

RP delves underground



Members of the Radiation Protection Group measure radiation in the LHC tunnel.

At 7-00 a.m. on 8 December the LHC and all of the upstream accelerators will begin their technical stop. At 7-30 a.m., members of the Radiation Protection Group will enter the tunnel to perform a radiation mapping, necessary so that the numerous teams can do their work in complete safety. "Before we proceed underground, we always check first to make sure that the readings from the induced radioactivity monitors installed in the tunnels are all normal," underlines Christophe Tromel, the engineer in charge of coordinating radiation protection operations for the SPS and LHC accelerators. "Normally, we are able to enter

The LHC's winter technical stop is rapidly approaching. As in past years, technical staff in their thousands will be flocking to the underground areas of the LHC and the Linac2, Booster, PS and SPS injectors. To make sure they are protected from ionising radiation, members of the Radiation Protection Group will perform an assessment of the levels of radioactivity in the tunnels as soon as the beams have stopped.

the tunnel 30 minutes after the beams stop circulating, the amount of time necessary to completely exchange the air in the tunnels. We are always the first ones on the scene."

Walking, cycling or riding electric trucks, the members of the Radiation Protection Group make their rounds of the 45-odd kilometres of the LHC, SPS, and injection and transfer tunnels. With their meters they continually measure the ambient radiation level and record the readings for all machine components. It takes eight people working one-

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A word from the DG

Summer students, Higgs bosons or something else entirely? The choice is yours

At the beginning of my mandate, I undertook to write a message in each issue of the Bulletin, and I've been true to my word. Over the last three years, I've spoken about everything from LHC physics to summer student programmes. But now I think the time has come to ask you what you'd like me to write about in my bi-weekly messages to the CERN community.

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Published by:

The European Organization for Nuclear Research - CERN
1211 Geneva 23, Switzerland - Tel. + 41 22 767 35 86
Printed by: CERN Printshop
© 2010 CERN - ISSN: Printed version: 2077-950X
Electronic version: 2077-9518

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and-a-half days to survey the 27 kilometres of the LHC tunnel.

"We use two types of detector to measure the radiation: a scintillation detector and a Geiger counter. If the reading from the first detector is above 0.5 μSv per hour*, we change to the second, which is better suited to measuring higher levels of radiation," explains Nadine Conan, the engineer in charge of coordinating radiation protection operations for the LHC and HiRadMat experiments. "And when we approach one of the more radioactive points (of the order of several millisieverts per hour), for example an injection, extraction or collimation region, we fit the Geiger counter with a special "Teletector" probe that allows us to remain at a safe distance from the radiation source."

The upstream accelerators (Linac2, Booster and the PS) will be the first to be mapped,

on 5 and 8 December. Most of the underground portion of the LHC will be open to the Radiation Protection Group members half an hour after the beams stop circulating, but a few areas will not be opened until several hours later. The SPS and its transfer tunnels will be mapped later, between 12 and 14 December.

Once all of the measurements have been taken, the Radiation Protection Group will draw up a "radiation map" for the underground facilities and put up signs marking the most highly radioactive points, so that a visual overview of the radiation levels in the area can be rapidly obtained. "For the LHC, the radiation maps change from one year to the next," says Nadine Conan. "They are affected by various factors, namely the increase in intensity, the operation mode, and technical modifications carried out on the accelerator."

In 2010, the number of trips to the underground facilities during the winter technical stop numbered in the tens of thousands. This year, the tunnels of the world's biggest accelerator will once again witness a very large number of interventions.

*The level of radioactivity measured around CERN is some 0.1 μSv per hour.

Anais Schaeffer

More information about radiation protection at CERN can be obtained at:

espace.cern.ch/hse-unit/

The radiation classification of the LHC tunnels can be consulted at:

www.cern.ch/rp-lhc-rad-class-new/



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Summer students, Higgs bosons or something else entirely? The choice is yours

Next year will not be short of subject matter. We'll have the final word on the Standard Model Higgs, discussions about the long-term future of the LHC, and the development of global particle physics. For those of you based at CERN, local concerns might be of interest: how are we developing our relationship with our neighbours, and what plans do we have in mind for the Prévessin site? These are just some of my thoughts. I'm sure you'll have many others.

Whatever you're interested in, drop a line to bulletin.editors@cern.ch with your suggestions. Although I doubt I'll be able to respond to them all, I will answer the most popular requests during the course of the year. For my final message this year, I'll be reporting on highlights from the December Council meeting.

Rolf Heuer

LHC Report: positive ion run!

The peak luminosity in ATLAS reached $5 \times 10^{26} \text{ cm}^{-2} \text{ s}^{-1}$, which is a factor of ~ 16 more than last year's peak of $3 \times 10^{25} \text{ cm}^{-2} \text{ s}^{-1}$. The integrated luminosity in each of ALICE, ATLAS and CMS is now around 100 inverse microbarn, already comfortably over the nominal target for the run. The polarity of the ALICE spectrometer and solenoid magnets was reversed on Monday, 28 November with the aim of delivering another sizeable amount of luminosity in this configuration.

On the whole, the LHC has been behaving very well recently, ensuring good machine availability. On Monday evening, however, a faulty level sensor in the cooling towers at Point 4 caused the loss of primary cooling water for a short time. This disturbed the operation of the cryogenics system, and one knock-on effect was the warming of a 500m superconducting link between a feed-box and

The current LHC ion run has been progressing very well. The first fill with 358 bunches per beam - the maximum number for the year - was on Tuesday, 15 November and was followed by an extended period of steady running. The quality of the beam delivered by the heavy-ion injector chain has been excellent, and this is reflected in both the peak and the integrated luminosity.

magnets situated near to Point 3. The cryogenics recovery and the cool-down of the link took until Wednesday afternoon. The warm-up of the link required some revalidation tests of the magnet circuits, and beam was finally back early Thursday morning.

In the following days, there will be a luminosity calibration exercise using Van der Meer scans. There will also be some machine studies related to future performance improvements. Otherwise, the accelerator teams are looking forward to the end of the run on Wednesday, 7 December.

Mike Lamont for the LHC Team

#JOBS #CERN - hashtags for your career

Not long ago, jobseekers had but two tools they could use to find work: a red pen and a recent newspaper.

Nowadays, recruitment services are going right up to their virtual doorstep: posting announcements on Twitter, Facebook, LinkedIn, and other social media spheres. The CERN Recruitment Service launched their social media profiles in October 2010, breaking into this new way of recruiting well before many other companies and organisations.

This move into the social media scene was driven by needs in the CERN community. "In conversation with Department Heads, we found that the 'sourcing' of candidates required real improvement," explains James Purvis, Head of the Recruitment Programmes and Monitoring (HR-RPM) group in the HR Department. "In other words, we needed more applicants per post and we needed them for a variety of jobs."

Although social media is but one branch of the new recruitment strategy, the team is coming at it from every possible angle. "We're posting regular videos on our dedicated Youtube channel, and we've even integrated videos into our vacancy notices to bring them to life; we also have official Facebook, Twitter and LinkedIn accounts, allowing jobseekers to incorporate their search for work into their social and pro-

Last year, CERN's HR Department leapt ahead of the curve in recruitment techniques by moving into the social media scene. Their success is in the numbers, with applications for CERN jobs increasing significantly.

fessional lives," says Michel Guye-Bergeret, CERN Recruitment and Sourcing specialist.

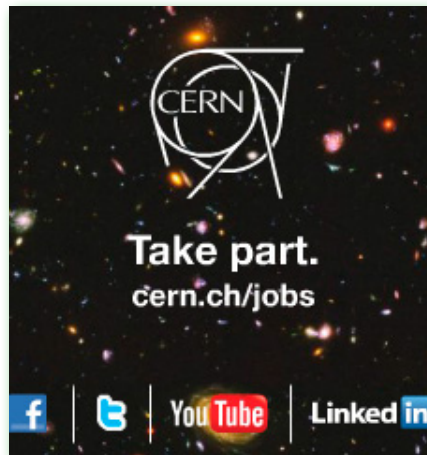
As a result of the new strategy – of which social media is key – applications for CERN positions have increased. "Two years ago, we would typically receive 50 applications per vacancy; now we often receive upwards of 300 applications," says Michel.

While social media has proved successful for CERN Jobs, its global use in recruitment is still in its infancy. Hoping to share techniques and best practices with other

recruitment experts, the HR Department organised a day-long round-table seminar. Dubbed the "accidental conference", the seminar became a smash hit in the recruitment industry before it had even begun. "As soon it was announced, we started receiving a remarkable amount of feedback," says organiser Catherine Nederman from the HR Department. "In the end, we had over 50 participants attending – including the Head Recruitment Officers from the European Parliament, L'Oreal, and the World Health Organisation – and over 400 professionals participated via a live webcast." Furthermore, Sara Wyke, CERN recruiter and Web 2.0 technologies enthusiast, ensured that the event was closely followed on Twitter where it reached over 120,000 people with regular tweets posted throughout the day.

Social media was the topic for the seminar's morning sessions, opening with a speech by Robert Cailliau, co-creator of the World Wide Web. During the sessions real-life experiences were presented alongside statistical data. "Last year, a survey demonstrated that 10% of job-seekers used Facebook to look for work," says James. "In 2011, the survey showed a jump to 17% and it's only expected to grow. We have already found that twitter is driving a significant amount of traffic to the CERN jobs site." With the web presence of CERN Jobs growing with every click, expect your next job offer to begin with a hashtag.

Katarina Anthony



Muon's (g-2): The obstinate deviation from the Standard Model

Francis J. M. Farley, Fellow of the Royal Society since 1972 and the 1980 winner of the Hughes Medal "for his ultra-precise measurements of the muon magnetic moment, a severe test of quantum electrodynamics and of the nature of the muon", is among the scientists who still look at the (g-2) anomaly as one of the first proofs of the existence of new physics. "Although it seems to be generally believed that all experiments agree with the Standard Model, theory cannot explain the muon (g-2) result," says Francis Farley. "The most recent experimental results were published by a Brookhaven National Laboratory experiment in 2004. Since then, many theorists have laboured to nudge theory into agreement with experimental results, but none have succeeded. The discrepancy has remained obstinately at 3 standard deviations or more. The measurements are very clear: three virtually independent runs including μ^+ and μ^- , with blind analyses agreeing with each other, are all well above

It's been 50 years since a small group at CERN measured the muon (g-2) for the first time. Several other experiments have followed over the years. The latest measurement at Brookhaven (2004) gave a value that obstinately remains about 3 standard deviations away from the prediction of the Standard Model. Francis Farley, one of the fathers of the (g-2) experiments, argues that a statement such as "everything we observe is accounted for by the Standard Model" is not acceptable.

the value provided by theory. Although theorists are increasingly confident in their Standard Model value, no common experimental mistake has been suggested so far."

"g" is a dimensionless quantity related to the magnetic properties of a particle. Assuming that the muon obeys the simplest equations of quantum mechanics, then g should equal exactly 2. However, this is modified by the quantum fluctuations in the electromagnetic field around the muon, specified by the rules of the well-established Quantum Electrodynamics theory within the Standard Model, making g larger by about 1 part in 800. The quantum effects include rare fluctuations, which involve virtual pion states, strongly interacting vector mesons, bosons of the weak interaction, and perhaps other



Francis J. M. Farley.

particles as yet unknown. "The main motivation for measuring the (g-2) of the muon is to see whether the known particles play their predicted roles or whether there is something more to be discovered," observes Francis Farley. "In this way, the Brookhaven muon (g-2) measurement is the first indication of physics beyond the Standard Model. However, it does not tell us which of the many speculations is correct."

The conundrum remains on the table. "Eventually", Francis Farley hopes, "a new theory will evolve and our result will be explained."

Antonella Del Rosso

New childcare solution helps CERN's global community

CERN already has a well-established on-site kindergarten but the community is growing and the need for childcare is constantly increasing. In order to find a viable solution to the problem, CERN's Director-General, Rolf Heuer, signed an agreement with "Le Jardin de Zébulon" in January this year for the provision of 40 places at the "Jardin de Capucine"; a new private crèche that opened this autumn.

The agreement became fully operational on 2 November, with the inauguration of the new kindergarten in which four of the total 40 places allocated to all categories of the CERN personnel will now be reserved for people coming to CERN for short periods of time. "As experience has taught us, the increasingly global scientific community needs dedicated solutions," says Sigurd Lettow, Director of Administration and General Infrastructure. "The new childcare solution is flexible and designed around the needs of children and their itinerant parents."

Commuting between the home institute and CERN is a tough task for a lot of scientists with families. However, thanks to a newly signed agreement between CERN and the "Jardin de Capucine" kindergarten, the task of looking for a childcare solution might turn out to be easier than originally expected: 4 places are reserved for all categories of CERN personnel for child enrolment periods that can vary between a few weeks and a few months.

The new enrolment scheme can vary from a few weeks to a few months. The short-term places are available all year round, with the exception of French public holidays and CERN's two-week end-of-year closure.

To enquire about availability, parents are invited to contact:

Le Jardin de Capucine
Mrs Ariane BOUCHER

60 rue Clement Ader

Tel +33 (0)6 45 63 72 74

info@lejardindecapucine.com

www.lejardindecapucine.com



CERN Bulletin

Astroparticle physics in Europe gets a new roadmap

The new strategies for Astroparticle Physics (ApP) – the research field at the intersection of astrophysics, particle physics and cosmology – were discussed at a meeting held in Paris

on 21 and 22 November, when a new roadmap was presented to the community. “An update of the strategic plan published in 2008 was needed because of the significant progress made in recent years,” explains Arnaud Marsollier, ASPERA press officer. “In this new roadmap, ASPERA gives an updated overview of ApP Projects and proposes new recommendations after having conducted a review of the whole timescale.” This was a welcome update for the ApP European funding agencies of ASPERA and the Astroparticle Physics European Coordination (ApPEC).

“The currently planned projects have been divided into three main categories,” says Arnaud Marsollier, “according to their size and current status, as well as the expected date of construction. You can look at these categories as the stages of a rocket: the current experiments and near-future upgrades, the mid-term large infrastructures that will begin construction by the middle of the decade, and the longer-term large projects that also require a global approach.”

The first category comprises the ongoing projects on gravitational waves, dark matter searches, neutrino property measurements, underground laboratory upgrades, and space-based detectors. These medium-scale projects are strongly supported by ASPERA, which encourages their development. The second category includes large-scale projects that expect to deliver

After publishing its first strategy plan in 2008, the ASTroParticle European Research Area (ASPERA) – a network of European national funding agencies responsible for astroparticle physics – has just published an update. The new document provides an overview of the activities of the astroparticle physics community, makes recommendations for future projects and emphasizes the role of networking and sharing among the funding agencies.



their first results in the coming decade. Three high-energy projects and one low-energy neutrino project fall into this category, including the Cherenkov Telescope Array (see box), LAGUNA, KM3NeT, and a Pierre Auger Observatory-like project for the Northern Hemisphere. The ASPERA Roadmap encourages the research and development for these experiments.

A third category is related to longer-timescale projects, mainly in the dark energy and gravitational wave domains, such as the Einstein Telescope (ET) and the space-bound LISA project. “These ambitious projects will certainly boost the science of astroparticles, but they need time, R&D, funds and more partners in order to see the light,” comments Arnaud Marsollier. “And in the case of gravitational waves, upgrades and data taking at current experiments must be completed before ET can go ahead.”

Given the rapid progress in ApP, the ASPERA roadmap will be a useful tool for decision makers in addition to increasing coordination and networking among all the projects on a global scale.

Brochure version of the roadmap (s.aspera-eu.org/StrategyBrochure), and the 2011 roadmap – full version at:

s.aspera-eu.org/RoadmapFull

Fabio Capello



Did you know?

The Cherenkov Telescope Array (CTA)

The most advanced large-scale project categorised by the roadmap is the Cherenkov Telescope Array (CTA), which is currently in the preparation and prototyping phase. CTA is an initiative to build the next generation ground-based, very high-energy gamma-ray observatory, and will take over current observatories such as H.E.S.S. in Namibia, MAGIC in the Canary Islands and VERITAS in the United-States. Such telescope arrays use particle physics technology to look at particle showers that are generated in the atmosphere by gamma-rays coming from cosmic sources. CTA is clearly the worldwide priority project in the TeV gamma-ray astrophysics area. As currently envisioned, CTA will consist of a southern hemisphere array, aimed at observing galactic sources, and a northern hemisphere array, optimised for extragalactic observations. CTA's southern array could have as many as 100 telescopes. Some 800 scientists from 25 countries around the world have already joined forces to build it, and construction is expected to start by 2014.

CERN firefighters have got your back covered

Conscious of the potential safety hazards for personnel working on ALICE's inner detectors, the collaboration's GLIMOS, Fernando Pedrosa, asked the Fire Brigade to organise an exercise in March to simulate the emergency evacuation of a person from the centre of the detector.

Despite the exceptionally limited space available in the centre of ALICE, the Fire Brigade successfully met the challenge. However, although specially designed for emergency evacuations, the cumbersome dimensions of the stretcher used in this first exercise caused many problems.

Following the exercise, the Fire Brigade therefore investigated alternative solutions and came up with the idea of a spine splint, which they have now acquired. The splint's polycarbonate back plate allows it to slide over all types of surface. In addition the splint is fitted with an anchor point so that the person in difficulty can be winched out.

The new equipment was delivered in November and the firemen are currently attending a training course on how to use it. The initial tests have already proved very promising.

There's not much room in the centre of a detector. Ensuring the safety of technicians who have to work on components close to the collision point is an absolute priority. With this firmly in mind, the Fire Brigade has recently acquired a back immobilisation device known as a spine splint.

The Fire Brigade



CERN firefighters show off their new spine splint.

Enter FameLab and become the new face of science in Switzerland

FameLab is an international science communication competition for young researchers. It aims to find the new voices of science and engineering across the world. CERN has been chosen as the venue of the regional semi-finals for Switzerland. To compete, all you have to do is prepare a 3-minute talk that is scientifically accurate but also engaging to a non-scientific audience and impress your jury and your audience **on Saturday 4 February, 2012** at the Globe of Science and Innovation.

Famelab aims to provide new opportunities for scientists to develop their skills as communicators. Set up in 2005 by the British Council in partnership with NESTA (National Endowment for Science, Technology and the Arts), Famelab is a registered trademark of Cheltenham Festivals, one of the UK's premier cultural organisations, and has become a truly global event: in 2012 more than 20 countries will participate in the competition. The extent of its popularity is heartening: in Turkey alone, a staggering 20 million TV viewers tuned in one year to watch the national FameLab final.

Switzerland has now caught the FameLab bug and in early 2012 the competition will kick off for the first time in Zurich and Geneva, where finalists for the national finals in Zurich will be selected. In the national finals one young scientist will be selected to represent Switzerland in the international FameLab competition at the Cheltenham Science Festival in the UK in June 2012. The FameLab experience has a long-lasting positive impact on the participants, who go on to take part in science events, make presentations on television and radio, and engage in numerous public activities.

Are you 18 to 35 years old and studying or working in science in Switzerland? Are you passionate about your job and keen on exciting public imagination with a vision of the 21st century of science? Then this competition is for you!

Rules and Regulations in Short:

- To enter FameLab you must be 18-35 years old and studying or working in science in Switzerland. This includes private and public sector employees, teachers, technicians and anyone working in the fields of natural sciences and engineering (including biology, biotechnology, chemistry, computer science, engineering, mathematics, medicine, pharmacy, physics, psychology, robotics, astronomy, etc.). Science communication professionals – journalists, writers, TV and radio presenters, public relations specialists and performers whose shows are about science and engineering – are not allowed to enter.
 - For the regional competition in Zurich or Geneva you will have to prepare two exciting, engaging and charismatic 3-minute presentations about your research or topic of interest (powerpoint presentations **are not allowed** and only minimal props can be used), that can be understood by a lay audience.
 - Presentations will be accepted in French or English. However, at the national finals in Zurich and at the international finals in Cheltenham, the presentation will have to be in English.
 - In the event of a particularly high number of participants, the regional competition will be divided into a preliminary round in the morning/afternoon and a final round in the evening. For this reason, all participants must prepare **two** 3-minute presentations. Both presentations may deal with the same topic, but should not be identical.
 - Presentations will be judged by 4 to 5 jury members from the world of science and media, in front of an audience that will be involved in the selection process.
 - The 10 best participants selected at the regional heats will attend a weekend masterclass in science communication and compete in the national finals in Zürich in March 2012. The winner of the Swiss national finals will represent Switzerland at the International FameLab competition in Cheltenham, UK.
- How do I enter?*
- Fill out and submit the registration form by the deadline on <http://www.famelab.ch/>
 - Come to the Globe at the appointed time on Saturday 4 February and follow

important instructions that will be published closer to the date on the competition website and on the dedicated CERN website.

What do I win?

- The finalists will win a 2-day masterclass in science communication. They will work with UK and Swiss science communicators and media trainers to develop their media and presentation skills.
- The Swiss FameLab winner chosen at the final in Zurich will attend the Cheltenham Science Festival in the UK and compete in the **FameLab International competition**.
- The winners of the regional competitions will receive a **digital camera**. The national finalists can win a **laptop**. There will also be an **audience award**.
- Gaining the audience's appreciation for your passion for science and appearing **in newspapers and being on TV** is probably the biggest prize!

For more information, check out <http://www.famelab.ch/> or <http://famelab.org/> or write to info@famelab.ch.

Paola Catapano,
FameLab@Cern Project coordinator

e-EPS News: Highlights from the European Physical Society

European Physical Society Physics Education Division

Since 2000, the European Physical Society's Physics Education Division has been contributing to awareness of the relevance of physics in everyday culture, to interaction amongst schools and universities and to a better quality of physics teaching at all levels.

The Physics Education Division achieves this by addressing and promoting physics, the continued education of teachers, large scale educational changes – such as the Bologna process – and successful new teaching methods, taking into account differences and similarities in the European education systems. Since 2008, their More Understanding with Simple Experiments (MUSE) project has offered teachers and researchers a set of nine research-based, free, downloadable materials – characterised by added value in education.

For more information about the division, read the full version of this text at:

<http://www.epsnews.eu/2011/11/physics-education-division/>

Report on European gender consultation

The European Gender Summit has published the results of its Public Consultation on the Future of Gender and Innovation in Europe.

The consultation was designed to complement the European Commission Green Paper 'From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation Funding', and is hoped will contribute to a better understanding of how Europe can enhance its research and innovation systems, through the addressing of gender issues.

For more information, and to download the full report, please visit the European Gender Summit website:

<http://www.gender-summit.eu/>

New European Physical Society Facebook page

The European Physical Society has just launched its new Facebook page, at facebook.com/europeanphysicalsociety. Here you will be able to keep up with all the current news from the European Physical Society – and the articles here on e-EPS – from the comfort of your own Facebook account. Or, if you prefer, you can also follow the European Physical Society on Twitter, on Google+, through our RSS Feed or our email subscription service.

e-EPS News

Origins: Science inspires Art

The aim of the exhibition is to take the visitor on an imaginary journey to the origins of mankind and to show

how science and art approach the same theme from different angles. The works on display will include pieces of Makonde art, a traditional art form native to Mozambique, created by artists of the Nairucu Arts centre. The cultural programme that will run alongside the exhibition will include lectures on contemporary scientific themes aimed at the general public. Visitors will also have the opportunity to discover "L'Origine", a book of poetry by Beatrice Bressan (Ed. Loreleo, Geneva, 2010), which was awarded the third prize in the "Poeti nella società" competition held in Basel earlier this year.

"Recreating the first moments of the Universe and the events that led to the world of matter we live in today, identifying the forces that govern this world and

From 8 December 2011 to 17 February 2012, Geneva University's physics faculty will be holding an exhibition called "L'Origine – un voyage entre la Science et l'Art". Thirty artists from Europe and Africa will be exhibiting their work.

looking for the missing link in the evolution of mankind are the most fascinating challenges of scientific research. At the same time, the question of the origins of the Universe has always inspired the imagination of artists," says Marilena Streit-Bianchi, a former CERN staff member who is helping to promote the exhibition.

The exhibition is also associated with initiatives for the development of arts activities in Mozambique, including the creation of an art school. The members of the exhibition's organising committee are: Martin Pohl (University of Geneva), Marilena Streit-Bianchi (Nairucu Arts), Sergio Bertolucci (CERN), Beatrice Bressan (CERN), Giorgio Manzi (SAPIENZA, Rome University), Giovanni Mazzitelli (*Frascati Scienza*), Speranza Falciano (INFN), and Angelo Falciano (*Istituto Statale Liceo Artistico "Paolo Mercuri"*, Marino, Italy).

CERN Bulletin





You've received a Hallmark E-Card? Delete it!

This might not be your friend sending you a card, but a nasty attacker trying to infect your PC or steal your password. Attackers are always trying to take advantage, particularly during the Christmas season. Faking e-mails is easy. While it is evident that subject and message can be freely manipulated, did you know that the sender's e-mail address can also be freely set? This way, attackers can disguise themselves as somebody legitimate, for example Santa.Clause@cern.ch.

Christmas is coming! Time to send to your loved ones a nice Christmas card, and maybe receive one too. But hold on... you've already received a Hallmark card by e-mail, or even two? Watch out.

So if you haven't been expecting an e-card, or if you don't know the sender, just delete that e-mail. If the e-mail is asking for your (CERN) password, let us know at Computer.Security@cern.ch, and delete it afterwards. If the e-mail includes an attachment or asks you to click on an embedded link, take care. Both might be misused to infect your PC or to steal your password. If it's an e-mail from a friend or your family, maybe this is just

the right moment to call them and say "Thank you" before you open the attachment or click the link.

We wish you a Merry Christmas and a Happy New Year!!!

For further information, please check our recommendations here or contact us at Computer.Security@cern.ch.

Computer Security Team

The Slate Garden

Scribbling, crossing out, and writing over it again. In an age of digital "tablets", scientists have remained faithful to the traditional blackboard... the inspiration for the Slate Garden.

Completed just a few days ago on the Main Building patio (Building 500), the garden was designed by landscape architect Laurent Essig – who also created the InGRID installation outside Building 33 – and is the perfect combination of organic and mineral materials. Composed of 100 pieces of slate laid across three concentric circles, the work recalls the elegant lines of the CMS particle tracker. The project was completed thanks to the collaboration of a number of CERN technical services, in particular the Green Spaces Service, the Transport Service, the Electrical Service and the Central Store.

On the patio of the Main Building, a new garden has been unveiled. Inspired by physicists themselves, the garden uses a clever combination of flower arrangements and slate slabs to create the shape of the CMS particle tracker.

"Even now, physicists continue to work and exchange ideas on blackboards; the boards always end up covered in formulas, equations and other mathematical symbols," says Laurent Essig. "While creating this garden, I was inspired by what was taking place at CERN. The CMS particle tracker, for example, is extremely interesting from a purely aesthetic point of view."

Lined with daffodils, tulips and lilies, the Slate Garden will be in bloom all year round. The garden is lit up after dusk and can be enjoyed, day or night, from every angle – from the main hall, the restaurant, or the first-floor concourse.

Alexandre Pelletier and Anaïs Schaeffer



The Slate Garden at dusk.



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.

A simple confidential discussion can help

No story this week, for a change! But I would like to convey to everyone a simple message: whatever issues you are facing, the Ombuds is here to listen to you; the Office is open for you. From time to time I hear that someone had to leave his/her workplace due to an overwhelming stress or even a depression. To get to such a point takes time and I always wonder if these people have actually looked for help, and if not maybe this increased their isolation. At CERN, several Services are available to give valuable help, including the Ombuds. It is unfortunate that these people have not at least tried this Office, as this action would have been quite common.

A simple discussion sometimes allows the visitor to be heard and to tell his/her story while being certain that it will be kept confidential. This can help a lot of people: they feel that someone, totally neutral and independent in the Organization, has heard them. It is a positive way for people to release pressure. So, the

Ombuds is also here simply listen to you - you do not need to come only in the case of an interpersonal dispute. You will not be the only ones doing so, as the statistics from the first year of the Ombuds service shows that in more than 70% of cases, visitors came to the Ombuds solely for a discussion or to look for advice or coaching that would allow them to handle a situation by themselves. In all cases, these people left the Office more confident in themselves and more empowered to face their problems.

It is obvious from the graph that the most frequent methods of help from the Ombuds are related to simple discussions or giving advice. Most of the time the visitor knows what he/she would like to accomplish but may not be confident enough to decide how to go about it. Exchanging possibilities

– the Ombuds does not influence people but helps them to get their ideas and plans in order - allows the visitor to take his/her final decision.

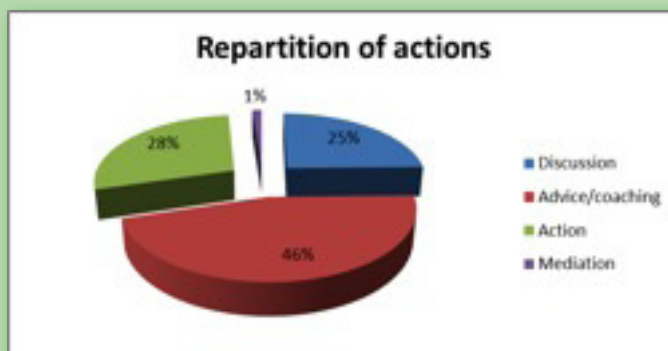
Conclusion

Never believe that your case is too trivial, just come to the Office. As seen in the first year results, most people simply want to bring their concerns to the Ombuds, be heard with empathy, and be comforted that there are ways they can take to handle their situation themselves. The Ombuds will also direct you to other Services where you can get professional help if you need it. Do not stay isolated. Build a network of support before it is too late.

Contact the Ombuds early!

<http://cern.ch/ombuds>

Vincent Vuillemin



Library
Bibliothèque

News from the Library

CERN Bookshop Christmas sales

The Bookshop will have a stand on the

Ground Floor of the Main Building (Bldg 500) from 12 to 13 December 2011. You are welcome to come, browse and buy books at very interesting prices!

The title list of the Bookshop is available at:

<https://cdsweb.cern.ch/collection/CERN%20Bookshop>

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, computing and popular science.

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. You can contact the Bookshop by e-mail at bookshop@cern.ch. Accepted forms of payment in the Bookshop are: cash, credit card and budget code. You can also purchase

books using your budget code via the CERN Stores:

<http://edh.cern.ch> > "Catalogue - CERN Stores" > "BOOKS - PUBLICATIONS" (category 90).

CERN Library



Take note

CERN CAR SHARING SCHEME NOW OPEN TO EVERYONE

The CERN car sharing service is a self-service scheme providing a pool of 30 CERN cars available for pick-up free of charge from 13 points around the Meyrin and Prévessin sites. From Thursday, 1st December 2011, the service will be open to all members of the CERN personnel and contractors' personnel, in the framework of their professional activities at CERN only. The conditions of use can be consulted at:

http://gs-dep.web.cern.ch/en/content/Mobility/Car_sharing

To be able to use the service, members of the CERN personnel and contractors' personnel must:

- have a contractual link to CERN,
- possess an e-mail address registered in the CERN databases;
- hold an RFID access card, which can be obtained from the CERN Car Pool on presentation of a valid CERN access card. Car Pool, Building 130-R-012, open Monday-Friday, 8.00 a.m.-12.00 noon/1.00 p.m.-5.00 p.m. <https://gs-dep.web.cern.ch/en/content/car-pool>.

GS-IS



Collide@CERN
Artists-in-Residence Programme

Collide@CERN is looking for mentors

The Collide@CERN Artist-in-Residence Programme is currently seeking CERN scientists interested in engaging in thought-provoking and creative collaborations with visiting artists.

In early 2012, a Digital artist will take up a 2-month residency and a Dance and Performance artist a 3-month residency. Each artist will be allocated a specially selected science inspiration partner to work with. Both the artists and their mentors will give a public lecture in the Globe of Science and Innovation at the beginning and end of the residencies.

One scientist will be selected for each artist. Mentors and artists will be required to share knowledge by:

- Meeting once a week throughout the residency;

- Conducting online communications (such as a blog).

If you are interested in becoming a mentor, please send the following information by e-mail to Merce Monje Cano (merce.monje.cano@cern.ch):

- Name;
- Department/Experiment;
- Area of research;
- A brief explanation of why you are interested in becoming a mentor and what you expect to learn from the experience;
- Telephone/mobile number;
- E-mail.

Mentors will be selected on the basis of mutual interest and compatibility with the artists.

For more information please visit Arts@CERN (<http://arts.web.cern.ch/arts/>).

YOUR OFFICE SOFTWARE IS EVOLVING – USE ITS FULL POTENTIAL!

Microsoft Office 2010 has been available at CERN since May 2011. It is the default version installed on new NICE computers. The IT Department is now planning to migrate the remaining NICE Windows 7 computers running Office 2007 to this version, so that it becomes the only version of Microsoft Office on NICE Windows 7 and all users can benefit from the improvements that it brings.

NICE Windows 7 computers in the IT Department will be migrated on 12 January and the migration in the other departments will begin on 21 February. You can migrate earlier at your convenience according to the "Next steps" below.

Windows XP users are not affected by this change. Until Windows XP is decommissioned from office use at the end of 2012, Microsoft Office 2007 will remain the only supported version of Microsoft Office on NICE Windows XP.

Revolutionary benefits of the evolution

Office 2010 is very similar to its predecessor, Office 2007. In particular, the file formats remain the same and the "Ribbon" interface, previously known from Word, Excel and Powerpoint 2007, remains the central point.

The biggest change is that the "Ribbon" interface has now been introduced also in Outlook. Furthermore, behind the scenes, Outlook 2010 offers several important improvements:

- * setting of out-of-office replies directly from Outlook,
- * seeing your mail recipients' out-of-office status before you actually send them an e-mail,
- * direct access to your interlocutors' contact information, including their phone numbers and office location,
- * new conversation view of your mail messages (easy to enable/disable according to your choice),

- * better overall integration with the new Exchange servers.

Another change concerns the website editing software: Sharepoint Designer is now reserved only for Sharepoint sites and is no longer installed by default. Instead, Microsoft Expression Web 4 is proposed.

Next steps

The experience of hundreds of current users indicates that Office 2010 and Expression Web 4 will enable you to obtain more in less time and to steer clear of problems. If you have a NICE Windows 7 computer and you would like to see how this change corresponds to your working habits, you can choose to migrate earlier – the pro-active installation procedure is described at <https://www.cern.ch/winservices/Help/?kbid=090194>.

Michał Kwiatek (IT-OIS)



Take note

MAIL OFFICE

On the occasion of the annual closure of CERN, **no mail will be distributed on Wednesday, 21 December 2011** but mail will be collected in the morning. Nevertheless, it will be possible for you to bring your outgoing mail to building 555-R-002 until 12:00 noon.

PUBLICATION OF THE BULLETIN

The final edition (Nos 51-52/2011 and 1-2-3/2012) of the Bulletin this year will be published on Friday 16 December and will cover events at CERN from 19 December 2011 to 19 January 2012. Announcements for publication in this issue should reach the Communication Group or the Staff Association, as appropriate, by noon on Tuesday 13 December.

Bulletin publication schedule for 2012

The table below lists the 2012 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 noon on Tuesdays at the latest.

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



Take note

RESTAURANTS CLOSED OVER CHRISTMAS

The restaurants will be closed during the Christmas holiday period : please note that all three CERN Restaurants will be closed **from 5 p.m. on Wednesday, 21 December until Wednesday, 4 January inclusive**. The Restaurants will reopen on Thursday, 5 January 2012.

94TH ACCU MEETING

DRAFT Agenda for the meeting to be held on Wednesday 7 December 2011 at 9:15 a.m. in room 60-6-002

- | | |
|--|---|
| 1. Chairperson's remarks | 8. Report on Summer Students |
| 2. Adoption of the agenda | 9. Users Organization in the U.S. (US LUO) |
| 3. Minutes of the previous meeting | 10. Reports from ACCU representatives on other Committees |
| 4. Matters arising | a. Accommodation Facilities Working Group |
| 5. News from the CERN Management | 11. Users' Office news |
| 6. Report on services from GS department | 12. Any Other Business |
| 7. CHIS report and Creche status | 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
subject=Next ACCU meeting

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:

Austria	M. Jeitler (manfred.jeitler@cern.ch)	Norway	J. Nystrand (Joakim.Nystrand@cern.ch)
Belgium	C. Vander Velde (Chairperson) (catherine.vander.velde@ulb.ac.be)	Poland	P. Bruckman De Renstrom (Pawel.Bruckman.de.Renstrom@cern.ch)
Bulgaria		Portugal	P. Bordalo (Paula.Bordalo@cern.ch)
Czech Republic	S. Nemecek (Stanislav.Nemecek@cern.ch)	Romania	R. Muresan (Raluca.Muresan@cern.ch)
Denmark	J.B. Hansen (Jorgen.Beck.Hansen@cern.ch)	Slovak Republic	A. Dubnickova (Anna.Dubnickova@cern.ch)
Finland	K. Lassila-Perini (Katri.Lassila-Perini@cern.ch)	Spain	I. Riu (Imma.Riu@cern.ch)
France	N. Besson (Nathalie.Besson@cern.ch) A. Rozanov (Alexandre.Rozanov@cern.ch)	Sweden	K. Jon-And (ker@physto.se)
Germany	H. Lacker (lacker@physik.hu-berlin.de) I. Fleck (fleck@hep.physik.uni-siegen.de)	Switzerland	M. Weber (michele.weber@cern.ch)
Greece	D. Sampsonidis (Dimitrios.Sampsonidis@cern.ch)	United Kingdom	M. Campanelli (Mario.Campanelli@cern.ch) T. Berry (tracey.berry@cern.ch)
Hungary	V. Veszprémi (Viktor.Veszpremi@cern.ch)	Non-Member States	D. Acosta (Darin.Acosta@cern.ch) E. Etzion (Erez.Etzion@cern.ch) C. Jiang (jiangch@mail.ihep.ac.cn) N. Zimine (Nikolai.Zimine@cern.ch)
Italy	G. Passaleva (giovanni.passaleva@fi.infn.it) N. Pastrone (Nadia.Pastrone@cern.ch)	CERN	E. Auffray (Etienne.Auffray@cern.ch) R. Hawkins (Richard.Hawkins@cern.ch)
Netherlands	G. Bobbink (Gerjan.Bobbink@cern.ch)		

CERN Management is represented by Sergio Bertolucci, (Director for Research and Computing), Sigurd Lettow (Director for Administration and General Infrastructure), Jose Salicio Diez/PH with Michael Hauschild/PH as Secretary and Doris Chromek-Burckhart/Head of the Users' Office. Human Resources Department is represented by James Purvis, the General Infrastructure Services Department by Isabelle Mardirossian, the Occupational Health Safety and Environmental protection Unit by Enrico Cennini, and the CERN Staff Association by Michel 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 subject=Next ACCU meeting).

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



TUESDAY 6 DECEMBER

LHC EXPERIMENT
09:00 - Bldg. 60-6-002

Upgrade Reviews LHCC review of experiment upgrades

LHC SEMINAR
11:00 - Main Auditorium, Bldg. 500

First evidence for CP Violation in charm decays at LHCb

A. CARBONE / UNIVERSITA E INFN (IT)

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

TBA - C. KOZCAZ

WEDNESDAY 7 DECEMBER

LHCC MEETINGS
09:00 - Main Auditorium, Bldg. 500

108th LHCC Meeting AGENDA OPEN Session

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

Cosmological forecasts from the angular correlation function

R. ROSENFELD / CERN

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

Cosmological forecasts from the angular correlation function

R. ROSENFELD / CERN

THURSDAY 8 DECEMBER

COLLIDER CROSS TALK
11:00 -TH Auditorium, Bldg. 4

Search for Supersymmetry with two and three leptons

C. CLEMENT / STOCKHOLM UNIVERSITY (SE)

TECHNICAL SEMINAR
14:00 - BE Auditorium Meyrin, Bldg. 6-2-024
9^e Forum Utilisateurs CATIA au CERN - J.-P. CORSO / CERN-EN-MEF-INT

TH BSM FORUM
14:00 - TH Auditorium, Bldg. 4
The 4D Composite Higgs
M. REDI

THURSDAY 8 DECEMBER

CERN COLLOQUIUM
16:30 -Main auditorium, Bldg. 500

Taming Nuclear Power. What have we learned from the Fukushima disaster?

J.-L. BASDEVANT / ECOLE POLYTECHNIQUE

FRIDAY 9 DECEMBER

POST-INDUCTION DAY TRAINING
09:00 - Bldg. 593

Post Induction day training on popular IT and GS services

ENGLISH session Room 25

FRENCH session Room 23

PARTICLE AND ASTRO-PARTICLE PHYSICS SEMINARS
14:00 - CERN

TBA

A. LENZ / DEUTSCHE FORSCHUNGSGEMEINSCHAFT (DE)

MONDAY 12 DECEMBER

LHC SEMINAR
11:00 - Main Auditorium, Bldg. 500

Top quark pairs at ATLAS

M. CRISTINZIANI / UNIVERSITAET BONN (DE)

TUESDAY 13 DECEMBER

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

TBA- S. MURTHY / UTRECHT UNIVERSITY

WEDNESDAY 14 DECEMBER

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

TBA - J. BELTRAN / UNIGE

COMPUTING SEMINAR
11:00 - IT Auditorium, Bldg. 31
Software Defects, Scientific Computation and the Scientific Method
L. HATTON / KINGSTON UNIVERSITY LONDON

TH THEORETICAL SEMINAR
14:00 -TH Auditorium, Bldg. 4
TBA - G. 'T HOOFT / UNIVERSITEIT UTRECHT

THURSDAY 15 DECEMBER

INDUCTION SESSIONS
08:30 - Globe 1st Floor

INDUCTION PROGRAMME - 2nd Part

S. HEGARTY, M. SGOURAKI / CERN

FRIDAY 16 DECEMBER

DETECTOR SEMINAR
11:00 - Bldg.13, 2-005

Triple-GEM studies for future upgrade of the CMS forward muon system - A. SHARMA / CERN

PARTICLE AND ASTRO-PARTICLE PHYSICS SEMINARS
14:00 -TH Auditorium, Bldg. 4

TBA - P. SERPICO / LAPTH ANNECY



Accelerator and Technical Sector Seminar

PLEASE NOTE THAT THIS SEMINAR HAS BEEN POSTPONED TO A FUTURE DATE TO BE CONFIRMED.

at 14:15 hrs - Bldg. 864-1-D02, BE Auditorium Prévessin

Future neutrino facilities: the neutrino factory

Gersende Prior / BE-ABP

The neutrino factory is one of the proposed design for a future intense neutrino beam facility. In its current layout, a high-power proton beam impinges on a Hg jet target producing pions, decaying in turn into muons. In order to reduce the particle beam emittance, the muon transverse momentum is reduced through ionization cooling by a technically demanding setup made of closely packed RF cavities alternated with absorbers. In this talk I will present the motivation for building an intense neutrino beam and some of the proposed neutrino facilities design. I will discuss the challenges inherent to the cooling of muons, possible optimization of the current baseline and the on-going R&D.

Organisers:
W. Herr (BE), S. Sgobba (EN), G. deRijk (TE)