New German Spelling
Should this expression be written in one word or in two? Where to put the comma? Judith Morgenthal and Katrin Wessling refresh your knowledge of the new German spelling rules in a training lecture (in German) October 10, 4 p.m. in the auditorium.

Data Taking at the LHC
In the particle physics Tuesday Seminar on October 16, Christoph Schwick (CERN) will talk about data taking systems at the LHC (in English). Everybody interested is welcome to this regular seminar that takes place on Tuesdays at 5 p.m., auditorium.

Choir Concert
“Reusable Songs” will be presented by the DESY Choir on October 11, at 7:30 p.m. in the canteen annex. Accompanied by a string quartet, old and new tales, kitchen songs and catchy tunes will be put into music. The entrance is free.

Wanted: New Researchers
The Helmholtz Alliance “Physics at the Terascale” offers a great variety of new jobs all over Germany, especially for physicists, technicians and engineers. All job offers can be found on the homepage www.terascale.de.

Bright Spot for Hamburg and the World
The foundation stone for the PETRA III experimental hall was laid

“I wish PETRA III and DESY a brilliant future!” These words from DESY Director Albrecht Wagner marked the culmination of the foundation stone laying ceremony on September 14. Acclaimed by around 450 spectators, Dr. Beatrix Vierkorn-Rudolph from the German research ministry, State Councilor Dr. Roland Salchow from the Hamburg Science Authority and Jörg Schröder from the building contractor Züblin, together with PETRA III project leader Edgar Weckert and Albrecht Wagner, sealed the foundation stone plaque for the 280-meter-long experimental hall. According to tradition, hall construction plans, coins and the daily newspaper from September 14 had been inserted in a waterproof copper cylinder underneath the plaque. In short addresses, the speakers emphasized their bonds with DESY and pointed out the research center’s prominent international position in research with photons. Both the Federal Republic and Hamburg invest high sums in this field every year. The new light source PETRA III at DESY will generate the finest X-ray beam worldwide for the examination of smallest samples. Dr. Vierkorn-Rudolph emphasized its importance for molecular biology, which aims to decode the atomic structure of tiny protein crystals. Dr. Salchow stressed that world-class research and its impact must also be made comprehensible to the general public. Jörg Schröder (Züblin) thanked the DESY physicists for the good cooperation, mentioning that they had a far better understanding for construction problems than most of his other clients.

New Head for Administration Department
Gunther Held assumes office

Everyone is still brand-new for Gunther Held: DESY, the physics, his office—even his position. At the beginning of September, he assumed the new post of Head of the Administration Department. As deputy for Director Christian Scherf, he will mainly take care of the finances and human resources, his hierarchical position being between Scherf and the administration department. “A good administration helps the scientists at DESY to do a good job. Hence, my goal is to focus our resources even more and improve the overall coordination of the V department,” says the industrial engineer, who already gathered 17 years of experience in administration and management in industry and insurance companies. (baw)
Antimatter, Dark Energy, Big Bang…
Heavy rush of visitors to the first Science Café DESY

It was like a small Big Bang. On September 13, more than 60 visitors met in the bistro to attend the first Science Café DESY. Among them were more than 40 kids and youngsters that had followed the advertising at the schools in the vicinity. For most of them, there was no doubt at all that the most exciting subject was the fact that physicists are still in search of the construction plan of the universe and that many major discoveries are still ahead of us. This was obviously new for many of them, and therefore, Research Director Rolf-Dieter Heuer, the first expert of this new DESY event, was bombarded with questions about these great mysteries. The meeting lasted more than two hours—a response that organizer Waldemar Tausendfreund had never dreamt of. The Science Café even had to change locations because of the heavy rush: from now on, it will take place—appropriately enough—in the cafeteria. Lecturers wishing to talk about their own physics theme are still wanted; an interested audience is assured.

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The topics of the coming meetings are: “Hidden Particles—Hidden Worlds” with Andreas Ringwald on October 4 and “Risks and Side Effects of Information Technology” with Malte Gerhard on October 11. Questions, of course, are always welcome! (tz)

http://sciencecafe.desy.de

Director’s Corner

at PETRA III, which are high brilliance, high degree of coherence and small beam size. Going this way, together with the extraordinary properties of the free-electron lasers in Hamburg providing access to the femtosecond time scale of the nano-world, the Center for Free-Electron Laser Science (CFEL) and the life science activities of EMBL and Helmholtz, DESY will become a unique center for photon science—we are facing very exciting times.

Sincerely yours,
Jochen Schneider

Development of the Month

Exquisite Design From the Carpenter’s Workshop

Benjamin Walter convinced the jury of a design contest with the outstanding practical realization of his journeyman’s piece. Only three out of 106 participants received an award from the Chamber of Crafts in this year’s end-of-apprenticeship celebration.

Walter’s piece of furniture can be folded very easily into different shapes. Another special feature is that it looks massive despite weighing very little, as its body is manufactured from light balsa wood. Alternating layers of plywood give the item its stability.

The contest, which runs in parallel to the final exams, gives carpenter’s apprentices the opportunity to demonstrate their professional creativity. (she)
FLASH Goes into the Second Round
100 days of shutdown - What will the second measuring period bring?

Until 2009, FLASH will be the only free-electron laser in the world to deliver fast pulsed, brilliant and ultrashort flashes in the soft X-ray range for user operation. The first measuring period ended on March 25. It already resulted in 36 published scientific articles. During the following shutdown, extensive installation work was carried out on the facility. The second measuring period, which will last 13 months, will begin on November 19. We talked about it with Josef Feldhaus, who has been working on FLASH from the very beginning.

How was the first measuring period, and what can the FLASH users expect in the coming months?
FLASH is new territory both for the machine team and the experimenters. So it’s simply great that FLASH ran so well right from the start, and that it kept improving. This is true both for the general operation stability and the management of the user operation, as well as for specific properties such as the beam stability, the number of pulses, the selection of the wavelengths or the beam intensity. The users also learned very quickly to take advantage of the brand new possibilities and to optimize their experiments accordingly. For the coming measuring period, we thus expect a promising mix of routine and many new ideas, which will surely lead to exciting new scientific results.

What will FLASH offer in the coming measuring period?
There are numerous technical improvements, such as new beam diagnostics systems or the new infrared beamline. We’re now eagerly awaiting the first lasing in the 6-nanometer range, which is expected soon now that the sixth module has been installed. This means that the current lower limit of the FLASH wavelength spectrum will then be reached.

Already for the first measuring period, applications exceeded the amount of available beam time. In the end, 16 projects had to share it among each other. How about the second measuring period?
The run on FLASH has increased even more. The international project review panel had to choose among 45 project proposals. On average, 32 percent of the requested beam time was allocated, with 13 projects being rejected. Many projects again focus on research on atoms, ions, molecules and clusters. Other important subjects are for instance studies of transient plasma states, the imaging of single nano particles ranging from rare gas clusters to pico plankton, or studies of the electron and spin dynamics of technically relevant materials in the femtosecond range.

Happy Ending for a Stage Drama
Movable platform damaged during transport, lots of data nonetheless

A platform called ‘stage’ kept the members of the international detector development group CALICE in suspense this summer. Fortunately, what had started like a drama finally lead to a happy ending. At the beginning of June, however, nobody would have expected this success. A custom-built movable platform designed by Karsten Gadow (FH1) and his colleagues to move calorimeter prototypes in various configurations into the test beam and rotate them around several axes, was severely damaged during its transport to Switzerland. Especially cables and electronics had to be replaced. “During the first week, we hardly did anything else than soldering boards,” Benjamin Lutz recalls. The calorimeter expert from FLC spent the whole two test beam months at CERN. Only one week later, almost everything was repaired and data taking could start. The physicists were able to collect a hundred million events or 14 terabyte of data with their calorimeter prototypes in the test beam at CERN. Using these data, the CALICE group will test the functionality of their prototypes and simulation software, and study the physics of hadronic showers. The tested components are prototypes for future ILC detectors, and DESY is playing a central role in their development. The prototype of the hadronic calorimeter built at DESY is now on the way back home, together with the repaired platform. Another test run is scheduled for next year at Fermilab.

E. Garutti (DESY), B. Lutz (DESY), F. Salvatore (Royal Holloway) from left
All-round Service
The International Office supports researchers in everyday life

For guest scientists from DESY, Hamburg University, EMBL or the Max Planck Society groups, the International Office’s (IO) support is a real benefit. Only when everyday life is well coordinated can the DESY scientists and guests really concentrate on their research. No matter whether child care, the translation of a marriage certificate or the transfer of a car from abroad is required; the motto of the team is always to find a solution for each problem, an answer to each question—in English, French or Russian.

Lately, DESY staff also profit from the extended IO services. Anyone who wants to participate in an international conference or to attend a business meeting abroad does not need to organize a visa himself any more. This kind of bothersome and time-consuming travel preparation is now handled by the International Office—even for German DESY staff. To this end, Steffi Killough and her team cooperate closely with the secretary’s offices of the other DESY departments. Another advantage is that the regular contact with embassies and consulates enables them to react quickly to the frequent changes in visa regulations.

The IO is also a contact point for young parents. Being the interface to the kindergarden or day care, they give advice and support to parents in matters of applications and payment, or make appointments with the kindergarten management. The good connections to the authorities have a positive effect also in this area. The IO was often able to arrange short-term child care because the youth welfare office, which is responsible for issuing kindergarten vouchers, cooperated in an unbureaucratic way.

Awards for Five DESY Doctoral Candidates
“New Talents” at the Erice Summer School

It is obvious that DESY has a lot of talented people, but their recognition and distinction as such is rather unusual. At this year’s International School for Subnuclear Physics, a kind of advanced training for young scientists that takes place every summer in Erice, Sicily, five young DESY scientists received a “New Talent” award. Friederike Januschek (ZEUS), Mira Krämer (H1), Nanda Wattimena, Peter Schade und Adrian Vogel (all FLC) were selected among 73 participants on the basis of their talks, together with 17 scientists from all over the world, most of them young theorists. “This is really an honour,” said Adrian Vogel. “What’s more, we met a lot of important physicists who gave talks there, and we can now say that we once had a coffee with Peter Higgs!” Peter Higgs is the father of the Higgs mechanism, which explains how the particles acquire their mass. Scientists hope to soon discover the Higgs particle at the LHC at CERN. Nobel laureate Gerard ‘t Hooft or theorist Lisa Randall also belonged to the staff of “teachers” in Erice.

XFEL
The first XFEL jobs

“This appeal heads the first job advertisements for the European XFEL, which will soon be published in print and online media. Wanted are scientists, engineers, technicians and administrative staff—women are expressly encouraged to apply. Currently, posts are vacant for the EU-financed preparatory project “Pre-XFEL”.

These and coming job advertisements can be found on a new page on the XFEL website: www.xfel.eu/jobs

IT
Funds for Grid Approved
In September, the German research ministry BMBF approved a project proposal by eleven universities and seven non-university institutes under the overall leadership of DESY to build a Grid infrastructure for astrophysics, astroparticle physics, particle physics and research with photons. The subsidies amount to about seven million Euros and will be used to upgrade the hardware of the institutes. “This funding is another important step for the implementation of the new Grid technology at DESY in Hamburg and Zeuthen,” said project leader Volker Gülzow from DESY-IT. At DESY, the funding will be used to extend compute nodes, disk and tape storage.

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