



European Coordination for Accelerator Research and Development

PUBLICATION

EuCARD: further reading

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The electronic version of this EuCARD Publication is available via the EuCARD web site <<http://cern.ch/eucard>> or on the CERN Document Server at the following URL :
<<http://cdsweb.cern.ch/record/1314844>>

Around the World

From interactions.org: World's particle physics labs take amateur photographers behind the scenes



A scene from the first photo walk at DESY in 2009 *Image: Christian Mrotzek*

8 July 2010 – Picture this: For the first time, amateur photographers around the world collide with the past, present and future of particle physics.

Five of the world's leading particle physics laboratories will make the image a reality when they join together to host a Particle Physics Photowalk on August 7. More than 200 people will have the rare opportunity to photograph state-of-the-art accelerators and detectors in all their beauty and complexity. Photographers will benefit from special behind-the-scenes access to laboratories in Asia, Europe and North America, with tours tailored to the creative eye.

Photographers are invited to register for a Particle Physics Photowalk at these participating laboratories:

- CERN in Geneva, Switzerland
- DESY in Hamburg, Germany
- Fermilab in Illinois, USA
- KEK in Tsukuba, Japan
- TRIUMF in Vancouver, Canada

[Read more](#) or [visit website](#)

BlogLine

7 July - *Frank Simon*
[Marine Life in Hamburg](#)

1 July - *Frank Simon*
[Heavy Lifting](#)

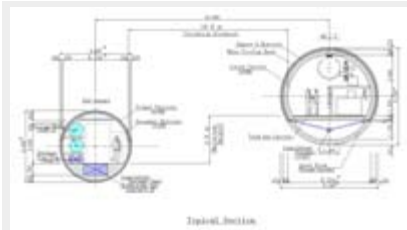
[Follow all Quantum Diaries](#)

Calendar

Upcoming meetings, conferences, workshops

Feature Story

One step forward to the ILC single tunnel design



Asian single tunnel configuration
Image: AAA CE-WG

On 1-2 June, the [review](#) on the design study of the ILC conventional facility in mountain regions was held at KEK, Japan, and the final review report was submitted last week by the review panel lead by Vic Kuchler of Fermilab to Seiya Yamaguchi, head of KEK's Linear Collider Office and to Marc Ross, project manager of the Global Design Effort (GDE) in charge of the conventional facility study (GDE/CFS).

[Read more...](#)

-- *Rika Takahashi*

Image of the Week

Exciting boring ceremony



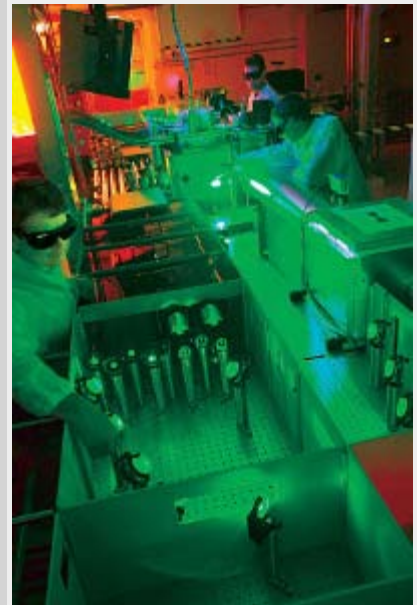
In an official ceremony filled with German civil engineering traditions the tunnel boring works for the European XFEL started on 30 June. The boring machine – with its 6.17 metres in diameter, 71 metres in length, weighing 550 tonnes and costing 18 million Euros everything but boring – was christened (it is now called 'TULA'), the tunnel itself was also christened and a statue of the saint in charge of tunnel works was blessed. The statue will watch over the construction work until the tunnel borer finishes its three-kilometer tunneling job in summer 2011. The European XFEL is an X-ray free-electron laser that will use superconducting radiofrequency technology to produce its brilliant X-ray light. Read the [press release](#).

In the News

From *Physics World*

Director's Corner

The laser and the next 50 years



The laser used to accelerate electrons by plasma-wakefield acceleration to one billion electron volts in only three centimetres. (From [Symmetry Magazine October 2009](#) – Image: Roy Kaltschmidt, Lawrence Berkeley National Laboratory)

[In my column last week](#) on the 50th anniversary of the demonstration of the first working laser at Hughes Research Laboratory in 1960, I stressed the remarkable impacts this fundamental physics discovery has had both in developing a multibillion-dollar industry and in affecting the way we live. Today, I continue that theme by projecting a little on what we can expect from further laser developments in the next fifty years. Of course, undoubtedly, some of the most important future developments have not even been thought of yet. Nevertheless, it is clear that the new laser developments will continue to have an impact on our lives in new and exciting ways, both by opening up new scientific opportunities and in creating new applications to our everyday lives.

[Read more...](#)

-- *Barry Barish*

[Director's Corner Archive](#)

Announcements

EuCARD: further reading

Want to know the latest in European accelerator R&D? Have a look at the [EuCARD newsletter](#) – issue 5 has just come out. EuCARD stands for European Coordination for Accelerator

[7th Positron Source Collaboration Meeting](#)

DESY, Hamburg, Germany
15-16 July 2010

[TeV Particle Astrophysics 2010](#)

Paris, France
19-23 July 2010

[35th International Conference on High Energy Physics \(ICHEP2010\)](#)

Palais des Congrès, Paris, France
21-28 July 2010

[First Baseline Assessment Workshop](#)

KEK, Tsukuba, Japan
7-10 September 2010

[XXV Linear Accelerator Conference \(LINAC10\)](#)

Tsukuba, Japan
12-17 September 2010

Upcoming school

[Fifth CERN-Fermilab Hadron Collider Physics Summer School](#)

Fermilab, Batavia, IL, USA
16-27 August 2010

[GDE Meetings calendar](#)

[View complete ILC calendar](#)

1 July 2010

Ultra-precise test confirms photons are bosons

Physicists in the US have carried out an extremely precise test of one of the cornerstones of modern physics – the idea that the two types of fundamental particle, bosons and fermions, follow two distinct kinds of statistical behaviour.

[Read more...](#)

From *Wired*

1 July 2010

New Muon Detector Could Find Hidden Nukes

A prototype of a device that could someday detect nukes through layers of steel just passed its first test.

[Read more...](#)

From *livemint.com*

30 June 2010

Will it lead to confusion or champagne?

Expectations vary as particle physics is dominated as much by subatomic structures as by personal perspectives

[Read more...](#)

From *About.com: Physics*

30 June 2010

Introducing Dark Watch

... Welcome to Dark Watch, my monthly update on all things dark matter-ish and dark energy-ish.

[Read more...](#)

From *Ars Technica*

29 June 2010

A short history of the history of the Universe

John Mather, along with George Smoot, won the Nobel Prize for his work on the Cosmic Background Explorer (COBE), the probe that first caught glimpses of fluctuations in the Cosmic Microwave Background (CMB) left over from the big bang.

[Read more...](#)

Research and Development and bundles all that accelerates in Europe. You can subscribe to it [here](#).

ILC Note

[2010-055](#)

Report from the GDE Physics Questions Committee

arXiv preprints

[1007.0981](#)

Mass Spectrum in the Minimal Supersymmetric 3-3-1 model

[1007.0829](#)

Simulation Study of W Boson + Dark Matter Signatures for Identification of New Physics

[1007.0706](#)

Probing the Majorana nature of TeV-scale radiative seesaw models at the ILC

[1007.0698](#)

Chargino and Neutralino Masses at ILC

[1007.0659](#)

Pair Production of Tau Sneutrinos at Linear Colliders

[1007.0486](#)

Plasma Panel Detectors for MIP Detection for the SLHC and a Test Chamber Design

[1007.0432](#)

The top quark electric dipole moment in models with vector like multiplets

[1007.0428](#)

DEPFET Vertex Detectors: Status and Plans

[1007.0020](#)

Consideration of Photon Radiation in Kinematic Fits for Future e^+e^- Colliders

[1006.5559](#)

Supersymmetry Breaking Scalar Masses and Trilinear Soft Terms in Generalized Minimal Supergravity