

CAST EXPLORES THE DARK SIDE OF THE UNIVERSE

Following the search for axions, candidates for dark matter, CAST is widening its scientific horizon by searching for chameleons, hypothetical particles postulated as an explanation for dark energy.



CAST, CERN's axion solar telescope, moves on its rail to follow the Sun (for an hour and a half at dawn and an hour and a half at dusk).

As the summer comes to an end, surveyors have set to work in the experimental hall of CAST, CERN's axion solar telescope. They will spend around 10 days perfecting the alignment of the detector with respect to the position of the Sun, to within a thousandth of a radian. The Sun's course is visible from the one window in the CAST experimental hall just twice a year, in March and September. This is why the physicists are making the most of these few days to align their magnet precisely.

For 12 years, CAST has been tracking the movement of the Sun for an hour and a half at dawn and an hour and a half at dusk. The experiment is searching for solar axions, hypothetical particles that are thought to interact very weakly with ordinary matter.

Axions were postulated in 1977 to solve a problem related to charge-parity symmetry violation. Axions, if they exist, could also

be good candidates for the Universe's dark matter, one of the great mysteries of contemporary physics. Physicists think that the Sun could also produce axions, which is why CAST is pointed towards it to capture them; however, visible light is needed only to adjust the alignment of the detector.

The CAST experimental apparatus is based on a magnet from the LHC, which has been converted into a telescope. Under the effect of its intense magnetic field, the axions (if they exist) turn into photons in the X-ray range. The X-ray detectors at each end of the magnet allow photons to be detected at sunrise and sunset. An excess of X-rays compared with the background could indicate the presence of axions.

This astroparticle experiment, which was the first of its kind at CERN, has not (yet) detected solar axions. But, as its detectors have been



A word from the DG

NEWS FROM COUNCIL

Friday, 18 September concluded a very busy week for Council. As you'll have seen from the press release sent that morning, Council elected a new President, who will take up his mandate on 1 January along with the new management team, which was also approved by Council.

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A word from the DG

NEWS FROM COUNCIL

You'll find full details of the incoming Director-General's management team and structures on: <http://cern.ch/go/t8JV>. Completing the configuration for the immediate future, Council also approved the medium term plan, along with the budget for 2016.

In other Council business, two complete applications for Associate Membership were discussed. Following an earlier letter, India's complete application was received and considered by Council. Consequently, a fact-finding mission has been established to report back before the end of the year. A new application was also received from Azerbaijan, with a fact-finding mission to be established. India's involvement with CERN goes back to the 1970s, and the country currently has observer status at Council. Azerbaijan's involvement is more recent, beginning with a contribution to the ATLAS experiment through the Joint

Institute for Nuclear Research, JINR. As the enlargement process continues to move steadily forward, it was also our pleasure to welcome the Pakistani delegation, attending for the first time.

In a break from tradition, this Council week concluded not with a sandwich lunch in the *salle des pas perdus*, but with a visit to the Proton Synchrotron's East experimental hall. The occasion was the opportunity to visit the Italian and South African winners of the CERN Beamline for Schools competition, currently in its second year. After a successful week of experiments, the two teams are reaching the end of their stay at CERN, and preparing to write up their results. Delegates also took the opportunity to visit the CLOUD experiment, situated on an adjacent beam line.

Beamline for Schools was established in 2014 to give school students the

opportunity to carry out their own experiment at CERN. So far, four groups have had that opportunity, but the impact runs both broader and deeper. Teachers have told us that, win or not, taking part has been a fantastic experience for their students, and thanks to physicists engaged in outreach around the world, many links have been established between physics and schools. All in all, Beamline for Schools has become a valuable part of our contribution to developing a new generation of scientists and scientifically engaged young adults.

Rolf Heuer

CAST EXPLORES THE DARK SIDE OF THE UNIVERSE



Antje Behrens, from the CERN Surveying group, Giovanni Cantatore, Deputy spokesperson of CAST, and Marin Karuza, member of the CAST collaboration, align the detector.

developed, it has established the most restrictive limit on the axion-photon coupling constant, which defines the probability that an axion will change into a photon (or vice versa) in a magnetic field. "CAST has become the global reference in the search for axions," says Konstantin Zioutas, the experiment's spokesperson. "But we have reached the limit of the solar axion research that we can carry out with our apparatus."

CAST will therefore complete its hunt for solar axions at the end of 2015. "However, we have already turned our experiment towards a new field of research – dark energy," explains Konstantin Zioutas. "It is a tradition at CERN to launch future research programmes far in advance in order to take the necessary time to prepare the new detectors and get new collaborators interested."

The collaboration intends to track another type of hypothetical particle – chameleons, which are candidates for dark energy. Dark

energy is thought to represent around 70% of the Universe's energy and to be behind the acceleration of the expansion observed in the cosmos. Over the last 10 years, theories have been developed to shed light on the nature of dark energy, involving new particles such as chameleons.

If chameleons exist, they could, like axions, be converted into X-rays under the effect of a powerful magnetic field. The theory predicts that chameleons may be produced by the Sun. However, the energy of the X-rays produced by these solar chameleons is thought to be almost 10 times weaker than that of X-rays produced by solar axions. Over the last two years, the collaboration has therefore installed new X-ray detectors with a lower energy threshold at the end of its magnet. The first is a Silicon Drift Detector, and the second is a gas detector called InGRID (Integrated Grid). Incorporating silicon-based Micromegas technology, the InGRID detector performs very well also at low energy levels.

CAST is also preparing an additional method of detecting chameleons, based on the pressure that their flux is thought to exert on a solid surface. The collaboration is putting the finishing touches to a new opto-mechanical sensor that uses an ultra-thin membrane just 100 nanometres thick. "It will be capable of detecting a displacement of around 10^{-15} metres, that is to say the size of the nucleus of an atom," says Giovanni Cantatore, deputy

spokesperson of CAST. "This is a sensitivity comparable to that of interferometric antennas that detect gravitational waves."

The displacement of the membrane is detected using optical interferometry (a Fabry-Pérot interferometer). A prototype of this low-cost detector is already in operation at the INFN in Trieste. Known as KWISP (Kinetic Weakly Interacting Slim Particles detection), it is due to be installed on the CAST magnet at the beginning of next year.

CAST has submitted its full scientific programme to the SPSC Committee, which will meet in October.

To learn more about the InGRID X-ray detector, go to: <http://cern.ch/go/6qkm>.

To learn more about the KWISP detector, go to: <http://cern.ch/go/M8Td>.

Watch the video:



Corinne Pralavorio

(Continued from page 1)

Axions wash whiter than white

Charge-parity symmetry violation, which could explain matter-antimatter asymmetry, has been observed only in processes linked to the weak interaction. Quantum chromodynamics (QCD), the theory of the strong interaction, also predicts the existence of this violation. But, until now, CP violation with the strong interaction has not been

observed. Hence the development of a theory that resolves this problem by predicting the existence of as-yet-undetected particles – axions. Physicist Frank Wilczek named axions after a brand of washing powder, because their existence would allow the theory to be "cleaned up".

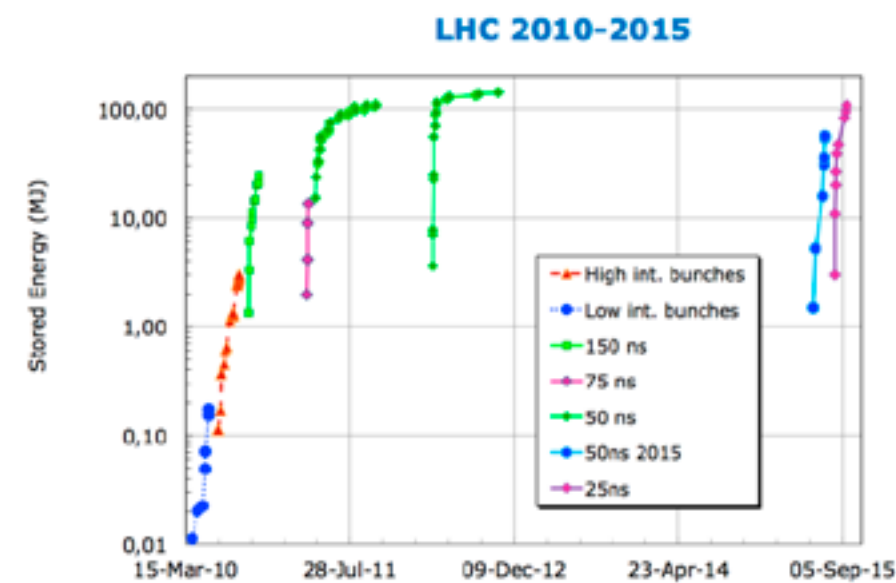
A Universe full of chameleons?

According to the chameleons model, a scalar field may be the source of the dark energy that causes the Universe to expand more rapidly. The scalar fields called "chameleons" are thought to interact like a fifth force and according to the density of matter encountered. If the density is low, the force would manifest itself at long-range and explain the acceleration of the expansion of the Universe. If the density is high,

the interaction range would be so small that it would be practically impossible to measure, like on Earth. With a spin of 0, chameleon particles would be manifestations of this scalar field, in a similar way to how the Higgs boson proves the existence of the Brout-Englert-Higgs scalar field.

LHC REPORT: 1,033 BUNCHES PER BEAM AND COUNTING

Following the second technical stop, the first beams were injected into the LHC in the early evening of Saturday, 5 September. About ten days later, the machine was operated with around 1,000 bunches per beam.



Evolution of the stored energy per LHC beam, over time.

The first step after a technical stop consists of running through a full LHC cycle, from injection to collisions and beam dump, with a low-intensity bunch ("probe") to check all machine settings and equipment. This is followed by a series of collimation and absorber validation tests at different points in the LHC cycle. Low-intensity beams – typically the equivalent of three nominal bunches (3×10^{11} protons) – are expanded transversely or longitudinally, or de-bunched to verify that the collimators and absorbers are correctly

intercepting lost particles. The techniques for those validations have been progressively improved, and they can now be performed within 24 hours in a few machine cycles.

As soon as the protection systems were validated, the intensity of the beam was ramped up in three steps to 459 bunches per beam – the level that had been reached before the stop. Since mid-August, the LHC bunches used for physics operation have been spaced by 25 ns, which is the LHC design bunch

spacing. The goal of the current operation period up to the end of October is to step up the number of bunches as much as possible.

The intensity of the LHC beams is ramped up stepwise: at each step the LHC must be operated for at least three periods of collisions ("stable beams") integrating at least 20 hours of operation before the next intensity step is authorised. The data collected across many systems, in particular those related to machine protection, are analysed carefully. The green light for an intensity step is only given when all system experts are satisfied with their systems' performance.

Following this procedure, on Wednesday, 9 September, after two long fills with 459 bunches, beam operation received the green light to ramp up to 745 bunches per beam. The step was achieved the same day and the remainder of the week was spent operating at that level.

The electron cloud activity is still significant, depositing considerable power onto the vacuum chamber beam screen. The beam screen temperature should remain below 30 K; this is achieved by managing the heat load transients. This operation is particularly delicate for the cryogenic system operation team in the CCC when the beams are injected and ramped.

On Monday, sufficient beam time was accumulated to step up to 899 bunches with a push to above 1,000 bunches per beam later in the week. At this level, the stored energy in each beam will have exceeded 100 megajoules for the first time in 2015.

Jorg Wenninger for the LHC team

IN THE MOOD FOR MODULES

When the going gets tough, the tough get going. This is especially true when it comes to safety: how can we improve our safety culture in the best possible way? The Safety Training section thinks the solution lies in better safety courses, so CERN's e-learning package is being redesigned. Future e-learning courses will be smaller but more efficient, covering all the specific risks present at the Laboratory.



The new Safety at CERN course available on SIR.

Being able to communicate safety messages efficiently is crucial in order to have a safe work environment, especially here at CERN. This is not always an easy task and therefore a more educational approach is required. With this idea in mind, the Safety Training section is currently redesigning its e-learning courses to include a series of smaller risk-specific modules.

"Currently, some risks, such as chemical- or electricity-related risks, are included in various

courses," explains Christoph Balle, Safety Training section leader. "The problem is that this creates redundancy and overlapping of content." The new collection of shorter courses will cover one specific risk at a time, and will serve as a prerequisite to other e-learning courses that give users access to the different installations and experiments, and to advanced classroom courses.

"We received a large amount of feedback from the users about this content redundancy," continues Christoph. "Therefore, last year, we started to consider redesigning our e-learning offer and taking a modular approach. In addition to making it easier for us to design new courses and updates and to plan maintenance, the single modules allow us to work with one Subject Matter expert at a time, supported by the corresponding HSE expert."

"We also understood the importance of nice visuals and a consistent look and feel, to motivate the learners to follow the course, as they will retain more information through

a pleasant experience," says Christoph. This includes improved graphics, sound and possibly the use of interactivity. Working in collaboration with DG-CO's graphic designers and a new Safety Training fellow, the section has also created a course template to finally get away from the "bullet-point list" look of previous courses.

"The courses available will certainly increase in number but they will be smaller than the current ones in terms of content," concludes Christoph. "If users need to access different facilities that present the same risks, they will have to follow these modules only once and then, according to the access they need, they will take the online and/or classroom courses specific to the facilities." The Safety Training team is currently working on redesigning the electrical safety awareness course as well as the first e-learning course on cryogenics-related risks which, in the past, was only covered in some of the installation and experiment courses. While the cryogenics course will soon be in the beta-testing phase, a new "Safety at CERN" course is already available on SIR (see on: <http://cern.ch/go/8Vq9>) for the whole CERN community and it will soon be mandatory for every newcomer arriving at the Laboratory.

Rosaria Marraffino

ICTR-PHE: SCIENTISTS ENGAGE WITH MULTIDISCIPLINARY RESEARCH

In 2016, the next edition of the unique conference that gathers scientists from a variety of fields will focus on many topics particularly dear to the heart of physicists, clinicians, biologists, and computer specialists. The call for abstracts is open until 16 October.



When detector physicists, radiochemists, nuclear-medicine physicians and other physicists, biologists, software developers, accelerator experts and oncologists think outside the box and get involved in multidisciplinary research, they create innovative healthcare. ICTR-PHE is a biennial event, co-organised by CERN, whose main aim is to foster multidisciplinary research by positioning itself at the crossing of physics, medicine and biology. At the ICTR-PHE conference, physicists, engineers, and

computer scientists share their knowledge and technologies while doctors and biologists present their needs and vision for the medical tools of the future, thus triggering breakthrough ideas and technological developments in specific areas.

One of the main new themes of the third edition of the conference is large-scale computing. A wide range of medical applications already relies on computing and simulation tools initially developed for particle physics, but more could be done. Indeed, CERN currently provides computing and data services through an efficient cloud-based provisioning model built on open-source software and state-of-the-art data storage

and management software. Computing grids originally developed to deal with the enormous amount of data coming from the experiments are ideal tools for a wide range of biomedical activities, from screening drug candidates and image analysis, to sharing and processing health records. CERN also has experience in the development of data anonymisation and privacy protection solutions to support privacy compliance, which is key to the safe exchange of medical data.

The high standards set by the ICTR-PHE conferences have not only garnered an impressive scientific community, but also ever-increasing interest and participation from industry. ICTR-PHE 2016 will offer opportunities for companies to contribute to the success of the conference through sponsorship and to exhibit their products and services at the technical exhibition,

which takes place in the hall of the conference centre. For the first time, a dedicated start-up and SME corner will be created to give visibility to innovative smaller up-and-coming companies.

If you are interested in contributing to the conference, please go to: <http://cern.ch/go/C89L>. If you wish to receive additional information on the technical exhibition,

please contact: ICTR-PHE-exhibitor-sponsor-support@cern.ch.

Antonella Del Rosso

CALLING ALL LEGO LOVERS! ADD A MINI CONTROL ROOM TO YOUR COLLECTION

The mini LHC Lego project launched in March (see: <http://cern.ch/go/C89L>) now has almost 6,000 supporters - well on its way to the 10,000 votes needed for it to (hopefully!) hit store shelves. This week, the project added a new feature to its line: a mini control centre!



The new LEGO Control centre, featuring operators "Kerstin" and "Marco".

The mini LHC project is the brainchild of ATLAS PhD student Nathan Readloff, who designed Lego replicas of the LHC and the ALICE, ATLAS, CMS and LHCb experiments on a micro scale. Each detector model is small enough to fit in the palm of your hand but crammed with detailed internal systems revealed by cutaway walls. Every major detector component is represented by a Lego piece.

Now, Nathan has created a control centre to complement the mini LHC project. This would be an add-on feature for Lego's consideration, should they decide to develop the accelerator into a box set. "The control centre is a simple, scaled-down representation of the real-life detector and LHC control rooms," says Nathan. "It features desks and displays in the semi-circle layout popular in control centres across CERN."

The Lego control centre even features two physicist minifigures! "Marco" comes with a mug of coffee - an essential accessory for any physicist but especially important when working long night shifts. Meanwhile, "Kerstin" comes with a hard hat and spanner for whenever a problem requires a descent into the underground caverns. When not in use, the hard hat can be hung on the grey peg on the back wall.

The large displays at the back of the control centre - where the minifigs monitor the accelerator configuration and the results of recent collisions - can be customised to represent any of the experiments or the LHC. "While the picture shows sample displays for the ATLAS detector and a typical event containing a Higgs boson, additional stickers would be included allowing the control room to be customised for other detectors and the accelerator," adds Nathan.

The mini LHC project has garnered over 6,000 votes - but it still needs 4,000 more for it to qualify for the Lego Review, which decides if projects become new Lego products. Cast your vote now by visiting the Lego Ideas website: <http://cern.ch/go/97Wh>!

Katarina Anthony

SCIENCE POPS IN BALEXERT

From 8 to 12 September, a CERN exhibition was held in the central area of the Balexert shopping centre in Geneva. The various activities on offer attracted large crowds. The celebrations are continuing with events planned by POPScience for Researchers' Night on 24 and 25 September.

The exhibition at Balexert, which was organised by the POPScience project, gave children and adults alike the chance to build the LHC out of LEGO™ (you can still vote for this to be produced commercially), complete a jigsaw puzzle of the ATLAS detector, and fire protons and experiment with the Higgs field in the interactive LHC tunnel created by CERN's

MediaLab team. The different stands were supervised by numerous volunteers from various departments within the Organization. Thank you to everyone involved!

While they enjoyed the activities organised by CERN, visitors were also able to find out about the many events planned for European



Constructing the LHC...



Discovering the Higgs field at Balaxert.

Researchers' Night, which will take place on Thursday, 24 and Friday, 25 September. This event will see science presented through music, poetry and cinema. Notably, on 24 September, the event "Made of Shadow and Light", organised by the University of Geneva, will include contributions from Gao Xingjian, winner of the Nobel Prize for Literature. On 25 September, events and activities will take place at FNAC, Pathé cinemas and the Balaxert shopping centre from 10 a.m. to 1 a.m.

The exhibition held at Balaxert was also an excellent opportunity to remind the local public that CERN is open to visitors free of charge every week, as well as to announce the upcoming inauguration of the new Microcosm exhibition.

François Briard

A BUSY WEEK FOR ARTS@CERN

Last week, Semiconductor – the winners of the Collide@CERN Ars Electronica award for 2015 – and artists Francesco Mariotti and José-Carlos Mariátegui visited CERN and met the scientists.



Ruth Jarman (left) and Joe Gerhardt (right) of Semiconductor with Peter Jenni, one of the scientists they met during their visit to ATLAS.

Just a few weeks ago, Ruth Jarman and Joe Gerhardt, two English artists collaborating under the name Semiconductor, were awarded the Collide@CERN Ars Electronica prize for 2015. Last week, they came on their first visit to CERN to meet the scientists and select their scientific partner in preparation for their residency. They will soon begin a two-month residency at CERN before going to Linz (Austria), where they will spend a month at the Ars Electronica Futurelab. During their residency, the artists aim to create a digital artwork elaborating on the nature of the world and our perception of it, including

considering how scientific instruments and particle physics discoveries influence our perception of nature.

On the same days, Swiss artist Francesco Mariotti and Peruvian scientist and writer José-Carlos Mariátegui also came to CERN. They visited the Synchrocyclotron and the Computing Centre and met various scientists. Francesco was continuing his exploration of the possible interactions between electronic and IT devices and the creation of multisensory installations and works.

Both visits were organised by Arts@CERN.

Antonella Del Rosso

Computer Security

IN THE NAME OF CERN

This summer, the American/Canadian dating website Ashley Madison was successfully compromised by a group of hackers (see: <http://cern.ch/go/97Wh>) who subsequently published tons of confidential information: addresses, dates of birth, e-mail addresses, ethnicities, genders, names, passwords, payment histories, phone numbers, security questions, sexual preferences, usernames and website activity.

Initially, these attackers blackmailed Ashley Madison and requested that the service be shut down. Later, however, they just made their stolen data public on the Internet. More than 30 million unique e-mail addresses – a hallelujah for miscreants.

What can they do with this data? One possibility is blackmailing the people whose e-mail addresses were exposed by threatening to tell their spouses ("Pay me X bitcoins or I will tell your spouse that you are looking for a date!"). Another is targeting those people who

have registered with their company e-mail address, e.g. the many e-mail addresses linked to governmental organisations ("Hand over document X, give me access to Y, or I will tell Z that you are looking for a date!"). Interestingly, that list also included the e-mail addresses of six of our colleagues, three of which were still valid. *Radio Télévision Suisse* also reported on the Ashley Madison story.

And this wasn't the first time something like this has happened! Adobe had data for 153 million accounts stolen, including encrypted passwords (which were quickly decrypted).

Four million records from Adult Friend Finder were leaked after an attack in May 2015. The list of customers of Domino's Pizza in France and Belgium was released in 2014 after a failed blackmail attempt. The Forbes news network fell to attackers in 2014, with more than one million user account details leaked. YouPorn also had 26,000 e-mail addresses plus passwords stolen.

And neither was this the first time that we've found CERN e-mail addresses in those compromised lists*. We have to wonder why people sign up with their CERN e-mail address to personal services not at all related to CERN's

core business... While CERN tolerates the private usage of its computing resources, this is overstretching our tolerance. Thus, if you happen to register with websites and web services that are not related to your CERN work, please use a private e-mail address from your favourite provider (e.g. Gmail, Yahoo, etc.)!

*If you want to figure out whether your (private) e-mail address(es) have been compromised, we recommend to you this trustworthy website: <https://haveibeenpwned.com>.

For further information, questions or help, check: <https://security.web.cern.ch> or contact us at Computer.Security@cern.ch.

Do you want to learn more about computer security incidents and issues at CERN? Follow our Monthly Report:

<https://cern.ch/security/reports/fr/monthly-reports.shtml>.

Stefan Lueders, Computer Security Team

Ombud's Corner

BOSS, WHERE ARE YOU?

Sometimes bosses seem to wear Harry Potter's invisibility cloak: always caught in meetings, away on duty travel, overwhelmed with technical duties... the time they have left to spend with their teams can drop down to almost zero. But their people need them...

"Oh no, he is too busy." "I can't go and disturb my supervisor, she has no time." "No, my supervisor doesn't want to deal with this type of interpersonal problem." "I have been struggling to get a final decision on this for ages now..."

Having to deal with an invisible boss is often a very worrying source of frustration for the supervisee: no one to share their professional concerns with, no one to make decisions that are perhaps vital to a project, no one to resolve an ongoing conflict between colleagues and a flow of information that is not as regular or structured as needed.

Boss, where are you? People working in your team need you! They need your decision-

making ability; they need you to share your knowledge, your experience and the overview that is invaluable for their project to move forward; they need you to step in and resolve conflict situations. Your people count on you for guidance and support as well as the feedback that will allow them to progress.

Being involved, ensuring regular and effective communication with supervisees, giving clear directions, ensuring that team members feel supported and valued – these are not optional for a leader. They are the essentials that their people expect from them. Certainly, conflicts are more easily resolved when bosses are present, when they decide to get involved, to step in and take whatever action is needed. It is part of the privilege of being a boss; it

is also the aspect that will gain them the appreciation of their staff.

Because of their role, bosses are often required to take action in difficult situations. Undoubtedly, this requires time, energy and concern; it requires a significant investment on their parts. But it is an investment that will bring them the greatest rewards. Take off your invisibility cloak and be a boss – your team will thank you for it!

All previous Ombud's Corners can be accessed in the Ombud's blog: ombuds.cern.ch.

Sudeshna Datta-Cockerill

JOHAN DIEPERINK (1940 - 2015)

We were deeply saddened to learn of the death of our former colleague and friend, Johan Dieperink, on 28 August, at the age of 75.



Han arrived at CERN in 1969, hired as an electronics technician to work on the data acquisition system for the "Charpak" multiwire chambers. In the 1970s, Han joined the SPS Beam Instrumentation Group and participated in the development of an analog acquisition system for the SEM type beam monitors used in the beam transfer lines towards the North and West experimental areas. In the 1980s, he joined the Beam Transfer Group, working on the development, construction and operation of the low-level control system for the LEP's beam separation system and on the modernisation of the control system for the SPS extraction

channels. In the 1990s, Han devoted himself to the design study for the control system for the LHC beam extraction system. Many of the ideas and suggestions that Han put forward in the course of these studies are now a reality and contribute to the good performance of this system, which is crucial to the operation of the LHC.

Han was always highly appreciated by his colleagues and by all those who had the chance to work with him, not only for his expertise in his field, his composure and his commitment, but also for his open nature, his willingness and the friendship he showed all of us. We send our deepest sympathy to his family and our sincere condolences to his wife.

His former colleagues and friends

REGISTER NOW FOR ISOTDAQ 2016

The International School of Trigger and Data Acquisition (ISOTDAQ) 2016 is the seventh in a series of International Schools dedicated to introducing MSc and PhD students to the “arts and crafts” of triggering and acquiring data for physics experiments.

The main aim of the school is to provide an overview of the basic instruments and methodologies used in high energy physics, spanning from small experiments in the lab to the very large LHC experiments, emphasising the main building blocks as well as the different choices and architectures at different levels of complexity. About half of the school time will be dedicated to laboratory exercises where the students are exposed to most of the techniques described in the lectures.

The 7th International School of Trigger and Data Acquisition will be held in the Lopatie Conference Centre on the campus of the Weizmann Institute of Science in Rehovot, Israel. Lectures, hands-on exercises, breakfast, lunch and coffee breaks will be held in the Centre. Accommodation is within walking distance at the Reisfeld Residence of the Hebrew University Faculty of Agriculture and the San Martin Guest House on the Weizmann campus.

Since places are limited, acceptance to the school is by a selection committee.

Apply on: <http://cern.ch/go/pc6r>

Applications are accepted until
31 October 2015.

Find out more about the school on: <http://cern.ch/go/d6tL>

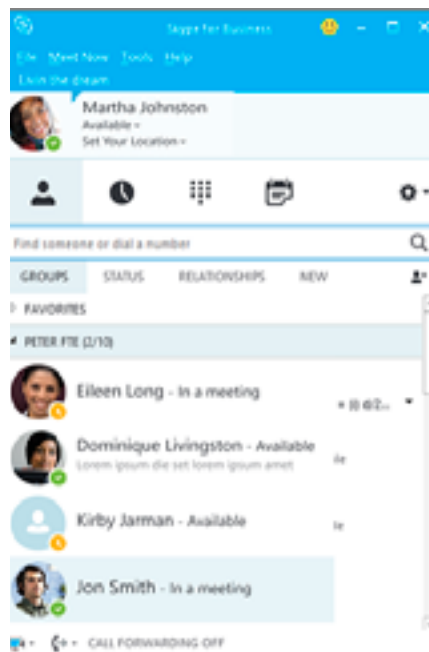
Markus Joos, on behalf of the organisers

LYNC BECOMES “SKYPE FOR BUSINESS” ON WINDOWS

Lync is the tool currently used at CERN for instant messaging, presence information, desktop sharing, etc. People registered on the Lync Phone system can also place phone calls to standard telephone numbers.

Now Lync is becoming “Skype for Business” as Microsoft is merging the service with Skype. Skype for Business is very similar to Lync, but with some interesting new features.

If you are already using the Lync application, or would simply like to learn more, keep reading...



On centrally managed Windows computers, Lync will be upgraded to Skype for Business in **mid-October**. It will be installed together with the monthly Windows updates.

If you would like to try the new Skype for Business service in advance, we encourage you to install it in September (it is available in CMF for manual installation: “MS Skype for Business (Lync successor)”).

The Skype for Business interface is similar to the Lync one: the main features can be found in the same parts of the application. The icons have had a facelift and now look more like those in Skype. It is, however, worth mentioning the introduction of a new feature named “call monitor”: when you are in a call and you switch to another window or application, your call will now be displayed in a minimised window that lets you monitor and control the call (end it, put it on hold, etc.).

Microsoft will also release Skype for Business on other platforms: Mac OSX, iPhone, iPad, Android. The date is not yet known. Check the Skype for Business community pages regularly for updates.

If you have questions about Skype for Business, you can ask them on the community website or contact service-desk@cern.ch.

On 12 October and 30 October at 10.00 a.m., there will be a 1 hour presentation on Skype for Business in the CERN Training Centre. Please register on: <http://cern.ch/go/9kFr>.

The Lync team

DIVERSITY IN ACTION CONFERENCE | COUNCIL CHAMBER | 30 SEPTEMBER

Promoting sustainable excellence through diversity in research careers, by Dr Pippa Wells (CERN) and Dr Claartje Vinkenburg (VU University Amsterdam).

**Wednesday, 30 September
1.30 p.m. - 3.00 p.m.
Council Chamber**

To register, please go to:
<http://cern.ch/go/L6Zd>.

Excellence is a non-negotiable in science, a necessary condition for a successful career as well as the funding of research projects. Scientific excellence is the sole criterion used by the European Research Council (ERC) to award frontier research grants. However, statistics show that there are still persistent inequalities between men and women scientists in ERC funding success as well as other career outcomes.

Dr Claartje Vinkenburg, of the VU University of Amsterdam, will illustrate two projects commissioned by the ERC Gender Balance Working Group to uncover and address this phenomenon.

The first project [ERCAREER (Vinkenburg PI, 2012-2014)] is about unconventional careers and career breaks, and studies the gendered nature of career paths of ERC applicants. Findings show that “conventional careers” in science are inextricably tied to normative beliefs about the ideal academic, mobility, independence, and excellence. Allowing unconventional careers to address the issue results in ironic effects and dilemmas for both applicants and reviewers, because underlying norms remain unchallenged.

The second project [GENDERC (Schiffbaenker Joanneum Research PI, Vinkenburg team member) – work in progress] focuses on the panel review process of the ERC and will shed some light on the connection of panel selection and composition, application and success rates of men and women, stereotypes and biases.

The conference aims to show how these projects enhance our understanding of research careers, gender equality and funding success in science.

Dr Pippa Wells, Project Leader at ATLAS and Chairperson of the Associates and Fellows Committee, will introduce the topic of (un)conventional career paths by giving some insight into CERN’s Post-Career-Break Fellowship Programme, a gender neutral

initiative to allow scientists and engineers to return to science or engineering after a break.

Claartje Vinkenburg, PhD, is affiliated with VU University Amsterdam as an associate professor of organisational behaviour and works as an independent consultant and researcher. Her research, partly funded by the European Research Council, deals with gender and ethnic diversity in professional and academic careers. She critically explores the impact of implicit bias, normative beliefs and discursive practices on career systems, patterns and outcomes to promote diversity and inclusion. Claartje teaches Diversity in Organisations (MSc HRM) and supervises PhD candidates. She has written various book chapters and has published in Academy of Management Review, Journal of Social Issues, and Leadership Quarterly.

CERN ROAD RACE | 7 OCTOBER

The 2015 edition of the annual CERN Road Race will be held on Wednesday, 7 October at 6.15 p.m.

The 5.5 km race takes place over three laps of a 1.8 km circuit in the West Area of the Meyrin site, and is open to everyone working at CERN and their families. There are runners of all speeds, with times ranging from under 17 minutes to over 34 minutes. The race is run on a handicap basis, by staggering the starting times so that (in theory) all the runners finish together.

Children (< 15 years) have their own race over one lap of 1.8 km. As usual, there will be a “best family” challenge (judging best parent + best child). Trophies are awarded in the usual men’s, women’s and veterans’ categories, and there is a challenge for the best age/performance.

Every adult will receive a souvenir prize, financed by the registration fee of 10 CHF. Children are free (each child will receive a medal).

More information, and the online entry form, can be found on: <http://cern.ch/go/q78X>.

Klaus Hanke, CERN Running Club

RECALL CAMPAIGN FOR GAS BOTTLES AND BANKS

The previous contract with gas supplier Carbagas ended on 31 March 2015. Gas bottles and banks are not a property of CERN. According to the contract terms, they can remain on CERN sites without any extra costs until 30 September 2015.

If you are using Carbagas containers (bottles and/or banks) for gas purchased between 1 April 2010 and 31 March 2015, multiple options exist:

- Return them to the closest gas point.
- Purchase them on the following basis:

- Rent them on the following basis:
12 CHF/month for bottles,
144 CHF/month for banks.

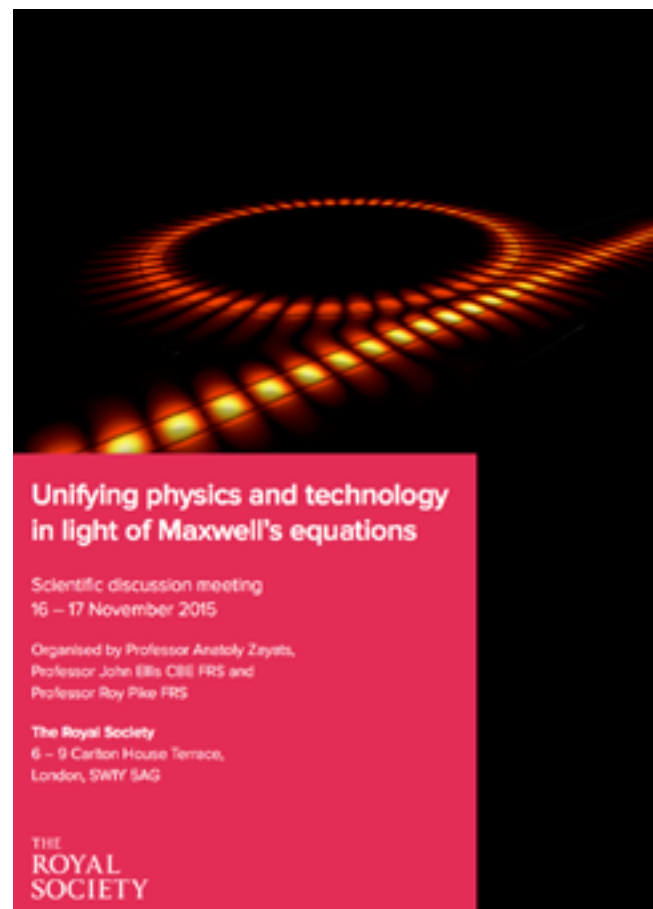
The recall campaign has been going on for several months already: we would like to thank everyone who has already replied to it. If you haven’t answered yet, there is still time.

If you know of unused or abandoned Carbagas containers, please don’t hesitate to contact us on: <http://cern.ch/go/8wFz>.

Thank you in advance for your help!

Central Stores - Gas Distribution

Type d’emballage (FR)	Container type (EN)	CHF/unité
Bouteille 1 l, 3.8 l, 4 l et 5 l	Bottle 1L, 3.8L, 4L, 5L	85
Bouteille 10 l, 13.4 l	Bottle 10L, 13.4L	174
Bouteille 30 l	Bottle 30L	280
Bouteille 33 l	Bottle 33L	450
Bouteille 40 l - Acier	Bottle 40L - Steel	342
Bouteille 40 l - Aluminium	Bottle 40L - Aluminium	850
Bouteille 50 l	Bottle 50L	342
Batterie 12*50 l	Bank 12*50L	6 271
Bouteille acétylène 10 l	Bottle acetylene 10L	248
Bouteille acétylène 50 l	Bottle acetylene 50L	628
Batterie 12*50 acétylène	Bank 12*50 acetylene	7 542
Bouteille soudée (fréon, propane, etc.)	Welded bottle (freon, propane, etc.)	160



Training

PLACES AVAILABLE – LEADERSHIP PROGRAMME (UP TO THE END OF 2015)

Please find here the courses in the field of Leadership scheduled up to the end of 2015 and which still 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.

	Language	Next Session	Duration	Available places
Managing Teams	English	6-8 October	3 days	7 places
Éléments essentiels de la gestion du personnel pour les superviseurs (adapté de « CDP pour superviseurs »)	French	Module 1 - 2, 9 November Module 2 - 11 December Module 3 - TBC (2016)	5 days	10 places
Comment, en tant que superviseur, tirer le meilleur parti de l'entretien annuel	French	20 November	1 day	9 places
How to get, as a supervisor, the most out of the annual interview	English	30 November	1 day	10 places

Newly launched communication course

Communicating with Impact	English	1, 2 October	2 days	5 places
Communiquer avec impact	French	12, 13 November	2 days	7 places

PLACES AVAILABLE - PERSONAL DEVELOPMENT AND COMMUNICATION COURSES (UP TO THE END OF 2015)

Please find here the courses in the field of personal development and communication scheduled up to end of 2015 and which still 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.

	Language	Next Session	Duration	Available places
Personal Awareness and Impact	English	15-17 September	3 days	4 places
Techniques d'exposé et de présentation	French	6, 7 October & 20 November	3 days	1 place
Handling Difficult Conversations	English	9 + 16 Oct, 11 Dec	3 days	3 places
Negotiating Effectively	English	13-14 October	2 days	8 places
Voice and Nonverbal Behaviour in Speech Communication	English	19-20 November	1.5 days	6 places
Communicating to Convince	English	23-24 November	2 days	8 places
Gestion de temps	French	24 Sept., 6+27 November	3 x .5 days	7 places
Négociation efficace	French	3-4 November	2 days	12 places
Équilibre entre performance et pression	French	9-10 November	2 days	12 places
Les enjeux de la voix et du comportement non verbal dans la communication orale	French	5-6 November	1.5 days	8 places
Communiquer pour convaincre	French	25-26 November	2 days	8 places
Animer ou participer à une réunion de travail	French	30 November & 1, 2 December	3 days	5 places

The following places are available on the newly launched communication workshops:

	Language	Next Session	Duration	Available places
Communication: Science or Art? (Workshop 1)	English	21 September 19 October 19 November	1 day 1 day 1 day	1 2 10
Communication : Science ou Art ? (Atelier 1)	French	22 September 19 November	1 day 1 day	3 12
Communiquer avec succès en milieu interculturel (Atelier 2)	French	8 October 20 November	1 day 1 day	3 9
Effective Cross Culture Communication (Workshop 2)	English	20 November	1 day	9

Seminars

FRIDAY SEPTEMBER 25, 2015

11:00 Detector Seminar: Fast Timing Detector R&D for the HL-LHC era

SUNDAY SEPTEMBER 27, 2015

08:30 CAS - CERN Accelerator School: Advanced Accelerator Physics Course 2015

MONDAY SEPTEMBER 28, 2015

16:30 Medical Applications Seminars: Cancer research on the Daresbury ALICE accelerator **Main Auditorium**

TUESDAY SEPTEMBER 29, 2015

11:00 LHC Seminar: ATLAS results

WEDNESDAY SEPTEMBER 30, 2015

15:30 ISOLDE Seminar: TBA

THURSDAY OCTOBER 01, 2015

08:30 Monthly induction HR: INDUCTION PROGRAMME - 1st Part Filtration Plant
14:15 A&T Seminar: Crystal collimation for LHC Kjell Johnsen **Auditorium**

TUESDAY OCTOBER 06, 2015

11:00 LHC Seminar: LHCb results

NEWS

FROM THE CERN WEB: TOP QUARKS, INCUBATION CENTRES, TEDxCERN AND MORE

This new section highlights articles, blog posts and press releases published in the CERN web environment over the past weeks. This way, you won't miss a thing...

ATLAS presents new top physics results
17 September - ATLAS Collaboration

This week, physicists from around the world are gathering at the Top 2015 workshop in Ischia, Italy to discuss the latest measurements of the top quark. As the heaviest known fundamental particle, the top quark plays a special role in the search for "new physics". In results presented at Top 2015, the ATLAS collaboration combed through their high-precision Run 1 LHC data to see if the top quark is behaving as predicted by the Standard Model of particle physics. ATLAS also presented new measurements of top-quark production at high-energy (13 TeV) from early analyses of the ongoing Run 2 of the LHC.

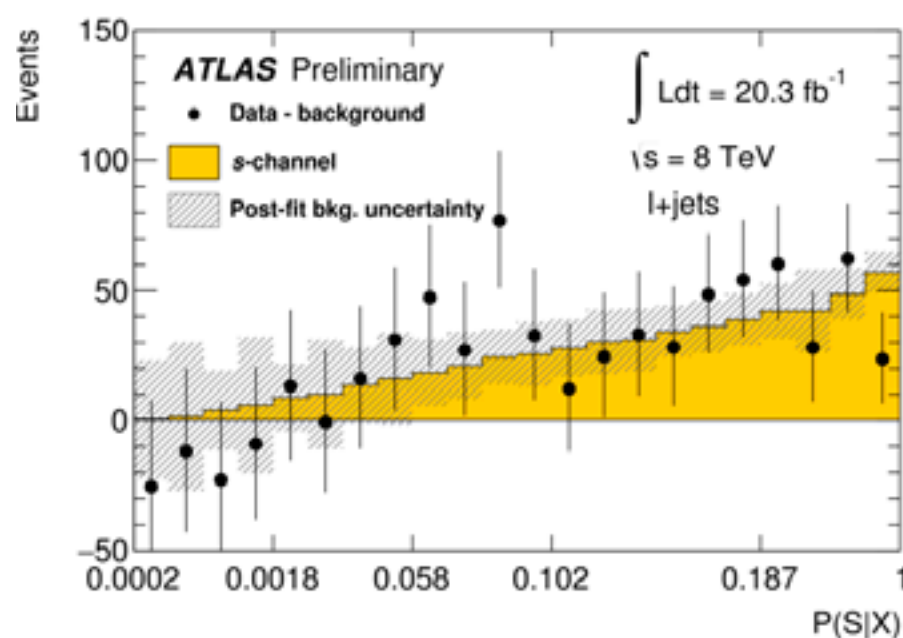
Continue to read on: <http://cern.ch/go/7HD6>

New partnership encourages businesses to develop CERN tech
16 September - by Harriet Jarlett



The latest Business Incubation Centre of CERN technologies (BIC) agreement was signed on 16 September in conjunction with the Helsinki Institute of Physics and Tampere University of Technology. The BIC will support businesses and entrepreneurs to develop innovative ideas in fields broadly related to CERN activities – bridging the gap between basic science and industry.

Continue to read on: <http://cern.ch/go/9VPx>



The figure shows the data in the search for the rare s-channel single-top production after the background events have been subtracted.

A beamline for school - Safety first
14 September - by Harriet Jarlett



Spending a day of the school holidays learning about health and safety may not be many students' idea of fun. But that's exactly what the young scientists from the Beamline for schools contest spent last Friday doing.

Continue to read on: <http://cern.ch/go/6QXm>

One month to go until TEDxCERN "breaks the rules"
9 September - CERN press release

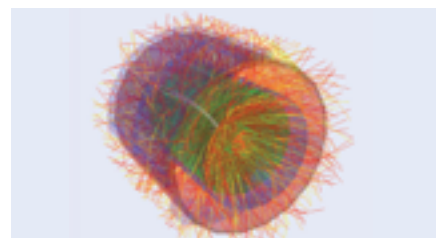


On Friday, 9 October, CERN will be hosting a TEDx conference for the third year running, this time on the theme of "Breaking the Rules". Providing a platform for visionaries in fields such as science, novel technologies and

education, the event, sponsored by Rolex, will take place on the CMS site in Cessy, France.

Continue to read on: <http://cern.ch/go/j7Wz>

ALICE investigates 'snowballs in hell'
26 August - CERN Courier



Event display of a central Pb-Pb collision.

The main goal of the ALICE experiment at the LHC is to produce and study the properties of matter as it existed in the first few microseconds after the Big Bang. Such matter consists of fermions and bosons, the fundamental entities of the Standard Model. Depending on the temperature, T , only particles with mass much less than T are copious. For $T < 1$ GeV, or about 1,013 K, these are the u , d and s quarks and the gluons of the strong interactions. In addition, there are of course photons, leptons and neutrinos.

Continue to read on: <http://cern.ch/go/gG7v>

TAKE NOTE

EDUCATION FEES – NEW FORMS

The application forms for the payment of education fees have been updated and are now available in the Admin e-guide (under the "Useful Documents" heading):

- Payment of education fees (including language course fees) – AC12A (form to be used by staff members recruited before 1 January 2007, with the exception of former "local staff").
- Payment of education fees – AC12B (form to be used by staff members recruited on or after 1 January 2007, by fellows, scientific associates and guest professors and by former "local staff" whose contracts started before 1 January 2007).

The Education Fees service will continue to accept the old forms until the end of the current academic year, i.e. until 31 August 2015.

Members of the personnel are reminded that any false declaration or failure to declare information with a view to deceiving others or achieving a gain that would result in a financial loss for CERN or in damage to its reputation constitutes fraud and may lead to disciplinary action, in accordance with Article SVI 2.01 of the Staff Rules.

For more information (benefits, procedure, reference documents, etc.), please consult the pages of the Admin e-guide relating to the payment of education fees, as well as the corresponding FAQ section, which has also been updated.

Human Resources department
schoolfees.service@cern.ch

DOCUMENTS ISSUED BY THE FRENCH MINISTRY OF FOREIGN AFFAIRS AND INTERNATIONAL DEVELOPMENT

New provisions and reminder

In the interests of simplifying administrative procedures and formalities, the French Ministry of Foreign Affairs and International Development (hereinafter referred to as "the MAE") and CERN have decided that members of the CERN personnel domiciled in France, whether of French nationality or long-term residents¹, will no longer be issued with an AR- or FR-type "attestation de fonctions".

The MAE also wishes to remind members of the personnel of the following rules concerning the documents that it issues and to point out that compliance with these

rules is essential for the proper operation of all international organisations established in France.

This notification replaces the one that appeared in issue 19/2006 of the *Bulletin* (ref. CERN/DSU-DO/RH/13173/Rev.2).

1. Types of document and use

a) Special CD-, FI- and AT-type residence permits

These permits serve as residence permits for members of the personnel and their family members who are not of French nationality and do not have the status of long-term resident¹.

They certify that their holders enjoy the privileges and immunities provided for by the Status Agreement between CERN and France (immunity from legal process in the discharge of their duties, entitlement to drive a vehicle registered in a special series, etc.; it should be noted that members of the personnel holding a full-time contract of less than six months duration with CERN do not enjoy any such privileges).

Furthermore, holders of a special residence permit are not required to obtain a visa for tourist trips (including conferences) to countries applying the Schengen Convention (currently: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Norway, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and Switzerland).

b) AR-, FR-, CR- and EF-type "attestations de fonctions"

All members of the CERN personnel, whatever their status, enjoy the immunities provided for by the Status Agreement between CERN and France (in particular, immunity from legal process in the discharge of their duties).

CERN and the MAE have decided that AR- or FR-type *attestations de fonctions* need no longer be issued to French nationals residing in France and non-French long-term residents in France, provided that CERN sends to the MAE each month a list of the members of the personnel falling into those categories, ensuring that the immunities provided for by the Status Agreement are applied to them.

EF- and CR-type *attestations de fonctions* will continue to be issued as previously. As a reminder, while these documents are proof of the holder's status as a member of the CERN personnel, they have no validity as residence permits since they are issued both to members of the personnel residing in France, whether French nationals or long-term residents (CR-type), and to those residing in Switzerland (EF-type).

N.B.: holders of an EF-type *attestation de fonctions* are not required to obtain a

French visa for temporary travel in France for professional reasons. This dispensation is not valid for travel in the other countries applying the Schengen Convention.

2. Persons issued with a special residence permit

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 a full-time contract with CERN for a period of more than three months, unless they hold a temporary long-stay visa ("*visa de long séjour temporaire*", VLSST).

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 *Pacte Civil de Solidarité* (PACS) or its legal equivalent;

- 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 enrolment at an educational establishment;

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

N.B.: nationals of a member state of the European Economic Area (hereinafter referred to as the "EEA"²) or Switzerland are no longer required to apply for a French residence permit. However, they may, within three months of arriving in France, apply for a special residence permit, in particular in order to be entitled to drive a vehicle registered in a special series.

3. Visa

a) Special residence permit

To qualify for a special residence permit issued by the MAE, persons who are not nationals of Switzerland or an EEA member state must present the following documents within three months of arriving at CERN:

i. either a D-type (long-stay) French visa marked "*carte PROMAE à solliciter à l'arrivée*", even if they are not subject to the requirement to obtain an entry and short-stay visa in France³;

ii. or, if they are the spouse, dependent child or dependent parent of a national of Switzerland or an EEA member state (excluding France), a photocopy of a valid residence permit issued by a European Union (EU⁴) 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 a D-type visa⁵ under ordinary law in order to obtain a residence permit issued by the prefecture.

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 *attestation de fonctions* must be made, must hold a Swiss D-type visa or a Swiss legitimation card.

4. Initial application

The initial application for a document issued by the MAE must be made via the Users Office (in the case of users, cooperation associates and visiting scientists) or the Cards Office (in the case of all other members of the personnel) as soon as the member of personnel concerned arrives at CERN.

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 or Switzerland, and

- if they reside in France for more than 90 days or, in the case of intermittent periods of residence, are physically present in France for more than 90 days in any six-month period.

5. Renewal

Applications for the renewal of a document issued by the MAE must be submitted via the Users Office (in the case of users, cooperation associates and visiting scientists) or the Cards Office (in the case of all other members of the personnel), no later than one month prior to the document's expiry date. As a general rule, these offices send a reminder via e-mail to the persons concerned.

Those whose legitimation document has expired are in violation of the regulations, which could create difficulties for them, in particular when crossing international borders.

6. Change of name, change of country of residence and promotion

In the following cases, an application for a new special residence permit and *attestation de fonctions* must be submitted via the Users Office (in the case of users, cooperation associates and visiting scientists) or the Cards Office (in the case of all other members of the personnel) as promptly as possible:

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 legitimation document to be issued:

- personnel classified in bands Aa to Ae, Ba to Bc, Ca, Cb and Da: AT-type document,

- personnel classified in bands Be, Cc, Db to De, Ea to Ee, Fa and Fb: FI-type document,

- personnel classified in bands Fc and Ga to Gc: CD- or CR-type document.

7. Surrender

a) Requirement

It is imperative that all documents issued by the MAE are surrendered to the ministry via the Users Office (in the case of users, cooperation associates and visiting scientists) or the Cards Office (in the case of all other members of the personnel):

- at the end of the contract with CERN, or
- if the contract no longer covers full-time activities or activities lasting more than three months.

Moreover, a child's special residence permit must be surrendered when the child concerned reaches 21 years of age. Children wishing to continue to reside in France beyond that point must submit a request for a residence permit to their local prefecture no later than two months prior to their 21st birthday.

b) Professional activity

Family members authorized to take up gainful employment in France henceforth keep their special residence permit.

N.B. : Applications to take up gainful employment by family members holding a French special card are handled on a case-by-case basis. They must be addressed to the MAE via CERN, by *note verbale* accompanied by an offer of employment, mentioning the expected remuneration (which must be in accordance with the French minimum wage regulations, regardless of the hours worked – information in French only at <http://cern.ch/go/Rh7P>) and a copy of the request submitted to the competent authorities.

c) Certificate of surrender

If so requested via the Users Office (in the case of users, cooperation associates and visiting scientists) or the Cards Office (in the case of all other members of the personnel), the MAE may – exceptionally and subject to the presentation of proof of having applied for a residence permit from the prefecture, whose issue is decided by the Interior Ministry – 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 users, cooperation associates and visiting scientists) or the Cards Office (in the case of all other members of the personnel), after having reported the loss or theft as required (please see the procedure in the

CERN Admin e-guide, <http://cern.ch/go/W8Vr>). The MAE will issue a duplicate only once.

In the event of non-compliance with the aforementioned rules and in accordance with international law, the MAE reserves the right to take appropriate measures, in particular to refuse to issue a special residence permit or an *attestation de fonctions*.

Consequently, members of the personnel are urged to co-operate with the services responsible for the above-mentioned formalities (departmental secretariats, the Cards Office, the Users Office, etc.) to ensure that all formalities are completed in accordance with the regulations.

Relations with the Host States service
[http://www.cern.ch/relations/
relations.secretariat@cern.ch](http://www.cern.ch/relations/relations.secretariat@cern.ch)
Tel. 72848/75152

¹Any persons not of French nationality who have been residing in France for more than three months on the date on which the MAE is notified of their recruitment are considered by the MAE to be long-term residents.

²<http://cern.ch/go/W8Cm> (in French only)

³<http://cern.ch/go/Vpz8> (in French only)

⁴<http://cern.ch/go/8Gft>

⁵<http://cern.ch/go/x8BS> (in French)

ARE YOU A MOVIE LOVER? DO YOU ENJOY SPEAKING OTHER LANGUAGES?

On the occasion of the European Day of Languages, the Language Tandem Programme is collaborating with the CERN CinéClub to offer you the possibility of watching a series of movies that share the common theme of communication.

Learning a language is like diving into another Universe. Movies can take us visually into other Universes.

Just like watching a movie, learning a new language takes us on an adventure, a discovery of something new. It can bring us new ways of looking at life; it can broaden our horizons.

The aim of this collaboration between the CinéClub and the Language Tandem Programme is to take you on this journey of discovery and we hope you will join us.

The series of movies, which started on 2 September, ends with an aperitif on 30 September where we can all get together.

Please see the list of movies here:

. 9 September: *Italian for beginners* (in Danish

and Italian, with English subtitles)

. 16 September: *Spanglish* (in English and Spanish, with French subtitles)

. 23 September: *The Interpreter* (in English, with French subtitles)

. 30 September: *Apéro & Lost in Translation* (in English, with French subtitles)

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

TRAFFIC MODIFICATIONS ON ROUTES RUTHERFORD, DEMOCRITE AND FERMI

The GS Department would like to inform you that, until the end of December, the construction of Building 245 will result in the following traffic modifications:

1. Traffic on Route Rutherford will be partially restricted in front of the construction site,
2. Traffic on Route Democrite will be one-way towards Route Rutherford.

Also, please note that due to construction work in front of Building 377, Route Fermi will be closed from Wednesday, 10 June until Friday, 7 August.

Thank you for your understanding.

WIN TICKETS TO SEE EDDIE IZZARD! | UPTOWN GENEVA | 1 OCTOBER



LECTURE | ACCELERATING INNOVATION... IN MEDICINE: CANCER RESEARCH ON THE ALICE ACCELERATOR | 28 SEPTEMBER

ACCELERATING INNOVATION ... IN MEDICINE



Peter Weightman
Professor of Physics at the University of Liverpool with a track record of developing novel instruments

Cancer research on the Daresbury ALICE accelerator

The ALICE accelerator at Daresbury is a superconducting energy recovery linear accelerator (ERL). It has characteristics that provide unique capabilities for the study of cancer. Firstly it drives an infrared free electron laser (FEL) that is equipped with a scanning near field optical microscope (SNOM) that makes it possible to determine the chemical structure of tissue with a spatial resolution of 5.1 µm. Secondly, unlike an x-ray source where the electron bunches circulate $\sim 10^7$ times, the electron bunches on ALICE circulate only once. This makes it possible to keep the bunch length short and when the bunch length is shorter than the wavelength emitted by the electron laser through lensing impart the gain due to coherent emission and a massive increase in intensity. On ALICE this occurs in the terahertz (THz) region of the electromagnetic spectrum providing an intense broad band source to an energy of ~ 0.6 THz. These capabilities of ALICE are currently being exploited in studies of cervical, esophageal and prostate cancers in a multidisciplinary research programme. This lecture will explain the role of the ALICE accelerator in the SCARAC research programme.

28 September 2015
 Coffee at 16:00, Seminar at 16:30
CERN Main auditorium

Entrance free - Limited number of seats - Please register on <https://indico.cern.ch/event/437526/>
 Conférence en anglais – Traduction disponible en français



TRAINING

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

Please find here the 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.

Upcoming Technical Management courses (in chronological order)

	Language	Next Session	Duration	Available places
Procurement of supplies at CERN up to 200 000 CHF – e-learning	English	n/a	1 hour	n/a
Achats de fournitures au CERN jusqu'à 200 000 CHF – e-learning	français	n/a	1 hour	n/a
Selecting the right person for CERN	English	17 September	1 day	2
Building up a good Marie Skłodowska-Curie project and writing a successful proposal	English	22-23 September	2 days	13
Introduction to knowledge transfer tools	English	1 October	4 hours	14
Selecting the right person for CERN	English	8 October	1 day	12
Dealing with Media questions!	English	9 October	1 day	10
PMI Project Management	English	12/13 October + 9/10 November	4 days	2
Project Scheduling and Costing	English	13/14 October	2 days	4
Managing by Project GDPM	English	21/22 October	2 days	3
Selecting the right person for CERN	English	19 November	1 day	12
Project Engineering	English	10/11 December	2 days	11