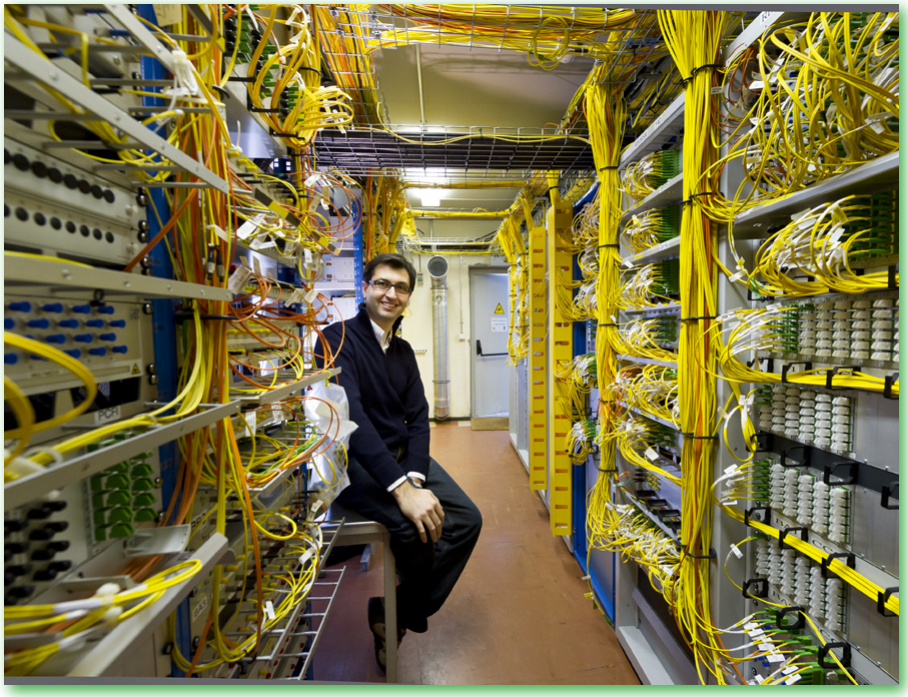
CERN Bulletin

Nos 48 & 49 – 1 & 8 December 2010

The Invisible Web



Daniel Ricci at the CCC optical fibre "starpoint", which serves the LHC installations and the computing centre in Meyrin.

There is an invisible web beneath CERN that keeps the entire system going. It often goes unnoticed, yet is responsible for transmitting the vast amounts of data produced at CERN: the optical fibre network.

CERN's 35,000 km of optical fibres are also used to synchronise the accelerators, take measurements of the beams and to send controls to the LHC. The network is maintained by a team of seven specialists working in the Cabling and Optical Fibres Section of the Engineering Department, while another eight specialists are responsible for copper control and direct current (DC) power cabling (412,000 cables at CERN). Although their work is essential to keep the LHC running, their record-breaking developments often go unspoken. In a recent seminar held on 14 October, the Optical Fibre team had the opportunity to present their exceptional work with radiation-resistant optical fibres.

"Over the past 7 years, we have developed special optical fibres that can resist the radiation levels of the LHC," says Daniel Ricci, leader of the Cabling and Optical Fibre section. "The qualification testing for these fibres is now being finalised." Over 2,500 km of special radiation-resistant optical fibres have been installed in the LHC, and their success has garnered the interest of other institutes dealing with radiation. Their most recent work has been done in collaboration with the International Thermonuclear Experimental Reactor (ITER).

The team has also improved the blowing technique used to install optical fibre cables.

(Continued on page 2)

Delivering new physics at impressive speed

The speed with which the heavy ion run at the LHC is delivering new physics is impressive not only for the insights it is bringing to the early Universe, but also for the clear demonstration it gives of the value of competition and complementarity between the experiments.

ALICE was the first off the mark to publish papers from the ion run, as you'd expect from the LHC's dedicated ion experiment, but results

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The Invisible Web

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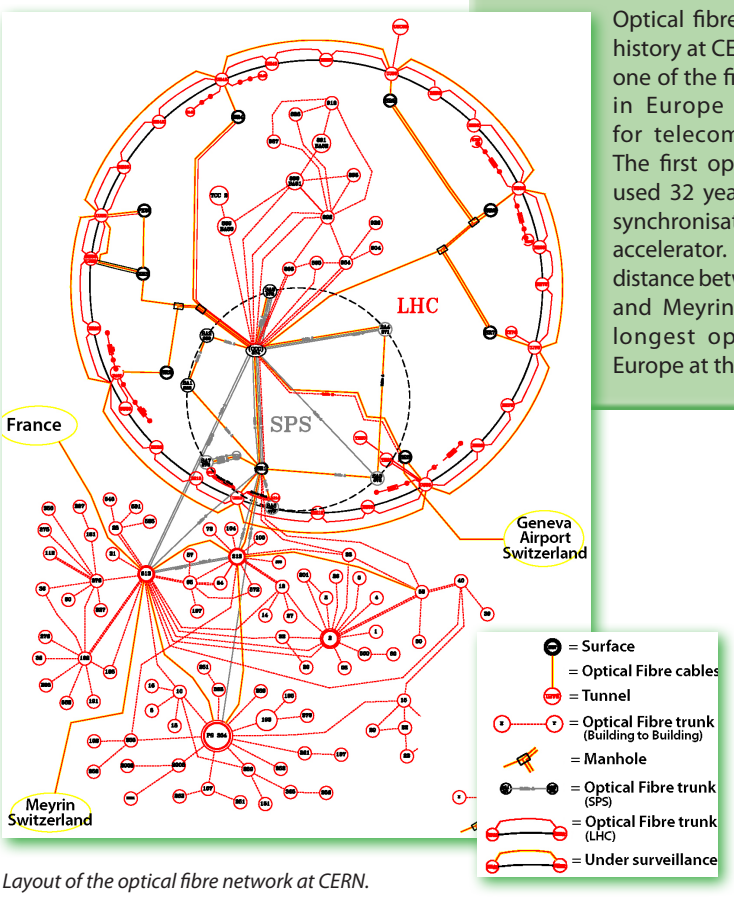
Industry can typically blow optical fibre lines a few hundred metres at a time, yet the length between sectors in the LHC is approximately 3.3 km! "In order to maintain the optical fibres while the LHC is in operation, we had to develop our own method to blow lines over this record-breaking distance in a single attempt," says Ricci.

The optical fibre network at CERN is constantly evolving. Every time a new project is developed or a new building is constructed, new optical fibres have to be laid out. "The installation of optical fibres never ends – there are always new projects, modifications of existing projects, and systems that need their copper cabling updating," says Ricci. In the long term, Ricci and his team would like to provide the SPS with an optical fibre infrastructure similar to that of the LHC. "The SPS currently has optical fibres running between specific points and the central control station. Extending the optical fibre network around the whole circumference of the SPS would certainly be a major improvement", concludes Ricci.

The Cabling and Optical Fibre section is going to be particularly busy during the upcoming Christmas technical stop. They will be preparing for major works that are planned for the 2012 shutdown, laying the groundwork for the new equipment, and installing a series of cable trays and racks at Point 7 and Point 8 of the LHC.

Katarina Anthony



Layout of the optical fibre network at CERN.

Did you know?

Optical fibres have a long history at CERN, which was one of the first institutions in Europe to use them for telecommunications. The first optical fibre was used 32 years ago for the synchronisation of the SPS accelerator. It covered the distance between Prévessin and Meyrin and was the longest optical fibre in Europe at that time.

(Continued from page 1)

Delivering new physics at impressive speed

emerging from ATLAS and CMS are bringing new understanding in their own right. Each collaboration's result plays to the strengths of its detector, and it is by taking all the results together that our knowledge advances.

The creation, observation and understanding of the hot dense matter that would have existed in the early Universe, normally known as Quark Gluon Plasma (QGP), is complex science and one of the ion programme's key goals. Many signals for QGP exist, and like pieces of a puzzle, we must assemble all of them to get the full picture. At the heart of the ALICE detector is the exotically named time projection chamber (TPC), a detector with an unparalleled ability to measure vast numbers of particle tracks.

The TPC was key to ALICE's first paper, which pointed to a large increase in the number of particles produced in the collisions compared to previous experiments at Brookhaven's RHIC collider with lighter nuclei and lower energy. ALICE's second paper confirms an earlier result from RHIC that the plasma seems to behave as a very low viscosity fluid. Taken together, these results have already ruled out some theories about how the primordial Universe behaved.

Add to that the result seen by ATLAS and CMS and we have the ingredients to start building up a clear picture of the primordial Universe. Both experiments measure jets of particles that emerge from collisions. Jets are formed as the basic constituents of nuclear matter, quarks and gluons, fly away from the collision point. In proton collisions, jets usually appear in pairs, emerging back to back. However, in heavy ion collisions the jets interact in the tumultuous conditions of the hot dense medium. This leads to a very characteristic signal, known as jet quenching, in which the energy of the jets can be severely degraded, signalling interactions with the medium. Jet quenching is a powerful tool for studying the behaviour of the plasma in detail.

LHC running for 2010 draws to a close this week. It's been a great year, and these results provide suitable Christmas icing on the cake.

Rolf Heuer

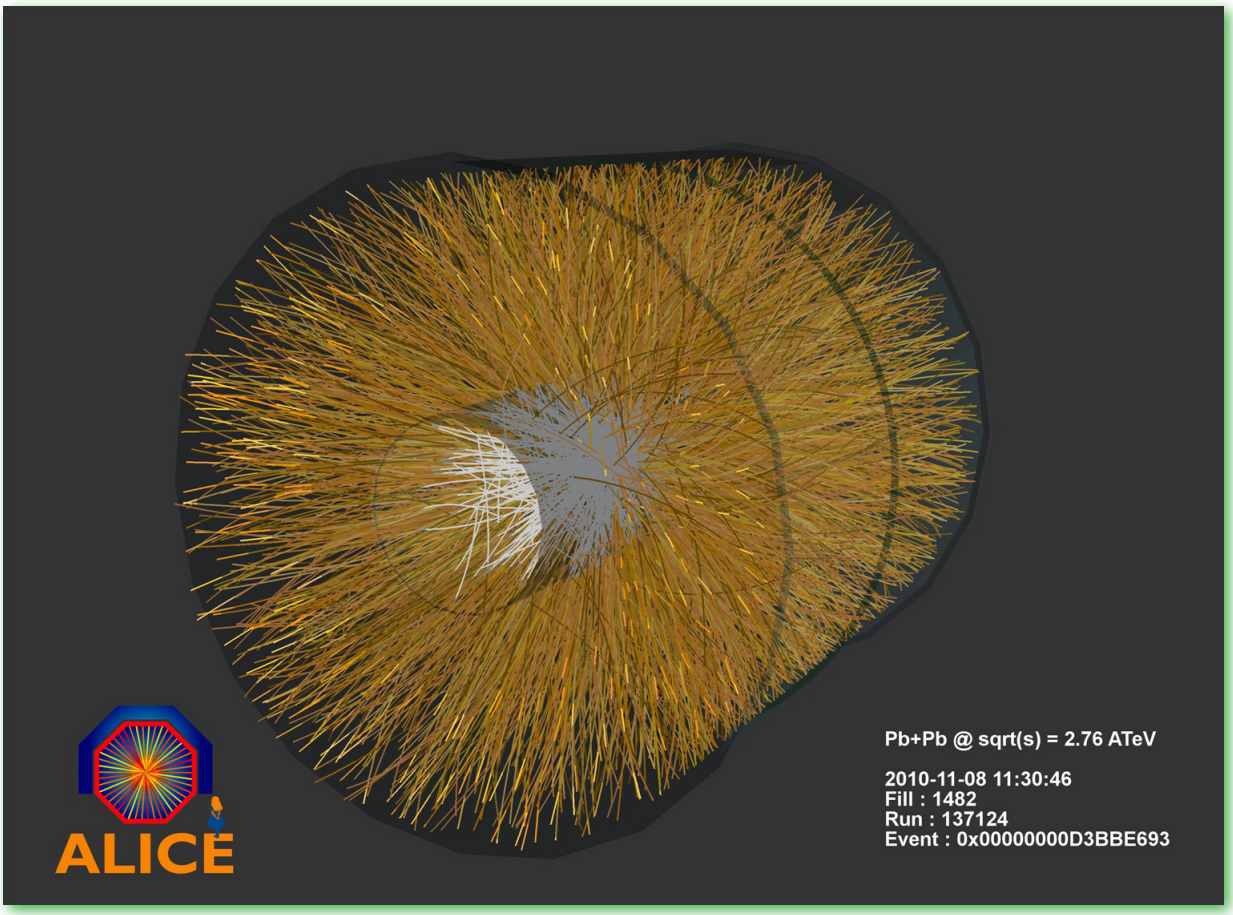
The Latest from the LHC: The success of the lead ion run continues

The success of the lead ion run continues, with the 2010 target of 121 nominal bunches achieved on Sunday, 14 November, just 10 days after the first ions were injected into the LHC. Operation under these conditions continued until Wednesday morning, when it was interrupted for a scheduled stop to replenish the lead ion source. By this time a peak luminosity of 2.8 10^{25} cm^{-2} s^{-1} had been reached, and over 2 μb^{-1} had been delivered to the experiments.

During the stop to replenish the source, the LHC switched back to proton operation so that studies with 50 ns and 75 ns bunch spacing could continue. These studies produced a wealth of valuable information about the behaviour of the machine with 75 ns bunch spacing, with up to 824 bunches circulating in one beam at 450GeV, and 680 bunches in both beams. Important data were also taken with 50 ns bunch spacing, allowing comparison both with runs made before the ion run started and with the behaviour of the machine with 75 ns spacing. In particular, measurements of the response of the vacuum system and of the heat loads deposited on the cryogenic beam screens will provide information essential for deciding the strategy for 2011. Accumulation of these data was considered to be of such importance that the proton run was extended until Saturday morning, beyond the time needed to replenish the lead ion source.

Throughout Saturday and Sunday, the injectors and the LHC were re-optimized for ion physics with 121 bunches per beam. The polarity of the ALICE spectrometer was switched on Tuesday to allow roughly equal amounts of data to be accumulated with both polarities. The ion run is scheduled to continue until Monday, 6 December. At the time of going to press, a peak luminosity of 2.5 10^{25} cm^{-2} s^{-1} had been reached, and over 4.5 μb^{-1} had been delivered to the experiments.

CERN Bulletin



Events recorded by the ALICE experiment from the first lead ion collisions.

Do atoms and anti-atoms obey the same laws of physics?

ALPHA physicists have recently succeeded in trapping anti-atoms for the first time. Being able to hold on to the simplest atoms of antimatter is an important step towards the collaboration's ultimate goal: precision spectroscopic comparison of hydrogen and antihydrogen. The question they are seeking to answer: do atoms and anti-atoms obey the same laws of physics? The Standard Model says that they must.

The ALPHA collaboration has taken it up a gear and trapped 38 atoms of antihydrogen for the first time. Antihydrogen atoms have been mass-produced at the Antiproton Decelerator (AD) since 2002, when ATHENA (ALPHA's predecessor) and ATRAP learned how to mix clouds of antiprotons and positrons at cryogenic temperatures. However, these anti-atoms were not confined, and flew off in a few microseconds to meet their fate: annihilation with matter in the walls of the experiment.

ALPHA uses antiprotons produced at the (AD) facility, trapping and then cooling them, and making them interact with positrons accumulated from a radioactive source (22Na). Cold antihydrogen atoms are formed inside a special magnetic "bottle" that prevents them from coming into contact with surrounding matter and annihilating. From the interaction of about 107 antiprotons and 7x108 positrons, the ALPHA collaboration observed 38 annihilation events that followed the controlled release of trapped antihydrogen (http://www.nature.com/nature/journal/vaop/ncurrent/full/nature09610.html). The antihydrogen atoms must be produced with an energy equivalent to less than 0.5 degrees above absolute zero or else they escape the trap and annihilate. The technical challenges were to produce these very cold atoms and to be able to detect rare annihilation events against background sources such as cosmic rays or stubborn antiprotons that linger in the atom trap after the charged particles should have been kicked out. Accelerator buffs will appreciate the fact that ALPHA empties its magnetic trap of antihydrogen in 30 ms by "quenching" the trap's superconducting magnets – and has done so several thousand times since the experiment began operation in 2006. Annihilations are detected by a three-layer silicon vertex detector similar to those used in many high energy physics experiments.

The charge-conjugation, parity, time-reversal (CPT) theorem, a crucial part of the theoretical foundation of the Standard Model, demands that hydrogen and antihydrogen have the same spectrum. Subjecting antihydrogen to rigorous spectroscopic examination would constitute a compelling, model-independent test of this fundamental symmetry of nature. This latest breakthrough puts ALPHA a major step closer to being able to perform this test. The announcement in Nature on 17 November resulted in worldwide press coverage for ALPHA – from CNN to Al Jazeera and beyond. In the words of one reviewer: "The very fact of a proof-of-principle demonstration of wall-free confinement of even a small number of antimatter atoms has an intrinsic philosophical value".

Jeffrey Hangst

The ALPHA Collaboration celebrates the successful results.

The CERN Global Network opens its doors to companies

Six months after its launch, the CERN Global Network already has almost one thousand members. Today, it is opening its doors to companies from CERN's Member States. This will open up a variety of new professional and career opportunities to all the members and will enhance the networking capabilities of all parties involved.

A new item has recently appeared on the top menu of the Network's website: "Organisations". This is the entry point for companies and, later, research institutes, wishing to join. "The CERN Global Network brings together hundreds of people who have worked at or with CERN and who have a wealth of skills and expertise. Thanks to the Network, the job opportunities made available by the companies will become visible to the wider community," says Linda Orr-Easo, a member of the Knowledge and Technology Transfer Group and the CERN Global Network Manager.

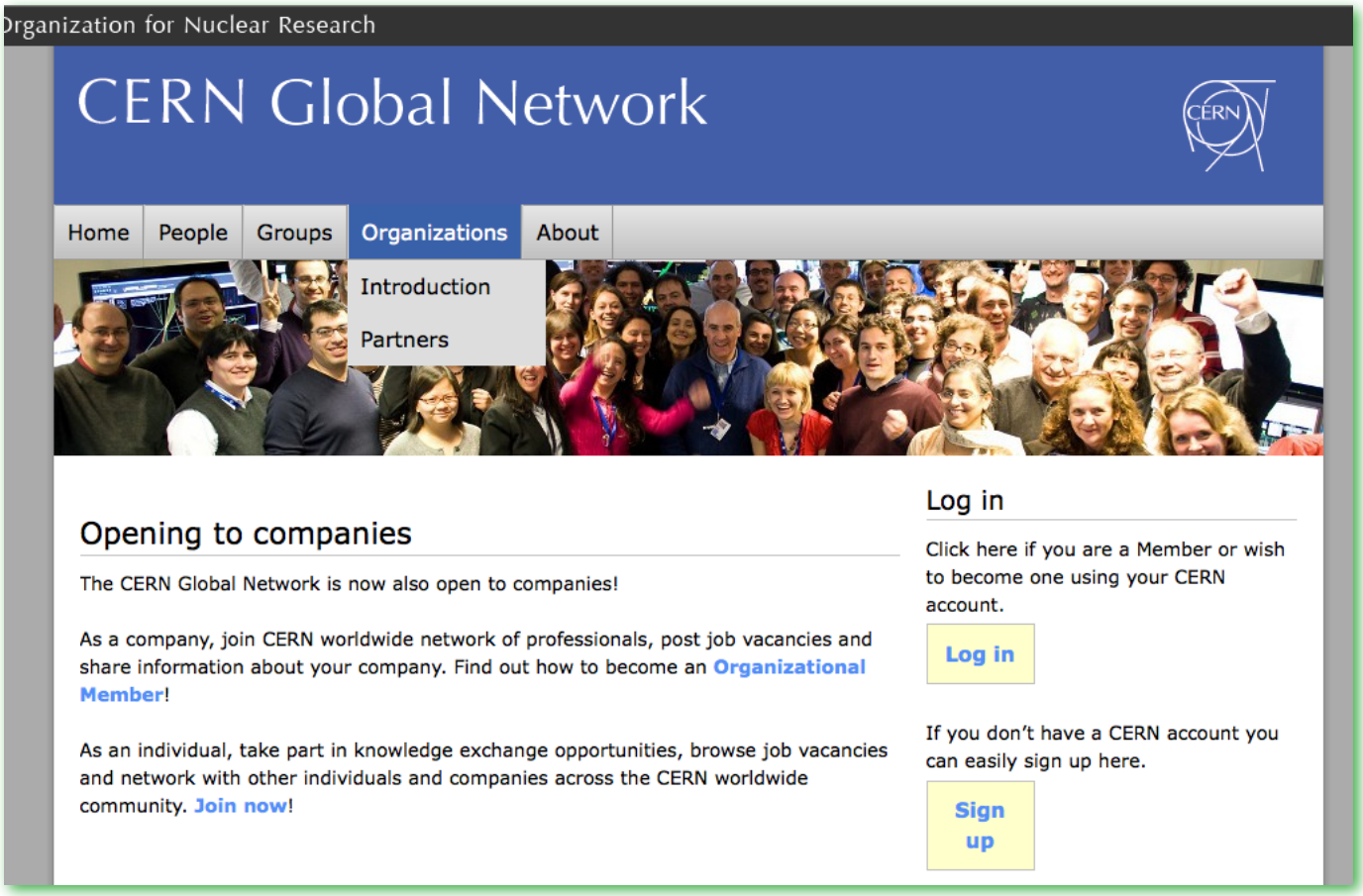
In addition to creating new career opportunities for all its members, opening membership to companies makes the Network a virtual place where experts in the same field, but coming from different communities, can exchange ideas and knowledge. "You can use the CERN Global Network as a tool to interact with people – individual members, experts from companies and, later, from research institutes – that you may not easily reach otherwise.. Through the 'Groups' too, virtual discussion rooms can be created. There are many possible topics, and one example is project management, which may or may not be the same seen from an industrial point of view and the point of view of a research environment," says Linda.

The Network is built around people for networking and exchanging knowledge. "Each member joins the Network on an individual basis. Therefore, a company wishing to join the Network has to nominate a representative to become a member. After that, he/she will be able to invite other individuals from the same company who are experts in their field to join, " explains Linda.

After the companies, membership of the CERN Global Network will also be opened up to research institutes and universities worldwide. There will then be targeted knowledge exchange activities. This will provide a lot of interesting opportunities concentrated in just one global website!

For further information on the CERN Global Network, please contact global.network@cern.ch

Francesco Poppi



Screenshot of the CERN Global Network website.

Restaurant No. 1 seating capacity increases by 240

These days you need patience when looking for a seat in Restaurant No. 1 to eat your lunch. The opening of the new dining room, which will increase the restaurant's seating capacity by 240, should alleviate the problem and improve service.

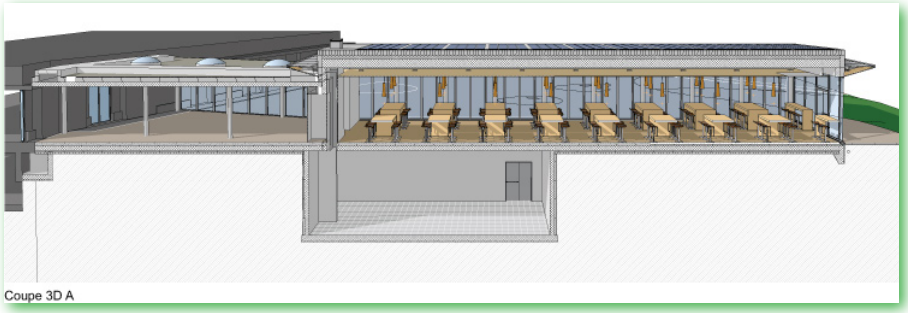
For the past several years the number of people using Restaurant No. 1 has grown steadily. Now, for a change, the restaurant itself is growing. Luz Lopez-Hernandez, leader of the project in the GS Department, explains: "Enlarging the restaurant has been on the GS Department's agenda for several years, but the project really got off the ground in 2009. Once it was approved and the design completed, construction itself only took seven months."

Seven months later, the restaurant extension is indeed on the verge of opening. One of the people who will be particularly happy is Joël Nallet, who manages the Novae restaurant: "I am thrilled, because until now, even if we managed to increase the speed with which we serve the customers, they still had to wait for a space to become free before they could eat. That problem should now be taken care of."

Well, perhaps not right away: when the extension opens for business, it will be the turn of the two dining rooms with wooden floors: they will close until February 2011 for renovation work. When that is finished, Novae will install a bar with two tills reserved for the sale of take-away sandwiches, salads, beverages and so on. "The idea is to separate the take-away business from the main food lines, by allowing take-away customers to avoid going through the main tills. There will also be a machine for dispensing coffee tokens," adds Joël Nallet.

The GS Department is working together closely with the Novae team on the construction and renovation projects. "Not only will this increase the number of restaurant spaces by 240, but the new room will also provide customers with other services they need, such as WiFi coverage, power outlets in the floor, three wall-mounted screens, two coffee machines and two drinking water dispensers," notes Christophe Biot, deputy project leader in the GS Department. The modern, comfortable furniture will make this a pleasant place to eat and relax. In the summer, the portion that connects the new dining room to the main restaurant will be completely open, with access to the terrace (see plan). Have fun exploring the new space!

Laëtitia Pedroso



Plan of the new extension.

The new restaurant area

The new coffee area/relaxation area.

A rendez-vous with history

François de Rose, one of the founding fathers of CERN, visited the Laboratory. On this occasion, CERN organised a ceremony for his 100th birthday.

It was a moving, almost surreal, scene. On Wednesday 24 November, François de Rose, one of the founding fathers of CERN, visited the CERN Control Centre. In the early 1950s, François de Rose, a French diplomat, helped establish CERN along with some of the greatest physicists of the time. Standing in a futuristic room that only science fiction writers could have imagined when CERN began, the diplomat – who turned 100 only a few days before his visit - marvelled at the progress that had been made in nearly 60 years. Taking in the rush of operators – including those from PS, an accelerator which he inaugurated as President of the Council in 1960 – François de Rose shared his emotions: "I feel a great sense of pride and admiration when I see that the ideals of peace, progress and universality that created CERN have been preserved after so many years. That the spirit of the founders has endured over the years confirms their ideals were right. Their wildest dreams have been exceeded."

CERN organised a birthday celebration for the diplomat. François de Rose spoke to the audience there, reiterating his sense of pride for CERN and adding a bit of humour. "You know, it is not an achievement to reach 100 years. With a little patience, you can get there eventually. On the other hand, every day there are real achievements here at CERN." François de Rose left CERN with a promise to return for the discovery of the Higgs boson, "in two years" he estimates.

Corinne Pralavorio

François de Rose, guided through the CERN control centre by Pierre Strubin from the Technology department.

François de Rose at CERN during the ceremony organised for his 100th birthday. From left to right: Torsten Åkesson, former President of Council, Carlo Rubbia, Nobel Prize in physics and former Director General, Rolf Heuer, Director General, and Herwig Schopper, former Director General.

New psychologist at CERN

A new psychologist, Sigrid Malandain, started work at CERN on 1 November. The psychologist's office, formerly part of the Social Affairs Service in Human Resources, has now moved to the Medical Service (office 57-1-024). It is open every Tuesday and Thursday.

Working in an organisation like CERN has numerous advantages. However, as in any professional setting, the work can sometimes bring stress, anxiety, overwork and so on. For this reason, a few years ago CERN brought in a psychologist for the staff. "As a psychologist, my role isn't just to deal with known problems, but also to make assessments and, if possible, prevent difficult situations arising. Sometimes people realise that something is wrong, but they can't say why. In such cases, I may be able to use a discussion to assess the nature of the problem and determine if further sessions are needed. If that is the case, I can either conduct the sessions myself or refer the individual to colleagues outside CERN," explains Sigrid.

The psychologist is available for consultation for any problem, large or small; it may be related to the job, or it may be an individual or private matter. "The earlier a problem is addressed, the easier it is to resolve it. Unfortunately, we often tend not to think of consulting a psychologist until the problem has become seriously entrenched. Professional confidentiality is our watchword, and our consultations remain strictly confidential," states Sigrid.

The members of the CERN personnel today have at their disposal various means of obtaining support: a psychologist, the Ombudsman, social assistance, the Equal Opportunities Advisory Panel, and the doctors. Deciding whom to see may not be very clear. The answer is very simple: when you go to see any one of those professionals, they will advise you and orient you towards the appropriate service to consult.

Laëtitia Pedroso

Did you know?

The curriculum vitae of Sigrid Malandain

Of French and Swedish nationality, Sigrid did her studies in Switzerland and France. After earning her secondary school diploma, she went to Grenoble for two years, and obtained her DEUG (Diplôme d'Etudes Universitaires Générales) in psychology. She then went to Lausanne to study for three more years, and received her Master's degree in psychology there. In parallel, she pursued a five-year post-grad training programme in behavioural and cognitive psychotherapy. Today, Sigrid spends three days a week working as a psychologist and psychotherapist in a private practice with a psychiatrist colleague in Lausanne. She started her career working in hospitals, including the adult psychiatric wards in Prangins and Marsens (Switzerland) and the child psychiatric ward in Mâcon (France).

The new psychologist, Sigrid Malandain.

A very special Physics Class gets a flavour of the "spirit of CERN"

On 9 and 10 November, forty members of a very special physics class visited CERN for the first time. They came from the Royal Swedish Academy… does that ring a bell?

The Physics Class of the Royal Swedish Academy of Sciences is the institution that each year awards the Nobel Prize in Physics. Forty of its members visited CERN, just a few weeks after awarding the 2010 Nobel Prize in Physics to Andre Geim and Konstantin Novoselov 'for groundbreaking experiments regarding the two-dimensional material graphene'.

Although many of its members have strong links with the Laboratory, this was the first time the Class had come to CERN on an official visit. "I have been at CERN for the last two years, working at ISOLDE", says Björn Jonson, visiting Scientist at CERN, chair of the Physics Class and member of the Nobel Committee. "I wanted to organize this important visit before leaving CERN to go back to my university in Sweden. I was sure my fellow colleagues would like the idea, as every time I've taken people to CERN they've immediately fallen completely in love with it."

From left to right: Gösta Ekspong, Mats Jonson and Lars Bergström, members of the Physics Class of the Royal Swedish Academy of Sciences.

The Physics Class of the Royal Swedish Academy of Sciences organizes annual visits to other laboratories but, to preserve their integrity, the members only go if they are NOT invited. So, CERN did not invite them but, indeed, prepared a rich programme for their visit, which included tours of ISOLDE, the AD, the CCC and the ATLAS Control Room, and, of course, a nice reception in the Globe. "These are exciting times for CERN and we are really pleased to be here", commented Lars Bergstöm, secretary of the Nobel Committee who was also a CERN Fellow in the early 1980s. "It's very clear that CERN is taking the lead in the field of particle physics. The performance of the LHC and its experiments is really impressive. They are certainly the top candidates to discover new physics and this is something that, by definition, interests the Nobel Committee."

Nobody knows what the future will bring but, in the words of Lars Bergstöm, there is already something here that is worthy of a special award: the 'spirit of CERN'. "During this visit, we got a very good idea of the spirit of CERN", he says. "Here people from different cultures have been working peacefully together since the very beginning. They manage to do ingenious things in a very efficient way. This is a great achievement, irrespective of whether or not they find some spectacular new things."

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Members of the Nobel Committee visit the SM18 Hall.

The colours of CERN

Would you move into an office painted in a colour you hate? As we all know, taste in colour is individual. Thanks to the establishment of a new Painting Charter, conflicting opinions will be unified.

There were many reasons behind the creation of the Painting Charter by the GS SEM Department. Unlike many companies, CERN has not until now regulated which colours can be used inside buildings. With many nationalities passing through CERN, tastes tend to differ: northern countries usually prefer colder colours, while southern countries seem to prefer warm colours. It's not hard to imagine how quickly we could make a rainbow!

In addition, whenever an office needs to be repainted, it can be difficult to find exactly the same colour. This results in entire walls being repainted, which increases the cost. If – by chance – the original colour is found, it could be out of stock. While it is being ordered, CERN staff need to wait even longer to have their walls repainted. "This Charter will not only reduce costs, inventories, etc., but it will also enable us to respond faster to the numerous requests from CERN staff, and, thus, work more efficiently," said Richard Morton, from the GS SEM Department.

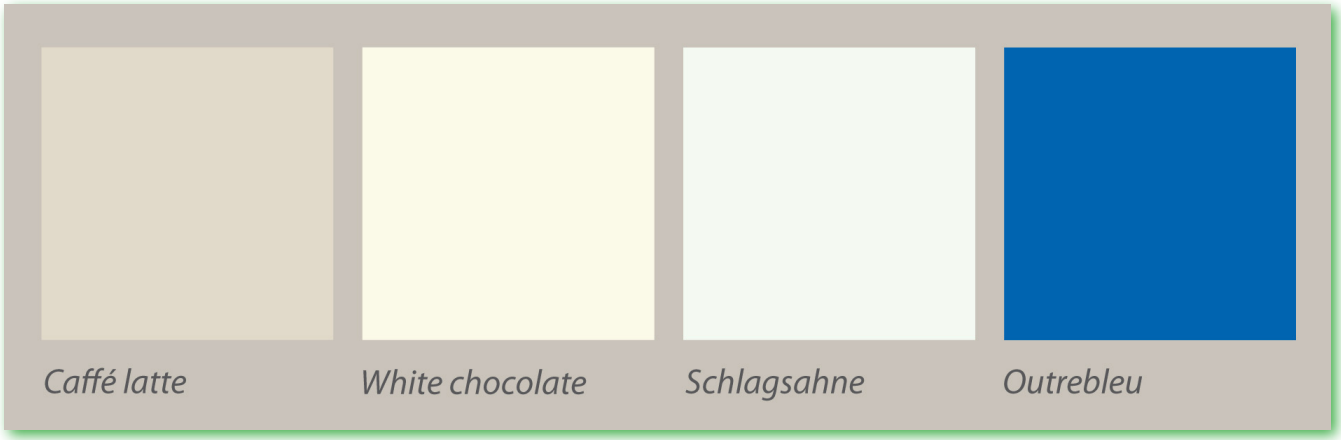
Besides helping resolve financial and managerial issues, the Charter aims to present a uniform image of CERN. The Painting Charter is the first step towards incorporating the Graphics Charter, currently under development, into CERN. "Colours give companies their own identity. Up until now, the colours of the CERN site had not been clearly defined. With the introduction of the Painting Charter, the interiors of the buildings will be consistent, "said Fabienne Marcastel, graphic designer. Three neutral colours have been chosen for office walls, while a blue colour has been selected for use on doors to technical areas (see below).

The colours were selected from RAL, an international system of colour coding. Interestingly enough, each of these four colors was given a separate English, French, Italian and German name.

Not only does this new charter unify the colours of paint that will be used, it also applies to floors. In fact, different types and colours of flooring are included in the Painting Charter: carpeting will be laid in meeting rooms in order to reduce noise; offices will be given linoleum floors, which are easy to maintain; tiles will be placed on the three types washrooms - technical, public and staff.

If you would like painting work or any other maintenance work to be carried out, call 77 777 (help desk).

Laëtitia Pedroso



The four new paint colours established in the Painting Charter.

That's a matter for ALICE!

ALICE has launched a new online newsletter to report on developments at the detector: ALICE Matters. The fortnightly newsletter will keep members of the collaboration – and a wider readership – up-to-date with the latest news from the detector.

The new ALICE Matters newsletter highlights the work of ALICE collaborators through news, interviews and feature articles. Published online every fortnight, it will report the latest developments from the experiment, providing information about operation and data taking, installation work during technical stops, and news from ALICE members.

The newsletter is aimed at members of the collaboration, but as an online publication it is also open to the general public. "We often receive questions from people who follow our progress and are interested in what's happening at ALICE," explains Despina Hatzifotiadou, ALICE Outreach Coordinator. "With ALICE Matters, we can now address these queries in a public environment."

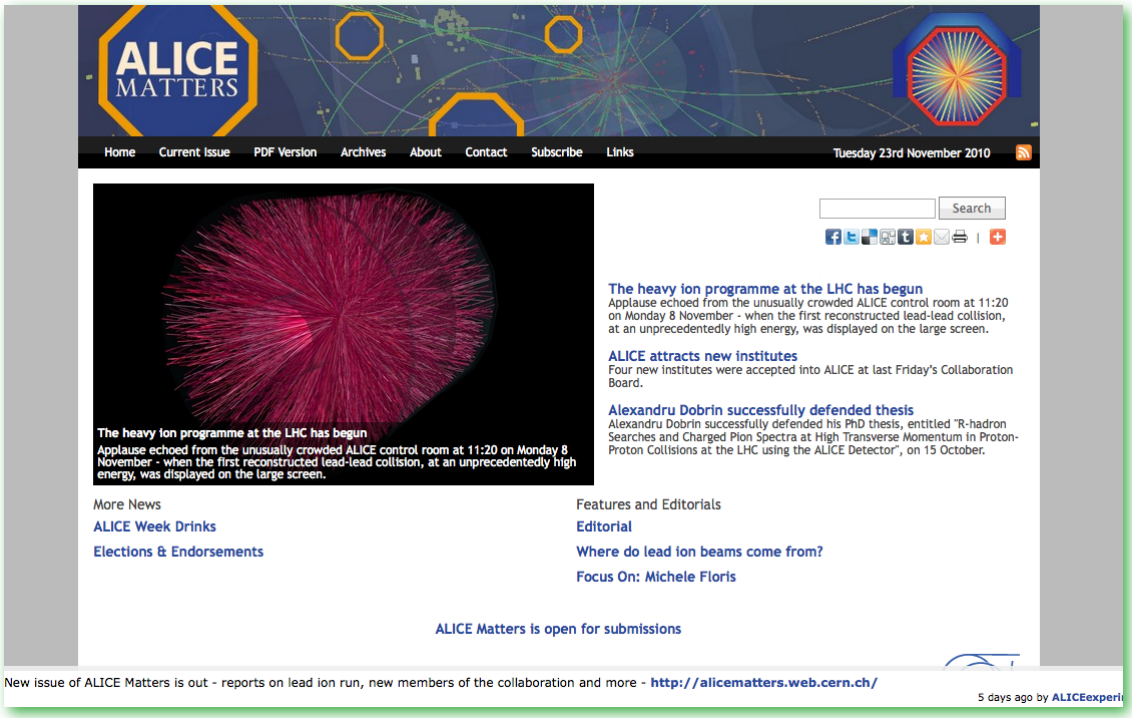
Although the first edition of ALICE Matters was published on 3 November 2010, the concept has been under development for some time. "We had been considering the idea of a newsletter for a few months," says Hatzifotiadou. "But we waited to find a science journalist to manage the project. We were able to recruit Ian Randall, fresh from City University London's MA Science Journalism programme, as the editor of ALICE Matters. Once he was on board, we were amazed how quickly things progressed!" The first newsletter's publication came at a historic moment for the ALICE experiment, reporting the lead-up to the first ion run.

ALICE Matters is a collaborative publication that invites ALICE members to contribute by writing articles, sharing personal stories and providing information for future articles. The newsletter also encourages its general readers to participate in the discussion, allowing them to post comments and feedback directly on the ALICE Matters website.

Find out what's new at ALICE and share your opinion at the ALICE Matters website, at:

http://alicematters.web.cern.ch/

Katarina Anthony



Screenshot of the ALICE Matters website.

Behind the scenes at LHCb

A new book chronicling the journey of LHCb has just been published: "LHCb: the collaboration in photos". It takes readers through the creation of the detector, from the project's inception to the construction of the site and final operation.

"LHCb: the collaboration in photos" presents a stunning collection of images and information about the experiment and its staff. Part photo journal of the experiment's creation, part introduction to the physics and engineering of the detector, it provides a complete overview of the LHCb project.

The many faces of the LHCb collaboration are reflected in the 77 glossy pages of the new book: from technical staff to computer scientists, physicists to secretaries, and Nobel Prize winners to post-docs. For all of its members, the book represents a well-earned celebration of their 15 years of effort. "We are very pleased to have this new communication tool," says Andrei Golutvin, LHCb spokesperson. "I am sure it will be put to good use - be it to showcase the experiment to visiting dignitaries or as a souvenir for members of the collaboration, and, indeed, the many visitors to Point 8 and other collaboration sites."

"LHCb: the collaboration in photos" offers something for every reader. For visiting VIPs, the book also provides information about knowledge and technology transfer programmes developed at the experiment. For students considering a career in physics, an entire chapter is devoted to information about working at CERN and invites them to take part in the LHCb through open days, Summer Student programmes, and even PhD placements.

Cover of the new book, "LHCb: the collaboration in photos".

The book features several of the iconic images of LHCb, while also revealing some never-before-seen photos of the detector and its staff. "Images came from a wide variety of sources, with members of the collaboration sharing their own collections for the book," says Emma Sanders, the book's co-author. According to Golutvin: "This beautiful collection of images will also no doubt inspire use of LHCb photos in other contexts, such as magazine articles or exhibitions."

"LHCb: the collaboration in photos" is currently on sale at the Library shop, the Reception shop, and through the LHCb secretariat. The book will also be on sale in front of Restaurant No. 1 on Friday, 10 December and Friday, 17 December. At only 10 CHF, this glossy book of photos and physics will make a stunning Christmas present.

Katarina Anthony

A Lego version of ATLAS

There's nothing very unusual about a small child making simple objects out of Lego. But wouldn't you be surprised to learn that one six-year old has just made a life-like model of the ATLAS detector?

It all began a month ago when the boy's father was watching a video about the construction of the ATLAS detector on the Internet. He hadn't noticed that his son was watching it over his shoulder. The small boy was fascinated by what he was seeing on the computer screen and his first reaction was to exclaim: "Wow! That's a terrific machine! I think the people who built it must be really clever". The detector must have really fired his imagination because, after asking his father a few questions, he decided to make a Lego model of it. Look at the photo and you will see how closely the model he produced resembles the actual ATLAS detector.

Is the little boy in question, Bastian, a budding physicist or engineer? Not really. Bastian is more interested in architecture and says that he's impressed by Gaudi's church of the Sagrada Familia in Barcelona. "I don't know about many professions yet but I'd like to become an architect so that I can build big and beautiful things like that. I really like the shape of the ATLAS detector and it's amazing how they managed to assemble such a huge machine so deep down", he says. We wish him much success in his future career!

Laëtitia Pedroso

Bastian with his Lego ATLAS detector. © Photo provided by Kai Nicklas, Bastian's father.

EIROforum welcomes the European XFEL as a new member

The European research facility XFEL has become the eighth member of EIROforum. Just as political and economic interests have become unified within Europe, scientific research is benefiting from a similar alliance.

In this day and age, scientific research is oriented towards large-scale projects, which require the involvement of a large number of partners – meaning funding institutes or national governments – and, obviously, the cooperation of the leading experts in a variety of related fields. For these reasons, it is essential to encourage synergies on an international level, combining resources, facilities and expertise. This is the quest of EIROforum, which brings together research organizations from many different fields (see box).

The role of EIROforum is to facilitate interactions with the European Commission, other bodies of the European Union and national governments. It is active in the field of science policy, supporting the construction of the European Research Area; it also works closely with industry to drive innovation and to stimulate the transfer of technology. "Since its beginning almost 10 years ago, the members have developed a wide range of joint activities including training, scientific instrumentation, outreach and education," said Francesco Romanelli, Director-General of EFDA-JET and current Chairman of EIROforum.

EIROforum plays a key role in communicating science to the general public, promoting and organizing science education activities and initiatives. One of these is Science on Stage, an event that brought together hundreds of European science teachers to swap ideas and experiences through workshops and an interactive arena. This led to the creation of a strong network of science teachers across Europe, supported by the Science in School journal. The publication is one of EIROforum's main educational initiatives and is freely available in over 25 European languages to inform science teachers and students.

"The European research organisations that are presently in EIROforum are bright success stories of European collaboration in science. The European XFEL has the ambition to become a further success story and looks forward to joining other organisations to draw upon their experience and, together with them, to strengthen the science basis for a stronger and more globally competitive Europe," concluded Massimo Altarelli, Chairman of the XFEL Management Board.

This article is based on the EIROforum press release, which is available at:

http://www.eiroforum.org/downloads/pr_08nov2010.pdf

Francesco Poppi

Massimo Altarelli, Chairman of the XFEL Management Board (left) and Francesco Romanelli, Chairman of the EIROforum (right). In the back (left to right): Francesco Sette (ESRF), Felicitas Pauss (CERN), Iain Mattaj (EMBL), Richard Wagner (ILL), Rowena Sirey (ESO) and David Southwood (ESA).

Did you know?

XFEL

The European XFEL (X-Ray Free-Electron Laser Facility), based in Hamburg (Germany), is currently under construction, with commissioning planned for 2014. It is supported by several countries: Denmark, France, Germany, Greece, Hungary, Italy, Poland, Russia, Slovakia, Sweden and Switzerland. Spain and China have also expressed an interest in joining. The facility will produce ultra-short X-ray flashes which will enable scientists to map the atomic details of viruses, decipher the molecular composition of cells, take three-dimensional images of the nano-world, film chemical reactions, and study processes such as those occurring deep inside planets.

EIROforum

EIROforum is a collaboration of eight European intergovernmental scientific research organizations. The EIROforum charter was formally signed in 2002, followed by a Statement of Intent between the EIROforum and the European Commission in 2003. The seven founding members of EIROforum are CERN, EFDA-JET, EMBL, ESA, ESO, ESRF and ILL. They cover the scientific disciplines of particle physics, fusion, molecular biology, space research, astronomy and astrophysics, materials science, and neutron research. EIROforum operates through "Thematic Working Groups". These are: Grid, International Affairs, Human Resources, Instrumentation, and Outreach and Education.

From the Geosphere to the Cosmos

On 1 -2 December, the European Network ASPERA will be organising the "From the Geosphere to the Cosmos" workshop at the Palais de la Découverte in Paris. The LIDO platform, 3D-radiography projects for volcanoes, and CERN's CLOUD experiment are among the interdisciplinary projects that will be presented at the workshop.

Astroparticle physics is a new field mixing both particle physics and astrophysics. It offers many new opportunities for environmental disciplines such as oceanography, climate science and studies of the atmosphere, and geology. "From the Geosphere to the Cosmos" workshop will present them to the scientific community and the press.

LIDO: Probing new territories

Whales sing at the same wavelength as the neutrinos emitted by stars. This happy coincidence gave physicists the idea to share their undersea telescopes with marine biologists. By helping the development of a bioacoustics network to monitor the deep-sea environment, they have already enabled the discovery of the unexpected presence of sperm whales in the Mediterranean Sea. Thanks to the LIDO (Listen to the Deep Ocean) platform, it is even possible to listen to whale songs live from home with a personal computer connected to the web.

Making 3D images of volcanoes

Just as it is possible to image the human body with X-rays, particle physics detectors should soon be able to make three-dimensional images of volcanoes, and thus help better understand their mechanisms and, indeed, risk prevention. As they interact very weakly with ordinary matter, some particles, such as neutrinos and muons, cross huge thicknesses of rock, revealing the densities of the different layers they go through. In addition, geoneutrinos could allow studies of the Earth's core.

CLOUD: Better understanding of the atmosphere and climate

Studies suggest that cosmic rays might have an influence on the amount of cloud cover through the formation of aerosols. The CLOUD experiment at CERN uses a cloud chamber to study the possible link between cosmic rays and cloud formation. The results could greatly modify our understanding of clouds and climate.

The programme of the workshop is available here:

http://bit.ly/agFINp

CERN Bulletin

Ombuds' Corner
Le coin de l'Ombuds

In this series, the Bulletin aims to explain the role of the Ombuds at CERN by presenting practical examples of misunderstandings that could have been resolved by the Ombuds if he had been contacted earlier. Please note that, in all the situations we present, the names are fictitious and used only to improve clarity.

Users and Staff Members

Pam* and Jeff* are both physicists working on the same project for an experiment. Pam is from a collaborating institute and Jeff is a CERN staff member. As the project is being developed at CERN they both share the same technical support available in the Laboratory. At the beginning they organised themselves so they could get the support that both of them needed.

When some milestones concerning the delivery of parts became urgent, they started to actually compete for the same resources, which could not possibly satisfy all requests at the same time. With the time pressure increasing, Jeff started to accuse Pam of diverting the resources for her own share of the project, while Pam in turn accused Jeff of using his position at CERN to prevent the technical team from working with her.

The conflict between them rapidly increased to the point where Pam complained to her home institute about the lack of support from the Organization, and Jeff did the same with his hierarchy, stressing that his resources were diverted. At the point where there was a high risk of developing a conflicting relationship between the institute and CERN, the Ombuds was called in to help.

Conclusion

If the conflict had been managed at an early stage, an agreement between them in dealing with their respective responsibilities could have been found with the Ombuds, who has the advantage of being fully independent and neutral in such issues. The conflict would then not have reached the level of a possible disagreement between a collaborating institute and CERN, which could be very damaging for an international collaboration.

Contact the Ombuds early!

http://cern.ch/ombuds

Vincent Vuillemin

** Names and story are purely fictitious.*

CERN Library *Bibliothèque*

News from the library

CERN Bookshop Christmas sale

If you are looking for an idea for your Christmas gifts, the Bookshop of the Central Library offers you a wide choice of titles in physics, mathematics and computing.

It will have a stall in the Ground Floor of the Main Building (Bldg 500) from 7 to 8 December 2010. You are welcome to come, browse and buy books at very interesting prices!

A list of the Bookshop's available titles is available at:

http://cdsweb.cern.ch/collection/CERN%20Bookshop

This Bookshop is located in the Central Library, Building 52 1-052, and is open on weekdays from 8.30 a.m. to 7.00 p.m. It can be contacted by e-mail at bookshop@cern.ch. CERN Users can buy books and CDs at discount prices.

CERN Library

Official news

DEAR CERN AND ESO COLLEAGUES AND RETIREES

Following approval by the CERN Pension Fund Governing Board, the CERN Pension Fund team is pleased to announce the new website address of your Pension Fund:

http://pensionfund.cern.ch

I take this opportunity to thank all the technical teams at CERN for the quality and rapidity of their support.

Kind regards,

Théodore Economou
CEO, CERN Pension Fund

Take note

MUSIC, VIDEOS AND THE RISK FOR CERN

Do you like listening to music while working? What about watching videos during leisure time? Sure this is fun. Having your colleagues participating in this is even more fun. However, this fun is usually not free. There are music and film companies who earn their living from music and videos.

Thus, if you want to listen to music or watch films at CERN, make sure that you own the proper rights to do so (and you have the agreement of your supervisor to do this during working hours). Note that these rights are personal: You usually do not have the right to share this music or these videos with third parties without violating copyrights. Therefore, making copyrighted music and videos public, or sharing music and video files as well as other copyrighted material, is forbidden at CERN --- and also outside CERN. It violates the CERN Computing Rules (http://cern.ch/ComputingRules) and it contradicts CERN's Code of Coduct (https://cern.ch/hr-info/codeofconduct.asp) which expects each of us to behave ethically and be honest, and credit others for their contribution.

Violating copyrights is not a trivial offense. Sharing music or video files via the CERN network or from CERN computers will reflect back onto the Organization and shed a bad light on all of us. Therefore, help to keep CERN's reputation and integrity protected. Do NOT run file sharing software like Bittorrent, eDonkey, Emule, KaZaA at CERN, and respect copyrights. Users violating these rules may face serious consequences.

IT Department

THE CERN ELECTRONICS POOL MOVES TO BUILDING 13

Please note that we will be closed for two weeks

from 29 November
to 13 December 2010.

Please anticipate your needs.

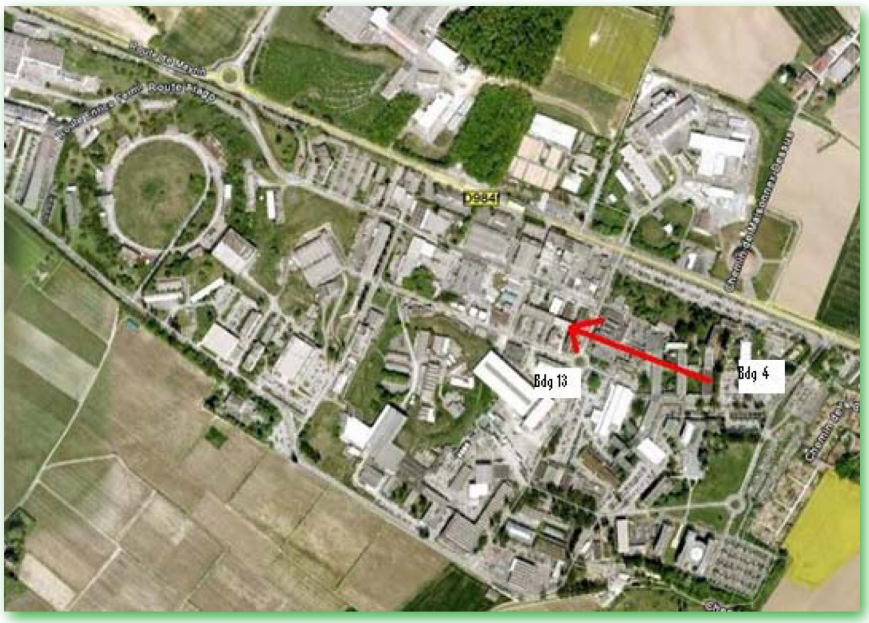
As soon as we re-open in Building 13 R-009, you will be able to come and choose the instruments you want to rent: oscilloscopes and other measurement instruments, low and high voltage power supplies, modular instrumentation, etc.

Please do not hesitate to consult the catalogue and give us any input you may have.

The CERN Electronics Pool operates on a self-service basis (with a CERN budget code) and is available for any help you may need, at

http://ph-dep-ese.web.cern.ch/ph-dep-ese/pool/pool.html

PH Department



Take note

INFORMATION FROM THE CENTRAL STORES

All items sold in the CERN shop (Bldg. 33) are now available in the central stores (Bldg. 73) and can be purchased on-line via EDH "Material Request" or at the "Emergency Desk" of the stores on the ground floor of Bldg. 73.

These items are visible in the CERN catalogue under the "SCEM" codes beginning with 92.

Department of
General Infrastructure Services (GS)
GS-SEM Group

CAR STICKERS FOR 2011

The 2011 car stickers are now available.

- Holders of blue car stickers will receive by internal mail their 2011 car stickers as of 15 December.
- Holders of red car stickers are kindly requested to come to the Registration Service (Building 55,1st floor) to renew their 2011 stickers. This service is opened from Monday to Friday from 7.30 am to 5.30 pm non-stop. Documents related to the vehicles concerned are mandatory.

Reception and Access Control Service – GS/ISG/SIS
General Infrastructure Services Department

NEW COMPUTER ACCOUNT MANAGEMENT SYSTEM

On 22 November, the current management system called CRA was replaced by a new self-service tool available on a Web Portal:

http://www.cern.ch/account

The End-Users can now manage their computer accounts and resources themselves through this Web Portal. The ServiceDesk will provide help orforward requests to the appropriate support line in case of specific requests.

Account management tools

The Account Management Portal (http://www.cern.ch/account) allows you to:

* Manage your primary account;
* Change your password;
* Create and manage secondary and service accounts;
* Manage application and resource authorizations and settings;
* Find help and documentation concerning accounts and resources.

Get Help

* In the event of any questions or problems, please contact the ServiceDesk (phone +41 22 767 8888 or it.servicedesk@cern.ch)

The Account Management Team

JOHN ADAMS LECTURE

13 December 2010

14:30 - Council Chamber, Bldg.503-1-001

Accelerator Breakthroughs, Achievements and Lessons from the Tevatron Collider

V. Shiltsev / Fermilab's Accelerator Physics Centre

This year we celebrate the 25th anniversary of the first proton-antiproton collisions in the Tevatron. For two and a half decades the Tevatron at Fermilab (Batavia, IL, USA) was a centerpiece of the US and world's High Energy Physics as the world's highest energy particle collider at 1.8 TeV center of mass energy. While funding agencies are deciding on a 3-year extension of the Collider Run II operation through 2014, we – in this 2010 John Adams Lecture - will take a look in exciting story of the Tevatron: the story of long preparations, great expectations, numerous difficulties, years of "blood and sweat", continuous upgrades, exceeding original goals (by a factor of 400) and high emotions. An accelerator scientist prospective will be given on a wide spectrum of topics: from "plumbing" issues to breakthroughs in beam physics, from luminosity achievements to social dynamics in scientific organizations and lessons for the LHC.

Take note

ACCU MEETING

DRAFT Agenda
for the meeting to be held
on Wednesday 8 December 2010
at 9:15 a.m. in room 60-6-002

1. Chairperson's remarks
2. Adoption of the agenda
3. Minutes of the previous meeting
4. Matters arising
5. News from the CERN Management
6. Report on services from GS department
7. The CERN Ombuds
8. The new account management system
9. Crèche progress + Restaurants
10. Reports from ACCU representatives on other committees
11. Users' Office news
12. Any Other Business
13. Agenda for the next meeting

Anyone wishing to raise any points under item 12 is invited to send them to the Chairperson in writing or by e-mail to

Michael.Hauschild@cern.ch

Michael Hauschild (Secretary)

ACCU is the forum for discussion between the CERN Management and the representatives of CERN Users to review the practical means taken by CERN for the work of Users of the Laboratory. The User Representatives to ACCU are (CERN internal telephone numbers in brackets):

Austria	G. Walzel (76592)
Belgium	C. Vander Velde (Chairperson) (71539)
Bulgaria	
Czech Republic	S. Nemecek (71144)
Denmark	J.B. Hansen (75941)
Finland	K. Lassila-Perini (79354)
France	N. Besson (75650)
	A. Rozanov (71145)
Germany	H. Lacker (78736)
	O. Biebel (72974)
Greece	G. Tsipolitis (71162)
Hungary	F. Siklér (76544)
Italy	G. Passaleva (75864)
	N. Pastrone (78729)
Netherlands	G. Bobbink (71157)
Norway	J. Nystrand (73601)
Poland	M. Witek (78967)
Portugal	P. Bordalo (74704)
Slovak Republic	A. Dubnickova (71127)
Spain	I. Riu (76063)
Sweden	K. Jon-And (71126)
Switzerland	M. Weber (71271)
United Kingdom	M. Campanelli (72340)
	S. McMahon (77598)
Non-Member States	D. Acosta (71566)
	E. Etzion (71153)
	C. Jiang (71972)
	N. Zimine (75830)
CERN	E. Auffray (75844)
	F. Teubert (73040)

CERN Management is represented by S. Bertolucci (Director for Research and Computing), S. Lettow (Director for Administration and General Infrastructure) and J. Salicio Diez/PH with M. Hauschild/PH as Secretary. Human Resources Department is represented by J. Purvis, the General Infrastructure Services Department by M. Tiirakari, the Occupational Health Safety and Environmental protection Unit by E. Cennini, and the CERN Staff Association by M. Goossens. Other members of the CERN Staff attend as necessary for specific agenda items. Anyone interested in further information about ACCU is welcome to contact the appropriate representative, or the Chairperson or Secretary (73564 or Michael.Hauschild@cern.ch).

http://cern.ch/ph-dep-ACCU/


CERN SHOP
Christmas sale
Building 33
Looking for Christmas present ideas ?
CERN card holders will have a special reduction
of 10% on all CERN shop articles
from Monday 13 to Saturday 18 December 10
From 08:15 to 17:45 | On Saturday, 09:00 to 17:15
CERN

Take note

PUBLICATION OF THE BULLETIN

The final edition (Nos 50-51-52/2010 and 1-2/2011) of the last Weekly Bulletin of the year will be published on Friday 10 December and will cover events at CERN from 13 December 2010 to 14 January 2011. Announcements for publication in this issue should reach the Publication Section (Communication group) or the Staff Association, as appropriate by noon, on Tuesday 7 December.

The table below lists the 2011 publication dates for the paper version of the Bulletin and the corresponding deadlines for the submission of announcements. Please note that all announcements must be submitted by 12.00 midday on Tuesdays at the latest.

BULLETIN PUBLICATION 2011

Bulletin No. Week number	Submission of announcements (before 12.00 midday)	Bulletin Web version	Bulletin Printed version
3-4	Tuesday 11 January	Fridays 14 and 21 January	Wednesday 19 January
5-6	Tuesday 25 January	Fridays 28 January and 4 February	Wednesday 2 February
7-8	Tuesday 8 February	Fridays 11 and 18 february	Wednesday 16 February
9-10	Tuesday 22 February	Fridays 25 February and 4 March	Wednesday 2 March
11-12	Tuesday 8 March	Fridays 11 and 18 March	Wednesday 16 March
13-14	Tuesday 22 March	Fridays 25 March and 1 April	Wednesday 30 March
15-16	Tuesday 5 April	Fridays 8 and 15 April	Wednesday 13 April
17-18	Tuesday 19 April	Fridays 21 and 29 April	Wednesday 27 April
19-20	Tuesday 3 May	Fridays 6 and 13 May	Wednesday 11 May
21-22-23 (Ascension)	Tuesday 17 May	Fridays 20 and 27 May	Wednesday 25 May
24-25	Tuesday 7 June	Fridays 10 and 17 June	Wednesday 15 June
26-27	Tuesday 21 June	Fridays 24 June and 1 July	Wednesday 29 June
28-29	Tuesday 5 July	Fridays 8 and 15 July	Wednesday 13 July
30-31	Tuesday 19 July	Fridays 22 and 29 July	Wednesday 27 July
32-33-34	Tuesday 2 August	Friday 5 August	Wednesday 3 August
35-36	Tuesday 23 August	Fridays 26 and 2 September	Wednesday 31 August
37-38	Tuesday 6 September	Wednesday 7 and Friday 16 September	Wednesday 14 September
39-40	Tuesday 20 September	Fridays 23 and 30 September	Wednesday 28 September
41-42	Tuesday 4 October	Fridays 7 and 14 October	Wednesday 12 October
43-44	Tuesday 18 October	Fridays 21 and 28 October	Wednesday 26 October
45-46	Tuesday 1 November	Fridays 4 and 11 November	Wednesday 9 November
47-48	Tuesday 15 November	Fridays 18 and 25 November	Wednesday 23 November
49-50	Tuesday 29 November	Fridays 2 and 9 December	Wednesday 7 December
51-52/1-2	Tuesday 13 December	Friday 16 December	Wednesday 20 December

If you wish to publish a news article or an item in the General Information or Official News sections, please contact

Bulletin-Editors@cern.ch

If you wish to publish an announcement in the Staff Association section, please contact

Staff.Bulletin@cern.ch

Publications Section, DG-CO group

Marie-Laure LECOQ 74924
ENSEIGNEMENT TECHNIQUE
TECHNICAL TRAINING
technical.training@cern.ch

CERN TECHNICAL TRAINING: AVAILABLE PLACES IN FORTHCOMING COURSES

The following course sessions are scheduled in the framework of the 2010 CERN Technical Training Programme and places are still available. You can find the full updated Technical Training course programme in our web catalogue (http://cta.cern.ch/cta2/f?p=110:9).

Software and system technologies

Emacs - way beyond Text Editing	09-DEC-10	09-DEC-10	English	3 days
ITIL Foundations (version 3) EXAMINATION	13-DEC-10	13-DEC-10	English	1 hour
JAVA 2 Enterprise Edition - Part 2: Enterprise JavaBeans	13-DEC-10	15-DEC-10	English	3 days
JCOP - Joint PVSS-JCOP Framework	29-Nov-10	03-DEC-10	English	4.5 days
Object-oriented Design Patterns	06-DEC-10	08-DEC-10	English	3 days
Oracle - Programming with PL/SQL	06-DEC-10	08-DEC-10	English	3 days
Oracle - SQL	01-DEC-10	03-DEC-10	English	3 days
PERL 5 - Advanced Aspects	30-Nov-10	30-Nov-10	English	1 day
XML - Introduction	01-DEC-10	02-DEC-10	English	2 days

Electronic design

Cours de base Automation du bâtiment	15-DEC-10	17-DEC-10	French	3 jours
LabVIEW Core I with RADE introduction	29-Nov-10	01-DEC-10	Bilingual	3 days
LabVIEW Core II	02-DEC-10	03-DEC-10	Bilingual	2 days

Mechanical design

SmarTeam - CATIA data manager at CERN	30-Nov-10	03-DEC-10	French	3 jours

Office software

Sharepoint Collaboration Workspace	13-DEC-10	14-DEC-10	English	2 days

If you are interested in attending any of the above course sessions, please talk to your supervisor and/or your DTO, and apply electronically via EDH from the course description pages that can be found at: http://cta.cern.ch/cta2/f?p=110:9 under 'Technical Training' with the detailed course program. Registration for all courses is always open – sessions for the less-requested courses are organized on a demand-basis only. CERN Technical Training courses are open only to members of the CERN personnel (staff members and fellows, associates, students, users, project associates, apprentices and employees of CERN contractors, with some restrictions). In particular, quoted prices and programmes refer specifically to the CERN community.

Marie-Laure LECOQ 74924
ENSEIGNEMENT TECHNIQUE
TECHNICAL TRAINING
technical.training@cern.ch

External meeting

GENEVA UNIVERSITY

École de physique - Département de physique nucléaire et corpusculaire

24, quai Ernest-Ansermet
1211 GENÈVE 4
Tél: (022) 379 62 73 - Fax: (022) 379 69 92

Wednesday 1st December 2010

PARTICLE PHYSICS SEMINAR

àt 17:00 – Auditoire Stückelberg

PAMELA - A cosmic ray observatory in space

Dr. Emiliano Mocchiutti, INFN, Trieste

On the 15th of June 2006, the PAMELA satellite-borne experiment was launched from the Baikonur cosmodrome and it has been collecting data since July 2006. The apparatus comprises a time-of-flight system, a silicon-microstrip magnetic spectrometer, a silicon-tungsten electromagnetic calorimeter, an anticoincidence system, a shower tail counter scintillator and a neutron detector. The combination of these devices allows precision studies of the charged cosmic radiation to be conducted over a wide energy range (100 MeV - 100's GeV) with high statistics. The primary scientific goal is the measurement of the antiproton and positron energy spectrum in order to search for exotic sources, such as dark matter particle annihilations. PAMELA is also testing cosmic-ray propagation models through precise measurements of the antiparticle energy spectrum and precision studies of light nuclei and their isotopes. Moreover, PAMELA is investigating phenomena connected with solar and earth physics. Latest results after four years of data-taking will be presented.

Information :
http://dpnc.unige.ch/seminaire/annonce.html

Organizer : G. Pasztor

Seminars

MONDAY 29 NOVEMBER

TH JOURNAL CLUB ON STRING THEORY
14:00 - TH Auditorium, Bldg. 4

Peculiarities of String Theory in AdS4xCP3

D. SOROKIN

TUESDAY 30 NOVEMBER

CERN JOINT EP/PP & EP/PP/LPCC SEMINAR
11:00 - Bldg. 222 - R-001, Filtration Plant

Measurement of CP violation in the $D^0 \to \pi^+\pi^-$ at CDF

M. J. MORELLO / FERMILAB

TH STRING THEORY SEMINAR
14:00 - TH Auditorium, Bldg. 4

TBA

P. VAUDREVANGE / LMU MUNICH

WEDNESDAY 1 DECEMBER

HR SEMINAR
08:30 - Globe - Bldg. 80

INDUCTION PROGRAMME - 1st Part

N. DUMEAUX, S. LYNNE HOBSON, E. MACARA, D. SERAFINI/CERN

TH COSMO COFFEE
11:00 - TH Auditorium, Bldg. 4

Galileons and Kinetic Gravity Braiding

IDO BEN-DAYAN / BEN GURION UNIV.

TH THEORETICAL SEMINAR
14:00 - TH Auditorium, Bldg. 4

High-energy scattering at strong coupling from AdS/CFT

E. IANCU / IPHT SACLAY & CERN PH-TH

THURSDAY 2 DECEMBER

TH BSM FORUM
14:00 - TH Auditorium, Bldg. 4

TBA

J. GALLOWAY / INFN, ROME

A&T SEMINAR
14:15 - Kjell Johnsen Auditorium, Bldg. 30-7-018

What happened to your protons ?

M. FERRO-LUZZI / CERN

FRIDAY 3 DECEMBER

COMPUTING SEMINAR
09:30 - IT Auditorium, Bldg. 31-3-004

Report on the Autumn 2010 HEPiX Meeting

H. MEINHARD / CERN-IT

MONDAY 6 DECEMBER

TH JOURNAL CLUB ON STRING THEORY
14:00 - TH Auditorium, Bldg. 4

TBA

B. EYNARD / SACLA

TUESDAY 7 DECEMBER

TH STRING THEORY SEMINAR
14:00 - TH Auditorium, Bldg. 4

TBA

J. HENN

WEDNESDAY 8 DECEMBER

TH COSMO COFFEE
11:00 - TH Auditorium, Bldg. 4

TBA

R. KUMAR JAIN / GENEVA U.

THURSDAY 9 DECEMBER

HR SEMINAR
08:30 - SALLE DIRAC - Bldg. 40 S2-D01

INDUCTION PROGRAMME - 2nd Part

C. GRANIER, M. SGOURAKI / CERN

FRIDAY 10 DECEMBER

TRAINING AND DEVELOPMENT
08:30 - SALLE DIRAC - Bldg. 40 S2-D01

Post Induction day training on popular IT and GS services

D. KLEM, E. GIANOLIO / CERN

CERN COMPUTING COLLOQUIUM
14:00 - Kjell Johnsen Auditorium, Bldg. 30 7-D18

Is there a future to Computer Science: The Lessons of Too Soon to Tell

D. A. GRIER / ASSOCIATE PROFESSOR OF INTERNATIONAL SCIENCE AND TECHNOLOGY POLICY