Feature Story

From KEK: Cryomodule for "S1-global" arrived from Italy

Italian made cryomodule being taken out from the container at Superconducting radiofrequency Test Facility (STF) at KEK.

A big Christmas gift arrived at KEK from Italy. On 25 December, KEK's Superconducting radiofrequency Test Facility (STF) welcomed the cryomodule for "S1-global" – a crucial system test towards realizing the International Linear Collider (ILC), a proposed next generation electron–positron collider.

"S1" refers to one of the priority task forces (so-called "S" task forces) for ILC R&D, and the object of S1 is the demonstration of an 8–cavity cryomodule operating at an average accelerating gradient of 31.5 Megavolts per meter, the design gradient for the ILC.
Read more...

BlogLine

24 December - *Frank Simon*
Deceleration

23 December - *Ingrid Gregor*
Christmas Upside Down

20 December - *Zoe Louise Matthews*
Dark days for science: STFC to drop UK involvement with ALICE

18 December - *Frank Simon*
Acceleration

Follow all Quantum Diaries

Around the World

Training the next generation of particle physicists

Students and teachers at the Third Linear Collider Physics School, Ambleside.

A lively debate across age groups and cultures marked the Third Linear Collider Physics School, held in Ambleside, UK, in August. For the first time, designated discussion periods were set aside for up–and–coming scientists to share their work and opinions on the future of accelerator–based particle physics with international experts. The week–long event held at the Ambleside campus of the University of Cumbria in England expanded on the technical and physics issues of past schools with three discussion topics: the "big questions" in the field: electroweak, Higgs physics and accelerator physics; quantum chromodynamics, exotics and cosmology. The school was organised by Andre Sopczak of Lancaster University together with his colleagues Chris Bowdery and Jonathan Gratus.
Read more...

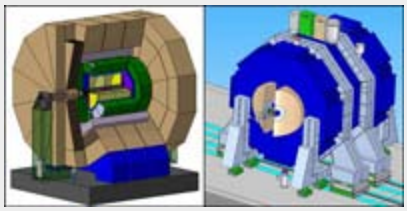
-- Andre Sopczak, Lancaster University

In the News

From *Yomiuri Online*
5 January 2010
謎の2粒子は正体同じ！ 阪大教授が新宇宙理論
ノーベル賞を受賞した南部陽一郎博士の理論からその存在が予測されたヒッグス粒子が、宇宙を満たす謎の暗黒物質(ダークマター)と同じものであるという新理論を、大阪大の細谷裕教授がまとめた。
Read more...

Director's Corner

Reflections on the New Year



Two ILC detector concepts, ILD and SiD, have been validated by the International Detector Advisory Group. (SiD CAD model rendering courtesy of Marco Oriunno)

As we enter the New Year, it is a good time to review and reflect on our accomplishments during 2009, as well as the present status and prospects for the ILC. I wish I could boldly state that we have made big strides towards making the ILC a reality over the past year, but in reality it was a mixed year. Technically, we have made impressive progress in key areas, while some others areas are languishing due to limited resources. Overall support for the ILC or more generally a next–generation lepton collider remains strong. However, uncertainty regarding the future course of the ILC has created difficulties in planning, as well as some slowdown in our timescale. Our overall plan remains stable: to create a technical design mature enough to propose a global construction project to collaborating governments by the end of 2012. I remain confident we can achieve that goal.
Read more...

-- Barry Barish

Director's Corner Archive

Image of the Week

AAP snowed under

Calendar

Upcoming meetings, conferences, workshops

Low Emittance Rings 2010 (LER2010)
CERN
12-15 January 2010

International Linear Collider Workshop 2010 (LCWS10 and ILC10)
Institute of High Energy Physics, Beijing, China
26-30 March 2010

Upcoming school

The US Particle Accelerator School sponsored by the UC Santa Cruz
Santa Cruz, CA, USA
18-29 January 2010

= Collaboration-wide Meetings

GDE Meetings calendar

View complete ILC calendar

From *Tanko Nichi Nichi Shimbun*
1 January 2010
ILC計画 2年後に詳細設計完成
世界の素粒子物理学会で開発協議が進められている、大規模実験施設「国際リニアコライダー(ILC=International Linear Collider)。2012年末までに、ILCの詳細設計が固まる予定で、その後、設置国の選定などに入る。

From *Science*
1 January 2010
Research Funding: U.K. Physicists Cry Foul At Major Budget Cuts
"It's not been a festive time for many U.K. physicists following the mid-December announcement of a 5-year funding plan for the Science and Technology Facilities Council (STFC), the British body responsible for particle physics, astronomy, nuclear physics, and space science."
Read more...

From *Financial Times*
29 December 2009
Editorial: Time to solve some cosmic mysteries
"...While an international team has drafted a Linear Collider design for the 2020s, governments are sensibly holding off from making any commitments for the foreseeable future."
Read more...

From *New York Times*
28 December 2009
Essay: The Joy of Physics Isn't in the Results, but in the Search Itself
"I was asked recently what the Large Hadron Collider, the giant particle accelerator outside Geneva, is good for."
Read more...

From *PhysOrg.com*
22 December 2009
Accelerators and Light Sources of Tomorrow (Part 1: From Linacs to Lasers)
"From their humble beginnings as offshoots of the ordinary electric light bulb, particle accelerators have evolved in surprising directions."
Read more...

The participants of the Accelerator Advisory Panel (AAP) meeting catch a breath and a few snowflakes on the steps of Oxford University's Denys Wilkinson Building. The review meeting started on Wednesday in snowy Oxford – in the background is the chapel of Keble College. Image: Nobu Toge.

Announcements

Happy New Year!
Stick to your New Year's resolution and share your story ideas with your ILC communicators! Would you like to promote your graduate student's research, let the community know about some interesting R&D work happening this year or present an important milestone? Simply send your ideas to communicators@linearcollider.org.

arXiv preprints
1001.0473
Neutral Higgs-pair Production at one-loop from a Generic 2HDM

1001.0092
Probing the Majorana nature of TeV-scale radiative seesaw models at collider experiments

0912.5536
Multi-Higgs portal dark matter under the CDMS-II results

0912.4841
Physical problems for future Photon Colliders

0912.2806
Identification of extra neutral gauge bosons at the International Linear

Collider

0912.2747
A Hybrid Design of Project-X

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