

Around the World

From CERN Bulletin: The collider of the future?

The recent ILC-CLIC meeting (see two recent Director's Corner about the [meeting](#) and about [Jean-Pierre Delahaye](#) joining the Executive Committee for more information) was also covered by CERN's internal newsletter *Bulletin*. We feature the article [here](#) today.



A view of the two beam lines in the CLIC experimental hall.

The International Linear Collider (ILC) and Compact Linear Collider (CLIC) studies both call for cutting-edge technologies. At first glance they may appear to be in competition, but they are in fact complementary and have a common objective – namely to propose a design, as soon as possible and at the lowest possible cost, for the linear accelerator best suited to taking over the baton of physics research at the high-energy frontier after the LHC. [Read more...](#)

BlogLine

6 July - [Ingrid Gregor](#)
[Rusted from the Rain](#)

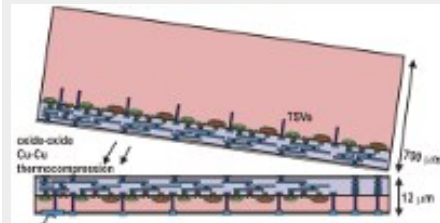
5 July - [Frank Simon](#)
[On the Road again](#)

[Follow all Quantum Diaries](#)

Calendar

Feature Story

3-D silicon technology project draws together industry and research for ILC



The bonding of two electronic tiers using the oxide-oxide Cu-Cu thermo-compression technique employed by Tezzaron.

The International Linear Collider had more than a dozen circuit pixel-detector technologies to choose from for their vertex detectors. Now, they can choose from many more design options thanks to a ground-breaking partnership among national laboratories, universities and industry. [Read more...](#)

-- [Andre Sulluchuco](#)

In the News

From *Eureka! Science News*
6 July 2009

Physical reality of string theory demonstrated

This is the first time that a calculation based on string theory has been published in *Science*, even though the theory is widely known. [Read more...](#)

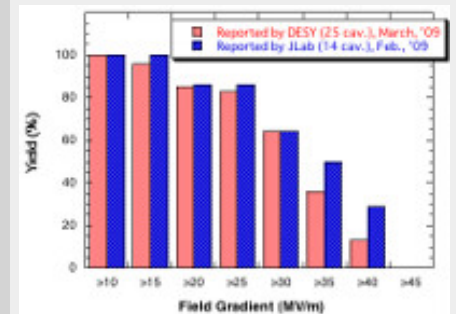
From *Science Centric*
6 July 2009

A galaxy as particle accelerator

It is one of the largest among the giants: With two to three billion times the mass of our sun, the galaxy Messier 87 dominates the Virgo cluster. [Read more...](#)

Director's Corner

Improvements in high-gradient ILC SCRF cavities



Recent results on cavity yields from JLab and DESY approach our TDP-1 goal of 50% yield at 35 MV per metre

Developing high-gradient superconducting radiofrequency (SCRF) nine-cell cavities is one of the primary goals of our global R&D programme. Soon after we initiated the Global Design Effort (GDE) R&D and design programme for the International Linear Collider, we set the ambitious goal of 35 Megavolts (MV) per metre as our gradient. If we succeed, we plan to set an average operating gradient of 31.5 MV per metre for the 14560 cavities mounted in the 1680 cryomodules of a 500-GeV ILC. Major efforts towards high-gradient cavities are underway in the Americas, Asia and Europe and we have recently made good progress that makes us believe our goals are within reach!

[Read more...](#)

-- [Barry Barish](#)

Director's Corner Archive

Image of the Week

Upcoming meetings, conferences, workshops

[Lepton Photon 09](#)

Hamburg, Germany
17-22 August 2009

[14th International Conference on RF Superconductivity \(SRF2009\)](#)

Berlin, Germany
20-25 September 2009

[2009 Linear Collider Workshop of the Americas \(ALCPG09\)](#)

The University of New Mexico,
Albuquerque, New Mexico, USA
29 September - 3 October 2009

Upcoming schools

[International School of Physics "Enrico Fermi" \(SIF\)](#)

[Radiation and particle detectors](#)
Varenna, Villa Monastero, Italy
20-25 July

[Linear Collider Physics School 2009](#)

Ambleside, England
17-23 August 2009

[Fourth International Accelerator School for Linear Colliders](#)

Beijing, China
7-18 September 2009

[GDE Meetings calendar](#)

[View complete ILC calendar](#)

From NASA
3 July 2009

NASA's Fermi Telescope Probes Dozens of Pulsars

Fermi is the first spacecraft able to identify pulsars by their gamma-ray emission alone.

[Read more...](#)

From *Science Daily*
1 July 2009

New Class Of Black Holes Discovered

The finding in a distant galaxy approximately 290 million light years from Earth is reported today in the journal *Nature*.

[Read more...](#)

Announcements

arXiv preprints

[0907.0917](#)

Measurement of Higgs Branching Ratio at ILC

[0907.0527](#)

Testing Gaussianity in the WMAP data of OT foreground reduced map

[0907.0525](#)

Measurement of Heavy Gauge Bosons in Little Higgs Model with T-parity at ILC

[0907.0524](#)

Analysis of Higgs Self-coupling with ZHH at ILC

[0907.0190](#)

Precision Measurements of the model parameters in the Littlest Higgs model with T-parity

Accelerators everywhere!



A single-cell niobium cavity was one of the many exhibits that showed that accelerators are 'everywhere: from the Big Bang to curing cancer'. In one of 25 stands of the Royal Society's Summer Exhibition — a popular event by the UK's national academy for science that attracted more than 5000 visitors in a week — a team of accelerator experts from labs and universities across the UK showed how exciting, useful and versatile the big machines are. More info: www.summerscience.org.uk/09/
Images: Christian Mrotzek, DESY.

