AWAKE STARTS THE EQUIPMENT INSTALLATION PHASE

AWAKE is the world’s first proton-driven plasma wakefield acceleration experiment. In AWAKE, a beam of protons from the SPS will be travelling through a plasma cell and this will generate a wakefield that, in turn, will accelerate an electron beam. A laser will ionise the gas in the plasma cell and seed the self-modulation instability that will trigger the wakefield in the plasma.

The project aims to prove that the plasma wakefield can be driven with protons and that acceleration will be extremely powerful, hundreds of times more powerful than that achieved today.

Over about 18 months of hard work, the teams have cleared the old CNGS area – leaving only the infrastructure that will be reused by AWAKE – and have modified the services to meet AWAKE’s needs. “We dismantled 100 metres of the proton beam line, completed the civil-engineering needed to house the new electron and laser beam lines, removed several kilometres of old cables, and installed some 100 kilometres of new cables,” says Edda Gschwendtner, CERN AWAKE project leader. “We have installed the 16 magnets for the proton line for AWAKE, built the laser clean room, modified the access and cooling and ventilation… It has been a huge amount of work in a very short time.”

Integrating a new experiment into an existing facility is extremely challenging, but now that the area has been cleared and is ready for the future installations, Ans Pardons, AWAKE's
A word from the DG

LHC RUN 2 – REACHING THE TOP OF THE LEARNING CURVE

For all those involved with operating the LHC and its experiments in this new energy and intensity regime, 2015 was always going to be a learning curve. And learning we most certainly are. The main objective for this year has always been to set up the machine and experiments for production running at high energy and high intensity in 2016, 17 and 18. That said, the experiments have all been able to collect quality data at 13 TeV, with the first Run 2 papers and conference presentations being written and delivered this summer.

It would be unfair of me, however, to give the impression that it’s all been plain sailing. As well as the highs: smooth presentations being written and delivered with the first Run 2 papers and conference and high intensity in 2016, 17 and 18. For all those involved with operating the machine and experiments objective for this year has always been learning we most certainly are. The main energy and intensity regime, 2015 was

For the experiments, most things have gone smoothly, but many of you will be aware that the cryogenic system supplying the CMS magnet has been having some difficulties. As a result, a fraction of the data CMS has taken this year is at zero-field. As I write, the system seems to be stable, but it’s clear that there are contaminants in the cold box that supplies the magnet with liquid helium, and this will therefore need a thorough clean. Interim measures are being taken during the technical stop, aimed at finding a way to continue to operate the magnet with an acceptable duty cycle. All being well, CMS will be able to take data satisfactorily with field on until the end of the 2015 physics programme, postponing the cleaning operation until the winter stop in order to be ready for the start of 2016.

To conclude, I’d like to congratulate everyone concerned in getting us to where we are today: on the threshold of the first LHC Physics conference with 13 TeV data on display. Along with the continuing flow of exciting results from Run 1, such as the combined ATLAS-CMS result on Higgs couplings presented today, there’s much more to come.

Rolf Heuer

AWAKE STARTS THE EQUIPMENT INSTALLATION PHASE

Coordination Package Leader for Integration and Installation, speaks with a smile: “It has been a challenging time for the CERN teams and the collaborating institutes involved in the project, but we can’t relax yet! We are now looking forward to installing the various beam and diagnostics components and starting to test them.”

One of AWAKE’s core components is the 10-metre-long plasma cell that will be arriving in the tunnel in a couple of months. A first prototype has successfully completed commissioning tests in CERN’s North Area where the uniformity of the plasma temperature in the cell has been validated. The installation of the plasma cell in the AWAKE tunnel will be followed by the installation of the laser, the vacuum equipment and the diagnostic system for both laser and proton beams. In March 2016, the proton line, the laser and the experimental equipment will be ready for hardware commissioning, and beamstart will commission in the summer. “Next year will continue to be very intense for the whole collaboration,” confirms Edda. “Indeed, in parallel to starting physics with the proton beam line, we will continue the installation of the electron line with the aim of starting the acceleration tests in 2017.”

If everything goes as planned, the AWAKE collaboration hopes to measure the first wavefields in the plasma cell in about one year from now.

Antonella Del Rosso

LHC REPORT: A VERY PRODUCTIVE HIATUS

On Monday, 24 August, the LHC transitioned from nascent 25 ns operation to a two-week hiatus devoted to luminosity calibration (two days), machine development (five days) and a technical stop (five days).

accurate calibration of the luminosity is vital input for many of an experiment’s measurements. The luminosity is calibrated using separation scans pioneered in 1968 by Simon van der Meer at the ISR. In these scans, carefully prepared beams are stepped across each other, horizontally and vertically, one plane at a time. Accurate measurements of the interaction rates, beam intensity, beam movement during the scan and other factors allow determination of the absolute luminosity. ATLAS, ALICE, CMS and LHCb all had dedicated time for Van der Meer scans. TOTEM and ALFA also took advantage of the special conditions to take data.

The LHC machine development (MD) period that followed consisted of a wide variety of measurement and development programmes ranging from exploring the limits of smaller beam sizes at the interaction point to collimation using bent crystals. From the developers’ challenges of high beam intensity, machine availability was high during this remarkably successful MD period. Highlights included the validation of a beta of 40 cm, which effectively doubles the luminosity potential of the present set-up. Collimation experts and members of the UA9 collaboration were also able to carry out successful tests and
demonstrations of the collimation potential of bent crystals.

The beams were dumped at 6 a.m. sharp on the morning of Monday, 31 August in preparation for the five-day technical stop, which has just finished. The key objectives of this technical stop were modifications to the critical Quench Protection System, the consolidation of the cooling and electrical distribution systems and important maintenance work on the cryogenics system. It involved a huge number of activities. The combined effort, coordinated by a team from DN/ME, was very successful.

Following the technical stop, the first key step is revalving of the LHC with beam from a machine-protection standpoint. Some dedicated system optimisation will be followed by the continuation of the intensity ramp-up with 25 ns beam and hopefully several weeks of sustained luminosity delivery with this bunch spacing. Mike Lamont for the LHC team

A VERY COOL COOLING SYSTEM

The NA62 Gigatracker (GTK) is a jewel of technology: its sensor, which delivers the time of the crossing particles with a precision of less than 250 picoseconds (better than similar LHC detectors), has a cooling system that might become the precursor to a completely new detector technique. whole system at its operating temperature.

Each of the microchannels is just 70 µm deep and the silicon plate is only a few dozen µm thick. This means that the microchannel cooling system can be implemented in silicon trackers as the additional material the beam particles have to cross is minimised and therefore the influence on the particle track is reduced significantly compared to traditional cooling methods. The stable low temperature helps to reduce the radiation damage to the detector and therefore increases its lifetime in the harsh environment.

In the NA62 GTK, the sensors, readout electronics and cooling plates are all made of silicon. This is why the natural evolution of all the three components in one single device “This is what we call a monolithic device” explains Mapelli. “In particle physics experiments, it is very important to reduce the amount of material used in high precision detectors. A single device incorporating the sensing layers, the electronics, and the services, such as the cooling, would be a very compact and thin system. It would also be less fragile than the current systems because it would require fewer manipulations. Finally, it would be more effective as the distance between the point where the heat is produced – namely the readout chip – and the coolant would be minimised.”

Experts in the CERN Physics department are currently working on future developments of this technology for high-energy physics detectors and beyond, as this technique could also be used in high-density computing, medical imaging and, more generally, in fields where images with sub-nanosecond-time-measurement precision are used.

Antonella Del Rosso

Watch the video:
THE NEW YOUNG FACE OF THE PENSION FUND

Matthew Eyton-Jones is the new Chief Executive Officer of the CERN Pension Fund. He joined the Organization in July and will meet with CERN pensioners for the first time on 15 September.

Before coming to CERN, Matthew held pension management and consultancy positions at a number of international organisations, including the John Lewis Partnership, Goldman Sachs, the Bank of America and Mercer Consulting. In his role as Chief Executive Officer (CEO) of the CERN Pension Fund, he is responsible for the day-to-day management of the fund, on behalf of and under the supervision of the Governing Board. “In my career, I have been involved in the operation and running of various pension funds around the world,” says Matthew. “Pension funds play an important role in society, not only providing financial security in a crisis but also acting as an important source of capital in financial markets.”

Living in such a complex environment is one of Matthew’s hardest challenges. However, he is used to that and he does not forget the importance of the end client. “Pensioners must get a service that works for them,” says Matthew. “The day-to-day operational administration has to be efficient, pensioners’ questions have to be dealt with correctly and the pensions have to be paid on time. But there is more than just that. We have to make sure that the whole thing is well-run, well-managed and that people, including Council members, the Staff and Pensioner Associations and all the other stakeholders, understand the Fund and how it works.”

We might never really understand the Pension Fund as well as Matthew does but there’s a reassuring look in his eyes as he says: “I am not a scientist but some of the things CERN has done are impressive and have had a huge positive impact on society. I will work hard to make its pension fund become a benchmark in the world out there.” Keep up the good work!”

Antonella Del Rosso

RESEARCHERS’ NIGHT 2015: EXPLORING SCIENCE IN MOVIES, COMICS, POETRY AND GAMES

On Friday, 25 September, CERN will be celebrating the European Researchers’ Night with a series of events and activities at the Balexert shopping centre. From celebrity Q&A sessions to author signings, there’s something for everyone!

The fun will kick off prior to the night itself, with a number of pre-events held throughout September. From 8 to 12 September, a mock-up of the LHC tunnel will be installed in the central court of the Balexert shopping centre. Representatives from CERN will be on hand to speak to shoppers, and to encourage them to participate in Researchers’ Night.

On 24 September, at ‘Made of shadow and light’, an event hosted by the University of Geneva, artist and photographer Gao Xingjian, will present poems and drawings created specifically for the event. Sergio Bertolucci, CERN Director of Research and Computing, will provide a scientific perspective on the content. Three POPScience poets - Gwyneth Lewis, Deborah D’Agostino and Susanne Stephan - will also present their poetry inspired by science and their recent CERN visit.

That same day, Jorge Cham, creator of PhD Comics, will be giving a talk in CERN’s Main Auditorium. Cham will explore the guilt and the myths associated with procrastination, arguing that it is actually a good thing! Cham will also be signing copies of his books before and after the talk, and will also introduce a CERN screening of The PhD Movie 2.

Now to the event itself, Friday, 25 September will be jam-packed, with activities starting at 10 a.m. and wrapping up at 1 a.m. the next day. Here are a few of the highlights:

• Authors and illustrators will be signing their works and speaking with fans at FNAC: Jorge Cham (PhD Comics), Gao Xingjian (Nobel laureate), Jaouen (Eternum), Michel Spiori (Si tu devais me dessiner l’Univers) and Camille Ladouesse (illustrator of CERN’s Passport to the Big Bang).
• It’s gloves off as The PhD Movie and The Big Bang Theory compete! Jorge Cham, creator of The PhD Movie, and David Saltsberg*, CMS physicist and scientific consultant for the TV show The Big Bang Theory, will talk about the projects and their impact on the public perception of science.
• Lawrence Krauss*, author of The Physics of Star Trek and Kip Thorne*, scientific consultant for the film Interstellar, will join CERN scientists Maurizio Pirro, and Lillian Smistad to explore the science of Hollywood blockbusters.

At the Pathé cinema, ESA astronaut Roberto Vittori*, ISS expert Jules Grandiere and AMS physicist Laurent Deinesse will explore the science in the movie Gravity.

Throughout the day, in Balexert’s Place de la Fontaine, CERN scientists will be giving demonstrations about the states of matter using liquid nitrogen. These “Fun with Physics” demonstrations will involve and enthuse the whole family. In addition, there will be a demonstration of augmented reality and poetry readings.

The evening will conclude with a special screening of Particle Fever, with special guests Mark Levinson* (the film’s director), Fabiola Gianotti (CERN Director-General Designate), Martin Alkusa (ATLAS physicist) and Mike Lamont (head of LHC operations).

In addition, as association with POPScience, RD Fil, the Comics Festival in Lausanne from 10 to 13 September, will be offering 4 invitations to the first people to register on this Doodle (http://cern.ch/go/n9Fm). For the full programme of events and activities, visit the POPScience website on: http://www.pop-science.eu/

ROAD SAFETY: TAKE IT SERIOUSLY

Around 50 road accidents happen every year at CERN. Cyclists, drivers and pedestrians must pay attention to their behaviour at all times to ensure that this doesn’t become an even more serious problem. Even if the Laboratory’s sites are not exactly downtown Shanghai, all road users need to make a little effort. So let’s do it’s frequent safety campaigns, the number of accidents, particularly those involving cyclists, has remained high since 2008.

Luckily, no-one has been seriously injured but it is more and more frequent to experience near misses or actual accidents, whether in a car or on a bike. Inexperienced, excessive speeding (also for bikes!) and answering the phone while driving are all examples of dangerous behaviour. Obviously, preventive measures such as paying more attention, wearing protective equipment (in the case of cyclists) and making sure that we are visible to other road users can be very effective and can prevent more serious accidents.

Since 2005, any person involved in or witnessing an accident or near a miss is expected to complete an internal accident report form. These reports are then used by the HSE Unit to compile statistics and analyse the problems so that they can take measures to enhance safety. By reporting a near miss, you are helping to prevent a similar incident and therefore to reduce the accident toll.

Driving, cycling and walking to work must be safe routine activities for everyone. Let’s stick to accumulating scientific data rather than road accidents.

Antonella Del Rosso

CERN SERVERS GO TO MEXICO

On Wednesday, 26 August, 384 servers from the CERN Computing Centre were donated to the Faculty of Science in Physics and Mathematics (FCFM) and the Mesoamerican Centre for Theoretical Physics (MCTP) at the University of Chiapas, Mexico.

CERN’s Director-General, Rolf Heuer, met the Mexican representatives in an official ceremony in Building 133, where the servers were presented for signature. From left to right: Frederic Henriksen, CERN’s Director for Operations, José Hurtado Acosta, Deputy Permanent Representative of Mexico to the United Nations and International Organizations in Geneva, Jorge Guetzen, Ambassador of Mexico to the Swiss Confederation and the Principality of Liechtenstein; Rolf Heuer, CERN’s Director-General; Luis Robertof Fores Castillo, President of the Swiss Chapter of the Global Network of Qualified Mexicans Abroad; Virginia Romanes Tellez, Coordinator of Institutional Relations of the Swiss Chapter of the Global Network of Qualified Mexicans Abroad; José Sabirocio Diaz, CERN’s Advisor to the Office for International Relations for Latin America; Flavia Costa, Coordinator within the CERN’s NSF/department at the delegation of France.

On Wednesday, 26 August, 384 servers from the CERN Computing Centre were donated to the Faculty of Science in Physics and Mathematics (FCFM) and the Mesoamerican Centre for Theoretical Physics (MCTP) at the University of Chiapas, Mexico.
The periodic replacement of computer equipment that no longer meets CERN’s highly specific requirements is necessary. However, the old equipment can still be used effectively in less demanding environments, including universities and scientific institutes around the world. Since 2012, no less than 1,533 servers and 103 switches have been donated to 103 other institutes.

This time, in addition to the servers, 24 network switches and 26 racks have been donated to CERN in Mexico. Once at their destination, these servers – some of which are to be used for data processing while others are for data storage – will be used by the Mexican institutes for a variety of scientific and educational projects in the fields of physics, mathematics, energy and environmental sciences. The computing equipment will also be available to the large community of users in Central America, with whom the FCIM and MCTP share scientific activity. Students of different grades in Chiapas and the surrounding region will also benefit from the increased computing capacity of the Mexican institutes thanks to their dedicated distance-learning programmes and outreach activities.

Stefania Pandolfi

In the process leading up to this donation, the interaction between CERN and the Mexican institutes was coordinated by the Swiss Chapter of the Global Network of Qualified Mexicans Abroad; this organisation actively seeks to create links between Mexican and Swiss scientists, students and institutes as one of its pillars. In Chiapas, the Rotary Club of Oriente de Tuxtla has provided support in monitoring the donation process, including the installation and operation of the acquired equipment.

Stefania Pandolfi

In your car, my control

We have discussed the Internet of Things (IoT) and its security implications already in past issues of the CERN Bulletin, for example in "Today’s paranoia, tomorrow’s reality". Unfortunately, tomorrow has come. At this year’s Black Hat conference researchers presented their findings on how easily your car can be hacked and controlled remotely. Sigh.

While these researchers have just shown that they can wirelessly hijack a Jeep Cherokee, others have performed similar studies with SmartCars, Ford’s, a Tesla, a Corvette, BMWs, Chryslers and Mercedes! With the increasing computerisation of cars, the engine management system, air conditioning, anti-lock braking system, electronic stability programme, etc. are linked to the infotainment, navigation and communication systems, opening the door for these vehicles to be hacked remotely. The now prevalent Bluetooth connection with smartphone(s) is an easy target to attack your car remotely. A second is the built-in GSM modem, which is even part of a new legal requirement in EU states for cars to be fitted with the ability to make automatic emergency calls (eCalls). The aforementioned researchers found a vulnerability in the Fiat/ Jeep “Unconnect” GSM feature that allowed them to connect to a Jeep Cherokee remotely, manipulate its firmware, and, finally, take full control of the radio, the air con, and even the accelerator! Definitely not something you want to experience on the motorway… The other findings concerning Fords, Teslas, and Corvettes are no less worrying…

So, computer security problems that were prevalent in PCs in the 1990s and led to industrial control systems in the 2000s (see our article ‘Hacking control systems, switching industrial control systems in the 2000s’ in CERN Today) are now entering our daily life (“Our life in symbiosis”)! And while patching European models is said not to be affected.

For further information, questions or help, check: Computer.Security@cern.ch or contact us at Computer.Security@cern.ch.

Stefania Pandolfi

Do you want to learn more about computer security incident analysis at CERN? Follow us! Our Monthly Report: https://cern.ch/security/reports/ — monthlyreports.shtml

Stefania Pandolfi

MAURIZIO LO VETERE (1965 - 2015)

The high-energy physics community mourns the sudden loss of Maurizio Lo Vetere, CMS and TOTEM member, who was the victim of a bike accident.

Maurizio Lo Vetere was a PhD student on experiment PS202 (SETSE) at LEAR.

During his PhD years, he also contributed to experiment PS210, which produced and observed antihydrogen atoms for the first time. In the following years, he moved to experiment E835 at Fermilab, which was dedicated to the study of charmium spectroscopy.

In 1996, he joined the Ballar collaboration at SLAC, where, for a decade, he made significant contributions, in particular to the construction and operation of the muon system. It was in 2005 that he made his return to CERN when he joined the TOTEM Collaboration, serving as deputy spokesperson for two years. More recently, in 2012, he joined CMS with his group.

Maurizio was an Associate Professor of the University of Genoa and team leader of the Genoa group in CMS. He began his career in high-energy physics at CERN, working first as an undergraduate, and subsequently as a researcher, in the field of rare decays of the Z0 boson, where he was appreciated as a teacher for several undergraduate and PhD courses spanning a broad range of subjects. He became an Associate Professor in 2014.

Rarely can one find such a large base of knowledge related to experimental particle physics as Maurizio’s. His competencies ranged from theoretical foundations to detection techniques and data analysis, and also included vast expertise in technical aspects such as electronic design and control development. His pleasant manner and high-spirited attitude always helped to maintain an enjoyable atmosphere at work.

Away from work, Maurizio was an enthusiast of the outdoor sports that eventually betrayed him. His passionate presence will be sorely missed by his much beloved family: his wife Paola and children Marta and Matteo and his many friends and colleagues at his University, INFN, the high-energy physics community as a whole.

His friends and colleagues

15 SEPTEMBER: ANNUAL INFORMATION MEETING OF THE PENSION FUND

All members and beneficiaries of the Pension Fund are invited to attend the Annual Information Meeting.

***Please note the room change ***

CERN Main Auditorium

Tuesday, 15 September 2015
9:30 a.m. - 11:30 a.m.

Following a presentation by the Chief Executive Officer of the Fund there will be a Questions and Answers session. Members and Beneficiaries are welcome to send questions in advance of the meeting by post to:

Mr Matthew Eyton-Jones
“Annual Information Meeting”
CEO - CERN Pension Fund

Office-S 5-012, Postbox C23800
CH-1211 Geneva 23 - Switzerland

Copies of the 2014 Pension Fund Financial Statements are available as a printable PDF on the Pension Fund website: http://pensionfund.cern.ch/en/financial-management/financial-statements and will also be distributed at the annual meeting.

"Coffee and croissants will be served prior to the meeting at 9 a.m."

CERN Pension Fund
The following persons are required to be in possession of a valid document:

a) members of the personnel, from the date on which they take up their appointment, who have to comply with the regulations and to point out that compliance with these regulations is essential for the proper operation of the CERN.

b) the family members of a member of the personnel falling into the category defined under paragraph 2.a) above, from the date of their arrival in France, namely:

- spouses, whether by marriage or by a Pacic Civil Solidarity (PACS) or its legal equivalent; and
- single children up to 21 years of age if they live with their parents and can provide proof of dependency on the permit holder and a valid certificate of enrollment at an educational establishment;

- dependent parents (parents and parents-in-law with the member of the personnel).

N.B.: nationals of a member of the European Economic Area (hereinafter referred to as the “EEA”) or Switzerland, are no longer required to apply for a French residence permit (or an entry visa, within three months of arriving in France), apply for a special residence permit, in particular in order to justify the privilege of driving a vehicle registered in a special series.

3. Visa

a) Special residence permit

To qualify for a special residence permit issued by the MAE or for an entry visa, nationals of a member of the EEA and of Switzerland must present the following documents within three months of arriving in CERN:

i. a D-type long-term visa French visa marked “carte PRGMA é sollicité à l’ambassade, even if they are not subject to the requirement to present an entry and short-stay visa in France”.

ii. or, if they are the spouse, dependent child or dependent parent of a national of Switzerland or an EEA member state, a photocopied validity of a resident permit issued by a European Union (EU) member state marked “EU family member”.

N.B.: the family members of a French national who are not themselves nationals of Switzerland or an EEA member state must present the following documents within three months of arriving in CERN in order to obtain a residence permit issued by the MAE:

- a) change of civil status (name, nationality, etc.);
- b) removal from France to Switzerland or vice-versa;
- c) a promotion to a salary band requiring a different type of designation document to be issued.

b) EF-type “attestation de fonctions”

Members of the personnel who are not nationals of Switzerland or an EEA member state, for whom an application for an EF-type designation attestation of functions is required, must hold a Swiss D-type visa or a Swiss legitimation document.

4. Initial application

The initial application for a document issued by the MAE must be made via the Users Office (in the case of all members of the personnel). The application is decided by the Interior Ministry – France.

In the event of failure to do so, the French authorities cannot issue the documents to which those concerned may claim entitlement.

Furthermore, those who fail to apply for a document run the risk of infringing French regulations with regard to residence permits as all persons of full legal age are required to obtain a residence permit:

- if they are not nationals of an EEA member state and do not hold a Swiss D-type visa or a Swiss legitimation document.

5. Renewal

Applications for the renewal of a document issued by the MAE must be submitted via the Users Office (in the case of all members of the personnel). The renewal must be made no later than two months prior to their 21st birthday.

6. Change of name, change of country of residence

In the following cases, an application for a new special residence permit and attestation of functions must be submitted via the Users Office (in the case of all members of the personnel). It must be addressed to the MEB, by family members holding a special residence permit.

If so requested via the Users Office (in the case of all members of the personnel), the MEB may – exceptionally and subject to a presentation of proof and/or application for a residence permit from the prefecture, whose signature can be replaced by the Interior Ministry – France, issue a certificate of surrender of the special residence permit.

8. Duplicates

In the event of loss, theft or deterioration of a document issued by the MAE, the holder must apply for a duplicate via the Users Office (in the case of all members of the personnel). The holder of the duplicate obtains a French residence permit (or an entry visa under ordinary law) in order to obtain a residence permit issued by the MEB.

b) EF-type “attestation de fonctions”

Members of the personnel who are not nationals of Switzerland or an EEA member state, for whom an application for an EF-type designation attestation of functions is required, must hold a Swiss D-type visa or a Swiss legitimation document.

The application for the renewal of a document issued by the MEB must be submitted via the Users Office (in the case of all members of the personnel). The renewal must be addressed to the MEB, by family members holding a special residence permit.

If so requested via the Users Office (in the case of all members of the personnel), the MEB may – exceptionally and subject to a presentation of proof and/or application for a residence permit from the prefecture, whose signature can be replaced by the Interior Ministry – France, issue a certificate of surrender of the special residence permit.
The screenings all start at 8 p.m. in the Council Chamber (503-1-001). We hope you will enjoy the theme of this series of movies and would love to meet you on 30 September for an aperitif. The aperitif will start at 7 p.m. and we kindly ask you to inform us if you plan to attend by completing the Doodle on http://cern.ch/go/NwK9.

Kerstin Fuhrmeister, on behalf of the Language Tandem Programme

ROOF RENOVATION OF BUILDINGS 128 AND 129

The roof renovation of buildings 128 and 129 is scheduled to take place from 17 August to 15 October 2015. During this period, access to the “raw material” workshop will be limited and controlled due to asbestos removal. Collecting your orders directly from the building will be difficult, or even impossible, and urgent requests will be difficult to carry out.

We therefore ask you to create your requests via EDH, so that delivery may be carried out as soon as possible.

Thank you for your understanding.

GS Department

WORK ON THE BUILDING 4 CAR PARK AND CLOSURE OF ENTRANCE A

From 6 July to 31 October 2015, the GS department will be carrying out renovation work on the car park next to Buildings 4 and 5. This work is aimed at improving safety on and around the car park for all users, particularly children attending the nursery school, pedestrians and cyclists.

The work on the car park will be conducted in two stages so that half of the parking spaces will always be available, in order to limit the impact on users as much as possible (the closed-off areas will be clearly indicated). When the work is completed, the car park will have been completely renovated, with new surfacing and road markings, high-quality lighting and more parking spaces (5%).

During the work, part of the car park will be inaccessible, which is likely to make it more difficult to find a parking space. We therefore invite you to park in the Globe car park during this period.

The renovation work will also affect Entrance A (Route Bell), which will be fitted with a fully automated road gate, similar to the one at Entrance C. For increased convenience and safety, two turnstiles for access by pedestrians and cyclists will also be installed. Entrance A will also be closed from 6 July but should be operational again by the end of September.

We thank you for your understanding and apologise for any inconvenience.

GS Department

DIVERSITY IN ACTION WORKSHOP | 18 SEPTEMBER | BUSINESS CENTRE TECHNOPARC

After two years, five successful editions and plenty of positive feedback, we are happy to announce the sixth edition of our Diversity in Action workshop.

Seize the opportunity and participate in this half-day interactive workshop designed to explore the meaning and importance of diversity at CERN. Using participative multimedia methods, this workshop will provide participants with insights into the different dimensions of diversity, help to develop greater sensitivity to differences, and explore ways to recognise and overcome biases and thereby strengthen our tradition of inclusiveness at CERN.

“For me it was a great opportunity to talk about diversity issues with other people at CERN who I would never have met otherwise,” says Alex Brown, who participated in the third edition of the workshop. “The discussions I was involved in inspired connections that are still active.”

Diversity in Action workshop – sixth edition in English

Friday, 18 September 2015
8.30 a.m. to 12.30 p.m.

Registration and more information on the workshop:
http://cern.ch/diversity-in-action

CERN Diversity Programme

ACADEMIC TRAINING LECTURES | THE OUTLOOK FOR ENERGY SUPPLY AND DEMAND | 14 - 16 SEPTEMBER

Please note that the next series of Academic Training Lectures will take place on the 14, 15 and 16 September. The lectures will be given by Chris Llewellyn Smith (Director of Energy Research, University of Oxford, President of SESAME Council).

The Outlook for Energy Supply and Demand (1/3)
on Monday, 14 September from 11.00 a.m. to 12.00 p.m.
https://indico.cern.ch/event/388334/
at CERN Main Auditorium, in Building 500-1-001.

Description: These lectures will review the challenges facing energy policy, the outlook for different sources of primary energy (fossil and renewable), how energy is used, and prospects for improved energy efficiency. A colloquium ‘Can Future Energy Needs be Met Sustainably?’, which will be giving on Tuesday, 15 September at 4.30 p.m., is part of this course. The lectures will provide more details and address topics that will only be mentioned in passing in the colloquium.

The Outlook for Energy Supply and Demand (2/3)
on Tuesday, 15 September from 11.00 a.m. to 12.00 p.m.
https://indico.cern.ch/event/388335/

The Outlook for Energy Supply and Demand (3/3)
on Wednesday, 16 September from 11.00 a.m. to 12.00 p.m.
https://indico.cern.ch/event/388336/
at CERN Main Auditorium, in Building 500-1-001.

Description: These lectures will review the challenges facing energy policy, the outlook for different sources of primary energy (fossil and renewable), how energy is used, and prospects for improved energy efficiency. A colloquium ‘Can Future Energy Needs be Met Sustainably?’, which will be giving on Tuesday, 15 September at 4.30 p.m., is part of this course. The lectures will provide more details and address topics that will only be mentioned in passing in the colloquium.

THE OUTLOOK FOR ENERGY SUPPLY AND DEMAND (1/3)
## Training

**PLACES AVAILABLE - TECHNICAL TRAINING (UP TO THE END OF 2015)**

Some upcoming courses (until December) are currently missing participants, required for the courses to take place.

For more details about a course and to register, please go to the Training Catalogue.

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**PLACES AVAILABLE - TECHNICAL MANAGEMENT COURSES (UP TO THE END OF 2015)**

Some courses in the field of technical management scheduled up to the end of 2015 and which have places available.

For more details about a course and to register, please go to the Training Catalogue. If you need a course that is not in the catalogue, please contact your supervisor, your Departmental Training Officer or the HR-LD group at Communication.Training@cern.ch.

### SUNDAY SEPTEMBER 13, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>CERN School of Computing</td>
</tr>
</tbody>
</table>

### MONDAY SEPTEMBER 14, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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</thead>
<tbody>
<tr>
<td>11:00</td>
<td>Academic Training Lecture Regular Programme The Outlook for Energy Supply and Demand (1/3) Main Auditorium</td>
</tr>
<tr>
<td>16:00</td>
<td>A&amp;T Seminar High Performance HTS Tapes for High Field Magnet Applications IT Amphitheatre</td>
</tr>
</tbody>
</table>

### TUESDAY SEPTEMBER 15, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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</thead>
<tbody>
<tr>
<td>07:30</td>
<td>CFP Zewail City Mini-School First (2nd part) CFP Zewail City Mini-school on ‘experimental tools in particle physics’ CFP, Zewail City of Science and Technology</td>
</tr>
<tr>
<td>09:00</td>
<td>Technical Seminar 20ème Forum Utilisateurs CATIA au CERN Kjell Johnsonen Auditorium</td>
</tr>
<tr>
<td>11:00</td>
<td>LHC Seminar CMS results</td>
</tr>
<tr>
<td>16:30</td>
<td>Academic Training Lecture Regular Programme Can Future Energy Needs be Met Sustainably? (2/3)</td>
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### WEDNESDAY SEPTEMBER 16, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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</thead>
<tbody>
<tr>
<td>11:00</td>
<td>Academic Training Lecture Regular Programme The Outlook for Energy Supply and Demand (3/3) Main Auditorium</td>
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### MONDAY SEPTEMBER 21, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>11:00</td>
<td>LHC Seminar Constraints on Higgs boson couplings from a combination of ATLAS and CMS measurements</td>
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### TUESDAY SEPTEMBER 22, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00</td>
<td>LHC Seminar Observation of J/ψp resonances consistent with pentaquark states in Ab→J/ψpK- decays at LHCb Main Auditorium</td>
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</tbody>
</table>