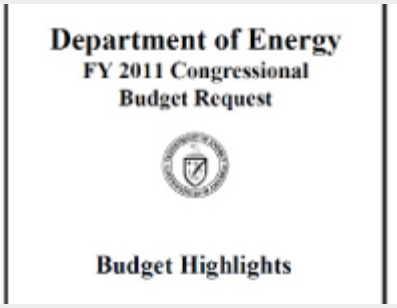
In the News

From *New Scientist*
9 February 2010
What the LHC could find at half-power
"Next week, engineers at the Large Hadron Collider will prepare the particle-smasher to run at 7 teraelectronvolts (TeV) – half the energy it was designed for. So what will it find? ... ..."
Read more...

From *News Blaze*
8 February 2010
Scientists Explore the Future of High-Energy Physics
"...Sibener and Lance Cooley, AB'86,

Director's Corner

US Department of Energy ILC R&D funding request for fiscal year 2011



Highlights of the FY2011 DOE Budget Request to Congress

It is an understatement to say that the US ILC R&D funding has had its ups and downs! Two years ago in the final budget compromise for Fiscal Year (FY) 2008, we effectively lost our funding for almost one year. Since that time, we have taken a somewhat less aggressive approach towards the US ILC R&D programme and have designed a programme around $35 million per year to support it through the Technical Design Phase. The programme selectively supports R&D in priority areas, rather than across the project, and it does not support work towards a US site proposal or significant investment in industrialisation. I am pleased to announce that the DOE is continuing to support this revised programme and that a $35-million ILC R&D budget has been included in the President's US budget request announced last week.
Read more...

-- Barry Barish

Director's Corner Archive

Image of the Week

Back in 2007...

...almost exactly three years ago the

Institute of High Energy Physics, Beijing, China
26-30 March 2010

XIV International Conference On Calorimetry In High Energy Physics (CALOR2010)
IHEP, Beijing, China
10-14 May 2010

The 1st International Particle Accelerator Conference (IPAC'10)
Kyoto, Japan
23-28 May 2010

= Collaboration-wide Meetings

GDE Meetings calendar

View complete ILC calendar

of the Fermi National Accelerator Laboratory, are working on the latter option with $1.5 million in funding from the U.S. Department of Energy. They aim to improve the efficiency of superconducting radio frequency (SRF) cavities made of niobium to accelerate beams of subatomic particles in the next generation of high-energy physics experiments. ..."
Read more...

From *Universe Today*
8 February 2010
Universe to WMAP: ΛCDM Rules, OK?
"The Wilkinson Microwave Anisotropy Probe (WMAP) science team has finished analyzing seven full years' of data from the little probe that could, and once again it seems we can sum up the universe in six parameters and a model. ..."
Read more...

International Committee for Future Accelerators (ICFA) announced the release of the Reference Design Report for the ILC. 2010 is another important year for the project, marking the end of the first part of the Technical Design Phase, or TDP-1.
Read the press release

Announcements

ILC Statement
2010-002
Statement of Common Intent by the CLIC Collaboration Board and the ILC Steering Committee

arXiv preprints
01002.1214
The Z' boson of the minimal B—L model at future Linear Colliders in $e^+e^- \to \mu^+\mu^-$

01002.1031
F-Theory Grand Unification at the Colliders

1002.1012
Beam Test Results with Highly Granular Hadron Calorimeters for the ILC

1002.0816
Electroweak corrections to W^+W^-Z and ZZZ production at the linear collider

1002.0659
Probing topcolor-assisted technicolor from lepton flavor violating processes in photon-photon collision at ILC

1002.0359
Negative Particle Planar and Axial Channeling and Channeling Collimation