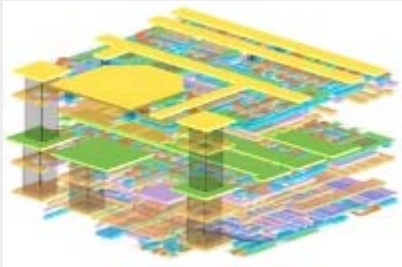


Feature Story

Pixel collaboration

R&D on monolithic and vertically integrated pixel detectors



Micro Magic 3D-layout of the 3-tier Fermilab Vertical Integrated Pixel (VIP) chip.

Plans are taking shape to form a new group to coordinate and stimulate R&D on monolithic and vertically integrated pixel detectors for scientific applications in high-energy physics and beyond. In a joint message, the directorates of CERN, KEK and Fermilab have offered their support. They suggested the formation of a regionally balanced coordination board to take this forward. From discussions in recent reviews and workshops, we think there is an opportunity for the many efforts underway worldwide to benefit a larger community. We already have strong collaborations for the development of vertical integration and monolithic active pixel sensors (MAPS). The new world-wide effort would build upon the existing collaborations and open the technology developments to other scientific areas. We will discuss how best to achieve this at upcoming meetings. Our suggestions will then be communicated to the directorates of CERN, KEK and Fermilab. [Read more...](#)

-- Chris Damerell (Rutherford Appleton Lab), Marcel Demarteau (Fermilab) and Yasuhiro Sugimoto (KEK)

Calendar

Upcoming meetings, conferences, workshops

[SiD Meeting at LCWS08](#)
University of Illinois at Chicago, Chicago, USA

Around the World

Under pressure

Large time projection chamber prototype is about to start its first test



TPC collaborators from across the globe fit the endcap onto the TPC field cage.

The [time projection chamber](#) is part of the tracker system of a future ILD detector at the ILC and will one day reproduce highly precise tracks of the particles that passed through its gas. A plot of all the tracks leading to a workshop called 'the tent' on the DESY campus would make for an interesting event display: in the course of the last weeks many parts for the detector prototype arrived from destinations around the world, together with their experts. While field cage, cathode and module dummies came from Germany, the anode endplate travelled all the way from Cornell University in the States. France brought a [Micromegas](#) readout module, Belgium contributed the trigger logic and the Netherlands the beam trigger equipment for the coming test with cosmic rays or test beam. [Read more...](#)

-- Barbara Warmbein

In the News

From *Wall Street Journal*
11 November 2008
Mining for Dark Matter, Some Go Wimp-Hunting
The Exotic Particles Would Explain a Lot About the Universe, and That Promise Has Scientists Going Underground
[Read more...](#)

From *Scientific American*
10 November 2008
New Theories May Shed Light on Dark Matter

Director's Corner

Formalising the CLIC-ILC collaboration

Collaboration between our ILC R&D and design work and the parallel effort towards the CLIC concept stands to be of benefit to both groups. This direction also promises to help break down barriers between the two groups, making the worldwide effort



Jean-Pierre Delahaye, CERN CLIC study leader

towards a linear collider more integrated and unified. Of course, the underlying concepts are fundamentally different and affect much of the rest of the design: for acceleration in the main linac, the ILC uses superconducting RF, whereas CLIC accelerates through a drive beam. Nevertheless, there is a great deal of mutual interest in other areas and we have formed [five working groups](#) that are already well [underway](#) and two more working groups are being set up. We have now taken the step to formalise the mode of our collaboration, especially regarding guidelines for communication outside the collaboration. This will help enable the joint work to go forward and be used in ways agreeable to both groups. [Read more...](#)

-- Barry Barish

[Director's Corner Archive](#)

Image of the Week

What is it?

15 November 2008



[International Linear Collider Workshop \(LCWS08 and ILC08\)](#)

University of Illinois at Chicago,
Chicago, USA

16-20 November 2008

[2nd Annual Workshop of the Helmholtz Alliance 'Physics at the Terascale'](#)

RWTH Aachen, Germany
26-28 November 2008

Upcoming school

[The US Particle Accelerator School](#)

Nashville, Tennessee, USA
12-23 January 2008



= Collaboration-wide Meetings

[GDE Meetings calendar](#)

[View complete ILC calendar](#)

The stuff of mystery may be more than meets the eye

[Read more...](#)

From *UPI.com*

10 November 2008

The search for dark matter might soon end

A German-led consortium of scientists says the search for the mysterious substance known as dark matter could soon end.

[Read more...](#)

From *symmetry breaking*

10 November 2008

3-D printer puts detector at your fingertips

...He and SLAC's Norman Graf stack the pieces together like oversized Legos and voilà! A 3-D version of the detector that can be displayed to scientists, engineers and other project members to help them better understand the massive detector they are trying to build.

[Read more...](#)



It's not an aurora borealis, it's not a blurry christmas tree... but what is it? [Send us](#) your guesses or tell us next week at LCWS/ILC08!

Announcements

Entries for the calendar?

Is your meeting featured in the ILC Calendar? Are enough people registering for your symposium? Is that important conference on your agenda? We are happy to include your entries in the ILC Calendar -- just send title, place, time and link to communicators@linearcollider.org!

Announcing ARW 09

We are happy to announce that the second [Accelerator Reliability Workshop](#) will be hosted by TRIUMF in the scenic city of Vancouver, B.C., Canada, 26 to 30 January 2009. The workshop will feature talks, poster presentations and open discussions on the reliability of hardware, software and humanware in the accelerator world. Spread the word to all who might be interested to bring their accelerator reliability related problems and solutions to the discussion table. I look forward to welcoming you in Vancouver, Violeta Toma, chair ARW 2009