

Feature Story

Collaborating for the beam



Fermilab, KEK and SLAC have joined forces to work on ATF.

When the Accelerator Test Facility (ATF) group at KEK decided to upgrade their beam position monitor system in 2005, Marc Ross had a solution. Based at SLAC at the time, he was a longtime collaborator with KEK and familiar with the instrumentation systems used throughout Fermilab's accelerator complex. In 2006, Ross became the head of Fermilab's Technical Division and could see how to continue his initiated beam position monitor upgrade efforts at the ATF damping ring. Called *Echotek* boards, these digital signal processing based systems offer a higher resolution potential – a characteristic that allows physicists to see more details about the beam. As it turned out, Fermilab was willing to make several *Echotek* boards available for testing the ATF system. Hence a new collaboration was born.

[Read more...](#)

-- Elizabeth Clements

Calendar

Upcoming meetings, conferences, workshops

[Photon 2007](#)

Paris, France
9-13 July 2007

[2007 Cryogenic Engineering](#)

[Conference and](#)

[International Cryogenic Materials](#)

[Conference](#) Chattanooga Convention

Center

Chattanooga, Tennessee USA

16-20 July 2007

Around the World

ILC also challenges electronics



XFEL-ILC Warsaw group during WILGA07 Symposium

To fulfil the detailed requirements of the ILC, each device from the particle source has to be controlled with high precision, stability and reproducibility. At Warsaw, Poland, a team of engineers works closely with particle physicists on electronics and photonics to develop electronic systems, instrumentation and microprocessors for cavity RF controls at the highest performance and for the lowest cost. This group motivates and encourages young researchers to join them by organising regular symposiums.

"We mainly produce knowledge," says Ryszard S. Romaniuk, head of the group, at Warsaw University of Technology. The team's main task is to create advanced products consisting, in terms of time spent, of 80 percent non-material values - the software - and only 20 percent strictly material values - the hardware. Specialised in electronics and photonics, they are university engineers who are used to working for various projects, traditionally at DESY in ZEUS, a HERA experiment (and more recently on Flash and XFEL) and also on LHC experiments like CMS. They belonged to the former TESLA collaboration and now joined the [Tesla Technology Collaboration](#) (TTC).

[Read more...](#)

-- Perrine Royole-Degieux

In the News

Director's Corner

ILC Project Tools: Implementing ILC EDMS

In September 2005, soon after the GDE was formed, I announced the formation of a special committee to help us select a suite of project tools for the GDE.

That committee consisted of Tom Markiewicz (SLAC), John Ferguson (CERN), Lars Hagge (DESY), Rich Stanek (Fermilab), Nobu Toge (KEK) and Harry Weerts (Argonne). Tom served as the committee chair. They developed a set of recommendations and helped facilitate their implementation. All good things must come to an end, and with the recent unveiling of the last major element of our set of project tools, I wholeheartedly thank the committee and dismiss them following a job very well done. The ILC Agenda and ILC Doc are now fully in operation, and the team recently launched the ILC EDMS at the LCWS and ILC 07 workshops at DESY. Lars Hagge leads the effort to implement the ILC EDMS and offered a set of tutorials on our new system at the DESY workshops. We are now undertaking an engineering design, and the EDMS will be a central global collaboration tool for carrying out this next phase.

[Read more...](#)

-- Barry Barish

[Director's Corner Archive](#)

Image of the Week



Lars Hagge, ILC EDMS Project Leader

[European Physical Society HEP 2007](#)

Manchester, UK
19-25 July 2007

[Lepton-Photon 2007](#)

Daegu, Korea
13-18 August 2007

Upcoming schools

[Toward the ILC: A Fermilab Community School on R&D Challenges and Opportunities](#)

Fermilab
25-27 July 2007

[2007 SLAC Summer Institute](#)

Stanford Linear Accelerator Center
30 July - 10 August 2007

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

Ettore Majorana Center, Erice (Sicily),
Italy
1-10 October 2007



**= Collaboration-wide
Meetings**

[GDE Meetings calendar](#)

[View complete ILC calendar](#)

From *Interactions.org*

3 July 2007

Breakthrough in Accelerator Physics: Crab cavities are operated successfully for the first time.

...Crab cavities will also play a role in achieving high luminosity at other machines with a crossing angle, including the International Linear Collider (ILC), upgrades of the Large Hadron Collider (LHC) at CERN as well as future synchrotron light sources.

[Read more...](#)

From *Deutschlandfunk*

2 July 2007

Hera in Rente

*Deutschlands größter
Teilchenbeschleuniger wurde
abgeschaltet*

...So könnte der Elektronenring von Hera eines Tages als Testgerät für einen neuen Riesenbeschleuniger gebraucht werden, den ILC. Der dürfte zwar kaum in Hamburg gebaut werden. Dennoch beteiligt sich das Desy mit großem Engagement an dem Megaprojekt.

[Read more...](#)

From *FYI: AIP Bulletin of Science
Policy News*

29 June 2007

Senate Appropriators Fund FY 2008 DOE Science Request

...The Committee provides \$60,000,000 to support research to support the U.S. ILC effort within the Accelerator Development, International Linear Collider R&D activities. The Committee appreciates the scientific challenge of building the ILC in the United States, establishing our leadership in this discipline among an international team.

[Read more...](#)

From *SLAC Today*

29 June 2007

ILC's High-Energy Collisions Require Accurate Energy Measurements

The International Linear Collider (ILC) collaboration proposes to crash electron and positron beams together with a total energy of 500 GeV (billion electron volts).

[Read more...](#)

End of the HERA era



After 15 years of colliding protons and electrons, DESY's largest accelerator HERA retired on Saturday 30 June (at 11:28 p.m.). Crowds in the control room and masses of HERA ALUMNI at colloquia and parties proved that it is and was a popular machine that will continue to keep people busy with data analysis for another ten years or so. Here are some impressions from the celebrations at DESY.

[View Slideshow](#)

Announcements

arXiv preprints

[0706.4328](#)

29 Jun 2007

QCD factorizations in $\gamma^* \gamma^* \rightarrow \rho_L^0 \rho_L^0$

[0706.3065](#)

20 Jun 2007

Double Chargino Production in $e^- e^+$ scattering

EUROTeV Reports

[2007-024](#)

Introducing a Homepage for Information Retrieval and Backup of Ground Vibration Measurements and Mechanical Vibrations of Superconducting Modules at DESY

[2007-25](#)

Vibration Stability Studies of a Superconducting Accelerating Module at Room Temperature

[2007-26](#)

Vibration Stability Studies of a Superconducting Accelerating Module Quadrupole Operating at 4.5 K

[2007-32](#)

A Dispersionless Algorithm for Calculating Wake Potentials in 3D

[2007-34](#)

Beam Profile Measurements with the 2-D Laser-Wire at PETRA

[2007-37](#)

Resolution of a High Performance Cavity Beam Position Monitor System

From *Interactions.org*

29 June 2007

Germany's Largest Research Instrument Finishes Experiments

On June 30, 2007, data taking at the electron-proton storage ring HERA at DESY will come to an end. For 15 years, deep in the earth beneath Hamburg, electrons and protons have smashed into one another.

[Read more...](#)

From *MSNBC*

29 June 2007

Beyond Big Science

Billion-dollar science projects end up being about much more than the science, whether we're talking about particle physics, or fusion research, or the international space station, or missions to the moon and beyond, or the next-generation radio telescope.

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