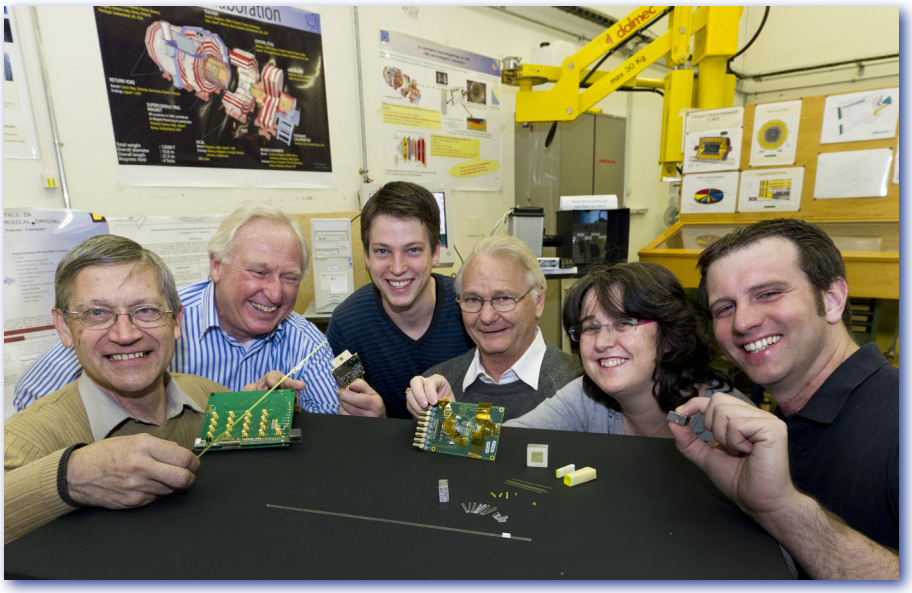
CERN Bulletin

Nos 07 & 08 – 16 & 23 February 2011

Scintillating crystals: the best things come in small packages



Les chercheurs du CERN participant au projet ENDO TOFPET-US.

The European project ENDO TOFPET-US, which involves a team from the PH Department, was officially launched last month. Its main objective is to design a high-performance medical imaging device for use in pancreatic cancer research. 13 partners (including three hospitals and three companies) are involved in the initiative, which has obtained funding of 5.5 million euros from the European Union's FP7 programme and will last for four years.

The scintillating crystals developed at CERN have a wide variety of applications, ranging from the LHC to use in hospitals. Now experts in the field, members of the PH Department are currently working on the development of a new type of crystal in the framework of the European project ENDO TOFPET-US. These new-generation crystals, which will be used in endoscopic probes for studying the biological processes associated with pancreatic cancer, are among the finest grown for medical imaging in the world.

Why pancreatic cancer?

The particularly difficult feature of pancreatic cancer is that it remains asymptomatic for a long time. Not only are there no symptoms but, more significantly, there are no biomarkers that allow its presence to be detected so that when signs of the disease do eventually appear it is often too far advanced for its progress to be halted. It

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One day, Sir, you may tax it

One day, Sir, you may tax it"… Those are the words I used to get the audience's attention during my talk at the World Economic Forum's annual meeting in Davos, where I was invited to speak about the science agenda in 2011. For those of you who don't know the quote, it was Michael Faraday's response to William Gladstone when asked to comment on the utility of his blue-sky research into the newfangled phenomenon of electricity.

So what does a 19th century English scientist have to do with the science

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Scintillating crystals: the best things come in small packages

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is therefore important to be able to identify the biological markers associated with the disease (such as the presence of given proteins in the blood) in the very early stages. However, this requires anatomical and functional images of the pancreas of a sufficient quality to reveal a very small tumour.

The device

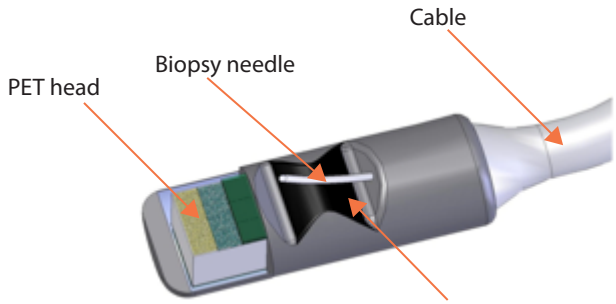
The project, which is coordinated by the Université de la Méditerranée, is an ambitious one to say the least. "To obtain the very high-resolution images the cancer specialists need you have to get right up close to the tumour," explains Paul Lecoq of the PH Department, the project's technical coordinator. To be able to do this, the researchers are currently working on the creation of an innovative endoscopic probe designed to be inserted through the oesophagus into the stomach and down to the first section of the small intestine, which surrounds the pancreas. "The ENDO TOFPET-US endoscope will have a dual-mode imaging system. We'll use an ultrasound probe with a biopsy attachment plus a PET (Positron Emission Tomography) detector head," continues Lecoq. The ultrasound signals will provide an anatomical image of the tumour, while the PET head will supply highly detailed information about its activity and, indirectly, the associated proteins. The results of the imaging will be correlated with the biological analysis of the tumour.

An innovative micro-detector

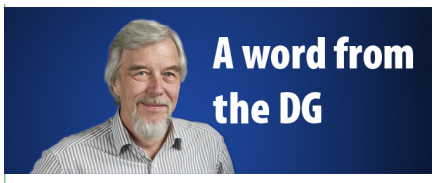
The scintillating crystals, which have been industrially produced in close collaboration with CERN, represent a real technological challenge. They are essential components of the internal micro-detector and will have to be miniaturised to a length of just ten millimetres and a diameter of 750 microns to be able to be fitted on a PET endoscope head. As Positron Emission Tomography requires at least two detection points, the PET head will also be coupled with an external PET plate placed on the patient's stomach.

With its 324 miniature crystals, the endoscopic PET detector will be a jewel of technology, allowing tumours only a millimetre in size to be "seen". "Doctors hope to find the biomarkers of pancreatic cancer using the PET probe. Although technological development plays a vital role in the project, the goal is ultimately a medical one," underlines Lecoq. Following four years of collaboration, the ENDO TOFPET-US probe should be operational by December 2014.

Anaïs Schaeffer



The Endo TOFPET-US endoscopic probe.



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One day, Sir, you may tax it

agenda today? A great deal, I would contend. Faraday was doing basic science, but he had the foresight to realise that through applied research his findings could one day be developed into something taxable – as it turned out, electric light. Faraday had a sense of the potential of his blue-sky research, but he also appreciated that basic science alone is not enough. This was my key message in Davos.

Governments often speak of basic and applied science as if we have a choice. We do not. The two form part of a virtuous circle that we interrupt at our peril. We need both if we're to lay the foundations for future prosperity, and we need to ensure that knowledge is shared between the two.

The modern day example I chose to illustrate the importance of the cycle of basic and applied science comes straight from CERN. In the 1970s, we worked with the Geneva cantonal hospital to build one of the first PET scanners. In the 1980s, we developed imaging crystals for our particle detectors. Such crystals are now widely used in PET scanners. In the 1990s, CERN scientists working with industry developed electronics to readout those crystals inside a strong magnetic field. And now, that advance is allowing a new kind of medical scanner to be developed, combining the complementary techniques of PET and MRI.

What this story tells us is that while basic science drives innovation, it's equally true that applied science fuels basic research. It's the constant interplay between the two that really drives things forward. Once particle physicists have developed a technology that suits their needs, they stop and get on with their research. They are not the ones to carry through the R&D to market. On the other hand, without the results of applied research, the particle physicists would not have the basic technology to build on.

Basic science is the ultimate driver of innovation. Without it, there's no science to apply. It attracts the brightest young minds to science as a whole, providing talent for future innovation. But basic science alone is not enough. My message at Davos was that we do not have a choice between basic and applied science. We need both. Our future prosperity depends on it.

See the video at:

http://cdsweb.cern.ch/record/1325569

Rolf Heuer

CERN's automobile fleet turns a brighter shade of green

CERN is partnering with Services Industriels de Genève (SIG) in an environmentally friendly initiative to acquire cars running on natural gas. The first forty vehicles will arrive at CERN around mid-February, and enter service in March.

CERN currently has approximately 800 vehicles in use at its different sites. Véronique Marchal, head of Site Services in the GS Department, explains: "Our fleet includes a great variety of vehicles, from small Category A cars for staff to utility/transport vehicles. The decision to acquire cars running on natural gas is part of our strategy of diversifying CERN's automobile fleet so as to make it more environmentally friendly."

The new cars are actually bi-fuel, which means that they will have two tanks: one for regular fuel and one for compressed natural gas (CNG). "This kind of car is a little more expensive than a conventionally fuelled one. However, by using CNG we are making a significant contribution towards reducing the emission of harmful gases into the atmosphere. It helps that the partnership with SIG makes us eligible for subsidies, thereby lowering the overall cost of the initiative," notes Véronique Marchal.

Car users will be free to choose between CNG and regular petrol, but the default setting will be for CNG. "To make life easier for car users from CERN, SIG have installed a CNG filling station at the BP station on the route du Nant d'Avril, some three kilometres from CERN," she adds. "CERN's regular petrol station will remain at their disposal, but we are counting on their environmental awareness to use CNG whenever possible."

From an ecological standpoint, CNG is clearly more environmentally friendly than petrol. "With CNG, carbon dioxide emissions are 25% to 30% lower than with petrol, while carbon monoxide emissions are cut by fully 70%," points out Serge Micallef, who is in charge of industrial clients at SIG and responsible for the partnership project with CERN. "Soot particles are almost eliminated. Overall, gas pollutants are 50% to 70% lower than for petrol." Another consideration is that 10% of the natural gas in the Swiss supply is renewable biogas. Biogas, consisting essentially of a mixture of methane and carbon dioxide, is produced by allowing organic matter, of plant or animal origin, to undergo anaerobic fermentation.

CERN is the only international organisation to have a cooperation arrangement of this type with SIG, and will be receiving its first 40 vehicles in the second half of February. SIG publicly presented the project at its stand at the 1-4 February 2011 FEDRE forum, with a display featuring a CNG car bearing the CERN logo. Twenty cars will be on display at a press conference organised on 24 February at the Globe.

A full-scale presentation of the SIG green mobility project will take place during the press days (1 and 2 March) that precede the opening of the Geneva International Motor Show from 3 to 13 March 2011 at Palexpo.

Anaïs Vernède

On 3 February 2011 CERN, represented by Steve Myers at the FEDRE Forum, was awarded the mobility prize.

One of the new CERN cars using natural gas, on display at the FEDRE 2011 Forum.

CERN in the blogosphere

CERN communicates with the outside world in many different ways – websites, publications, through the media and via twitter to name but a few. As of January, CERN has a new way of engaging with the world: a CERN institutional blog.

CERN's blog was launched on 10 January on the Quantum Diaries platform, adding a new strand to a well-established site. Quantum Diaries was launched in 2005 as an initiative for the World Year of Physics promoted by the InterAction collaboration, a group that brings together the communication offices of some of the world's major particle physics labs and organisations. The launch of institutional blogs from Brookhaven, CERN, Fermilab and TRIUMF has added an extra dimension to Quantum Diaries. Visits to the site jumped to 3000 per day with the addition of the institutional blogs, and that number is already growing.

CERN's first post explains one of the reasons we're doing this. With the incredible thirst for information about the Lab and particle physics, our existing social media channel, twitter, is a bit limited with its 140-character cut-off. A blog allows us to go into greater depth, and to engage more meaningfully with those who avidly follow our every move.

Quantum Diaries also gives a platform to the CERN Management, and was used by the Director-General during his recent participation in the World Economic Forum's annual Davos meeting. Not invited to Davos yourself? Then following Quantum Diaries might just be the next best thing:

http://www.quantumdiaries.org/

Bulletin CERN

Photowalk Exhibition opens at Microcosm

The winning photographs from the 2010 Global Particle Physics Photowalk competition will go on display at Microcosm from 11 February to 2 April. The exhibition is part of a global photography event taking place over three continents, with Photowalk exhibitions opening simultaneously at Fermilab in the US, KEK in Japan and here at CERN.

If you were one of the 1,300 photography lovers who voted in last year's Photowalk competition, this exhibition is your chance to see the winning entries in print. The exhibition will take place in the downstairs gallery of Microcosm, overlooking the garden. 15 photographs will be on display, with each of the laboratories that participated in Photowalk represented by their 3 winning entries. Among them will be the "people's choice" sunburst photo of a particle detector at DESY (Photo 1), and the 1st prize black-and-white photo of a nuclear-physics experiment at TRIUMF (Photo 2).

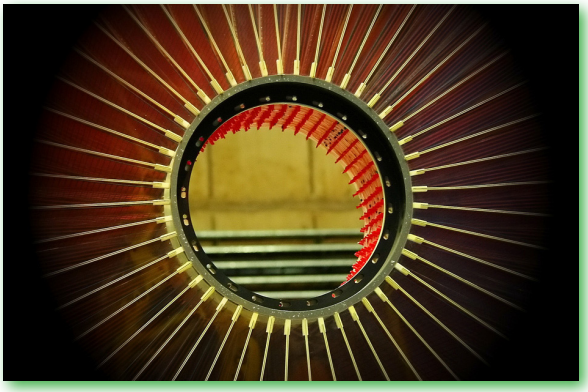

Photo 1 - DESY wire chamber - First place people's choice; second place global jury competition. (Photographer: Hans-Peter Hildebrandt)

The Particle Physics Photowalk competition gave amateur photographers access to the experiments and staff of five of the world's leading physics laboratories: CERN, DESY, Fermilab, KEK and TRIUMF. After months of voting and deliberations by judging panels, the winners were announced in October 2010.

You can view the photographs of all the finalists, including the selection of CERN's local winners, on the Photowalk Flickr site (http://www.flickr.com/photos/interactions_photos/collections/72157624560816481/). A 2011/2012 Photowalk calendar of the winning photographs is on sale at the Reception, or you can download a digital copy at the Interactions.org website:

http://www.interactions.org/cms/?pid=1030288

Bulletin CERN

Photo 2 - TRIUMF 8Pi experiment - First place global jury competition. (Photographer: Mikey Enriquez)

CERN communication in the spotlight

A rich harvest of important prizes has recently been awarded to CERN communication efforts. The list includes: the European Excellence Award 2010, the physics.org "people's choice" award for the best children's website, and two prizes in the UK Recruitment Advertising Awards for 2011. Given the high expectations surrounding CERN's future physics results, there is little doubt that the old refrain "the best is yet to come" also applies to communication at CERN.

In recent years, efforts to communicate as much and as well as possible have been stepped up at CERN – across all communities – and the fruits have come little by little. First of all, awards represent the recognition of the public, which, on different levels, has shown that it appreciates CERN's efforts to reach out. CERN is tweeting, blogging, talking on Facebook, regularly uploading videos on YouTube, and publishing websites and journals such as the Bulletin and the Courier.

The end of 2010 and the beginning of 2011 have marked a significant step forward because several international prizes have been awarded to CERN communication campaigns and websites. In November, CERNland – CERN's website for children – received the "people's choice" award for the best children's site from physcs.org. The judges' award went to the NASA Kids' Club site, while CERNland came second in this category.

Marie Anne Bugnon and Antonella del Rosso, from the Communication Group, accept the 2010 European Excellence Award for LHC First Physics.

In December, members of the Communication Group were in Prague to receive the 2010 European Excellence Award on behalf of CERN for the LHC First Physics event on 30 March, during which the eyes of the world were on the Laboratory as the first collisions at a total energy of 7 TeV took place. The prize, for the category of science and education, "rewards the cream of communications" in these areas. "These awards are great for CERN, and they're great for the Communication Group, which has worked hard to achieve them. Best of all, though, they're a sign that people are talking about science, "says James Gillies, Head of the Communication Group.

Finally, 2011 has just brought CERN's new recruitment campaign, produced by the HR Department's Recruitment Service in collaboration with the Work Communications agency, the top prize in two categories of the UK's Recruitment Advertising Awards for 2011: recruitment literature and print advertisement (commercial). Up against corporate giants such as Nike, Unilever and BAE Systems, the creativity of the CERN entries earned them the comment "Genius, a stand out piece of work" from the judges. "This fantastic peer recognition from the recruitment industry confirms that the work we are doing here at CERN can also be cutting-edge in HR as well as physics," says James Purvis, Head of the CERN Recruitment Service.

The icing on the cake is a chapter about science communication in a textbook for undergraduates. The "Physics at the Terascale" book, published by Wiley, will be on sale from March. The chapter has been written in collaboration with the Communication Group and it's a recognition of the growing importance communication has in the training of the scientists of the future.

Bulletin CERN

Did you know?

CERN Communication Group

The CERN Communication Group has 30 members spread across its 8 services, each in charge of a specific activity: the Press Office, which welcomes around 700 media representatives for 400 media to the site each year; the Publications Office, which publishes the Courier and handles the production of the more than 100,000 brochures distributed each year free of charge; the Web Office, which deals with the Public and User websites plus a number of satellite sites; the Local Communication Office, whose activities target our neighbours in France and Switzerland; the Visual Communication Office, which is responsible for graphic productions and support; and the Video Content Production team, which collaborates with the IT Audiovisual Service to produce videos including the LHC and CERN News. Last but not least is the Internal Communication Office, which, among other things, writes and edits your Bulletin.

A new EU-funded project for enhanced real-time imaging for radiotherapy

ENTERVISION (European training network for digital imaging for radiotherapy) is a new Marie Curie Initial Training Network coordinated by CERN, which brings together multidisciplinary researchers to carry out R&D in physics techniques for application in the clinical environment.

ENTERVISION was established in response to a critical need to reinforce research in online 3D digital imaging and to train professionals in order to deliver some of the key elements for early detection and more precise treatment of tumours. The main goal of the project is to train researchers who will help contribute to technical developments in an exciting multidisciplinary field, where expertise from physics, medicine, electronics, informatics, radiobiology and engineering merges and catalyses the advancement of cancer treatment. With this aim in mind, ENTERVISION brings together ten academic institutes and research centres, as well as the two leading European companies in particle therapy, IBA and Siemens.

"The 16 ENTERVISION researchers (12 Early Stage and 4 Experienced researchers during a 48-month period) will join a dynamic programme and will become part of a network of experts with a unique set of competencies, expertise, infrastructures and training possibilities," says Manjit Dosanjh, CERN's Life Sciences Advisor and a member of the Knowledge and Technology Transfer Group.

The necessary technological development for this next-generation image-based in-vivo dosimetry is covered by the ENVISION project (European Novel Imaging Systems for Ion Therapy), which is also coordinated by CERN. In addition, ENVISION will provide a platform for the training of future generations of researchers under the umbrella of ENTERVISION.

"Both R&D and training projects aim at developing a high-precision radiation therapy using particle or photon beams" continues Manjit. "Imaging techniques will help to obtain information on relevant tumour parameters, such as volume, position, topology, density – also of the surrounding tissue – in real time, to improve treatment quality. It will also be possible to adapt treatment plans in real time and initiate the appropriate regulation of the irradiation device to compensate for any deviations from the original treatment plan that could compromise a tumour conformal dose delivery."

CERN is involved in both ENVISION and ENTERVISION through two teams led by Paul Lecoq and Alfredo Ferrari, working respectively on the development of detectors for image-based in-vivo dosimetry and on Monte Carlo simulations for modeling imaging devices. "The improvement of the reliability of simulation tools represents a continuous investment for CERN that can eventually have the same critical benefits for society as CERN's basic research," says Alfredo Ferrari. "In addition to the resources for R&D in the fields of detectors and Monte Carlo simulations," says Manjit Dosanjh, "CERN benefits from the input from other institutes and disciplines about how to better apply CERN's technology in the medical field."

The kick-off meeting for ENTERVISION took place from 2 to 4 February at the same time as the first annual meeting of ENVISION. The two meetings were held in Lyon, a location of particular relevance to the field of radiotherapy as it was here that, in July 1896, Victor Despeignes decided to use X-rays to treat a cancer patient, thus becoming the first person to ever perform radiation therapy.

Both projects are funded by EU Framework programmes and are further examples of CERN's active policy in the coordination and development of EU R&D and training initiatives for better cancer treatment.

Manjit Dosanjh

LHC Report: finalizing the shutdown activities

The maintenance work and other activities scheduled for the LHC technical stop have now been completed and the electrical, quality assurance and powering tests are in full swing.

These hardware tests, or hardware re-commissioning as it is known in the CERN Control Centre, are complete for Sectors 5-6 and 6-7. The re-commissioning process is almost complete in Sectors 7-8 and 8-1, but a problem with the emergency stop safety system last week, and the failure of a turbine in the cryogenic plant at Point 8, mean that the final part of the re-commissioning for these two sectors has been delayed and will be completed this week. Preparations for the re-commissioning in the other 4 sectors are going well, and everything is on schedule for the LHC to restart with beam as planned on 18 February.

At the SPS, all the technical stop work and magnet changes have been completed and the machine has been handed over to the Operations Group for the usual set of hardware tests and preparations for beam operation.

Finally all the technical stop activities at the PS are complete and the machine has been given to TE/EPC for the initial commissioning of the new POPS power supply, which will replace the venerable old MPS. Last Thursday, POPS successfully powered the PS magnets for the first time up to the nominal current.

The POPS performance tests are taking place this week with the involvement of the CCC, initially without beam. Then, if the results are conclusive, the tests will begin with beam on Friday.

CERN Bulletin

AIDA – pushing the boundaries of European particle detector research

AIDA (Advanced European Infrastructures for Detectors at Accelerators), a new project co-funded by the European Union and worth a total of 26 million euros, will be officially launched at CERN next week. The kick-off meeting will take place on 16-18 February, during which Europe-wide detector physicists will come together to begin work on detector infrastructure developments for future particle physics experiments.

Coordinated by CERN, AIDA involves more than 80 institutes and laboratories from 23 countries as beneficiaries or associate partners (the full list can be found at http://aida.web.cern.ch/aida/about/participants/). This four-year project will receive 8 million euros from the European Commission's FP7 Research Infrastructures programme (cern.ch/council-strategy-group/Strategy_Brochure.pdf).

AIDA will develop facilities covering the four main goals identified by the European Strategy for Particle Physics. These are the LHC upgrade, Linear Colliders, Neutrino facilities and Super-B factories. These facilities will also be available for other researchers in the fields of nuclear and particle physics.

The AIDA project is divided into three main activities: Networking, Joint Research and Transnational Access. These activities are further subdivided into work packages, each with one or more people responsible for their coordination.

The networking activity will develop computer simulations of particle detector events, such as modelling their geometry, tracking particles and developing ways of interpreting the data collected. Researchers will study promising new technologies such as 3D detectors and the electronics needed to build them. These developments will be enhanced by planning interactions with appropriate industrial contacts.

The joint research activity will see many of the partners working together to improve existing beam lines and design new ones to test particle detectors. This activity will develop the equipment and technology needed to produce gaseous detectors, pixel detectors, silicon tracking devices and calorimeters.

The transnational access activity will offer European researchers from outside the AIDA project funding to access world-class beam lines for testing particle detectors at DESY and CERN and irradiation facilities at JSI (Slovenia), UCL (Belgium) and KIT (Germany).

This collaboration will keep Europe at the forefront of particle physics research. AIDA takes advantage of the world-class infrastructures existing in Europe for the advancement of research in detectors for future accelerator facilities. Further details of the project and transnational access funding can be found here:

http://aida.web.cern.ch/aida/index.html

and details of the kick-off meeting are available here:

http://indico.cern.ch/conferenceDisplay.py?confId=116670

Naomi Gilraen Wyles

There's gold in them thar' hills!

A former EN Department trainee, Vincent Gauthier-Manuel, has come away from the 2011 IPC Alpine Skiing World Championship at Sestriere in Italy with three world titles and now has his sights firmly set on the 2014 Paralympics.

It's been nearly five years since Vincent Gauthier-Manuel successfully completed his two-month traineeship in the EN Department. Now 24, Vincent is making a name for himself in another field - he won three medals in the "standing" category at the Vancouver Paralympic Games in 2010 (Super-G, Super Combined and Slalom) and has now been crowned triple World Champion (Super Combined, Slalom and Giant Slalom) at Sestriere in Italy in January 2011. Vincent hails from the French Jura and was born, on 6 April 1986, with a truncated left arm. Making light of this disability, he took up skiing at an early age, starting with cross-country before moving on to downhill. Up until 2006, he was a member of an able-bodied sports academy, but then decided to pursue a career in disabled skiing at the highest level. Thanks to a state scheme for top athletes, the *Convention d'Insertion Professionnelle*, he has been able to strike a balance between his passion for skiing, which he pursues for six months of the year, and his job as a technician in the design office of a packaging firm.

Vincent Gauthier-Manuel at the IPC Alpine Skiing Championship in Sestriere, in January 2011.

At CERN, Vincent worked on the LHC collimators. "He was very proud to work on the LHC," recalls Jean-Pierre Corso, a technical engineer in the EN Department's accelerator integration team, who knew Vincent well. "He's a very friendly and active young man with a real passion for sport."

Another CERN staff member who knows the champion well is Jean-Yves Le Meur, responsible for the CERN Document Server, himself an eminent paralympic skier. It was thanks to Jean-Yves that Vincent took up the sport at a time when he was jaded with able-bodied competition and thinking of giving up his passion altogether. "Vincent was a really good skier, and we were delighted to take him under our wing. He joined my club and that's how I took him to his first race," Jean-Yves relates. "He had excellent balance and amazing agility in his legs, qualities which I'm sure he developed as a child." So what other qualities does Vincent Gauthier-Manuel possess? A steely resolve, a charming personality and deep humility – plus his own unique preparations during the final minutes before a race: "He jumps about and runs up and down, all over the place, and only turns up at the start at the very last minute!"

With the World Championships now behind him, Vincent is already preparing for the 2014 Paralympics in Sochi, Russia, where he will surely be going for gold once more.

Keep up to date with Vincent Gauthier-Manuel's progress on the Vincent Team website at:

http://www.vincent-team.com/actualites-1-9.htm

Anaïs Vernède & Anaïs Schaeffer

14 medals for the CERN Ski Club

From 22 to 29 January, the ski resort of La Clusaz in Haute Savoie hosted the 11th Winter Atomiades. With nine gold medals and four silver medals in cross-country skiing, and a bronze medal in downhill skiing, the team from the CERN Ski Club finished third in the medals table.

Organised by the Association of Sports Communities of European Research Institutes (www.asceri.eu), nearly 260 participants from 15 research centres throughout Europe competed against each other in this skiing event.

Each in their own discipline and age category, the fourteen members of the CERN team defended the colours of the Organization in the spirit of fun and fair play: "I had a really good week," explained Simone Campana from the IT Department. "There was a great atmosphere. I'm only sorry that there was no general ranking this year. Let's hope they'll think about having one next time!"

Despite the competition, the event is primarily an opportunity for members of different scientific cultures to mix, as confirmed by Bruno Lenski, from the same Department as his team-mate: "These Atomiades have enabled us to make better acquaintance not only with the members of our team, but also with competitors from other institutes." The next Winter Atomiades will take place in 2014 in Austria – an opportunity for the CERN Ski Club to stand out once again.

Anaïs Schaeffer

Members of the CERN team

Juliette Blanchet (external), Simone Campana (IT Department), Niels Dupont-Sagorin (PH Department), Gregor Grawer (TE Department), Jean-Louis Grenard (EN Department), Lennart Jirden (PH Department), Franck Jouberjean (IT Department), Bruno Lenski (IT Department), Guissepe Lo Presti (IT Department), Alexandre Lossent (IT Department), Holger Neupert (TE Department), Cyril Perot (external), Pier Paolo Trapani (PH Department) and Werner Zapf (external).

Group photo at the 2011 Atomiades.

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.

Ombuds' corner: Compromise or "win-win" solution?

A managerial position in a large project led by CERN became available. Karen* and Walt*, both members of this collaboration and part of the same CERN unit, started to compete for this unique position, as they both felt that they were the most qualified.

Karen benefited from seniority and had developed excellent experience in management, which lead to her strongly believing that the post should be hers. Walt, although much younger and on a limited-duration contract, also applied for the position. He considered that his technical expertise, recognized as essential inside the project, would fully compensate for his lack of managerial skills. In addition, he strongly believed that such a project should be led by a young scientifically pro-active, inventive person. They entered into a conflict and asked the Ombuds to help them resolve their interpersonal working difficulties, which were becoming unbearable.

Through the mediation process, they realized that the Organization needed them both in order to succeed in this difficult enterprise, regardless of who became the manager. They then abandoned the "win-lose" idea. They discussed a compromise in which Karen would be responsible for the managerial aspects of the project and Walt would act in some way as scientific expert. Although they could agree to share the job, they were not fully satisfied. At this stage, each of them felt inclined to actively seen a solution that could fully satisfy both of them, with the help of the Ombuds.

The discussions took a lot of effort and good will, and in the end they agreed to make the following "win-win" proposal to the collaboration: Karen would take the single managerial position during the few years she had left with CERN. She would actively coach and support Walt so that he could acquire the necessary managerial skills so he could later lead the entire project. She also agreed to support Walt's application for an indefinite contract given his potential. Karen was happy to have the opportunity to share her expertise with a younger person. Walt welcomed the additional skills he could learn from Karen, and received assurance that his career would be positively considered. In the meantime, he had more time to work on the scientific aspects of the project.

Conclusion

A "win-win" solution is different from a compromise. In a compromise the parties get essentially only half of what they want, as they agree to concede the other half to the other party. It is unlikely to represent a sustainable solution, as both parties miss out on a large part of what they want. "Win-win" solutions ask for creativity and "out of the box" thinking. It generally takes more time to reach such solutions, but they are really worth trying hard for.

Contact the Ombuds early!

http://cern.ch/ombuds

Vincent Vuillemin

** Names and story are purely fictitious.*

Official news

STAFF RULES AND REGULATIONS – MODIFICATION NO. 5 TO THE 11TH EDITION

Please note that, following decisions taken at the December 2010 Council session, the following pages of the Staff Rules and Regulations have been modified as of 1 January 2011:

* Monthly basic salaries of Staff Members (Annex R A 5): amendment of page 71;
* Stipends of Fellows (Annex R A 6): amendment of page 72.

The electronic version of this modification and the complete Staff Rules and Regulations are available on the HR Department intranet site:

https://hr-docs.web.cern.ch/hr-docs/

Paper copies are also available from the HR-DI Secretariat upon request (Tel. 78003).

Department Head Office
HR Department

ADJUSTMENTS TO FINANCIAL BENEFITS AND CONTRIBUTIONS WITH EFFECT FROM 1 JANUARY 2011

In accordance with recommendations made by the Finance Committee and decisions taken by Council in December 2010, certain financial benefits and contributions impacting salaries and stipends have been adjusted with effect from 1 January 2011.

1) Annual adjustments

* An increase of 0.35% to the scale of basic salaries paid to Staff Members and the scale of stipends paid to Fellows (Annexes R A 5 and R A 6 of the Staff Regulations).
* No adjustments to the subsistence allowances of Paid Associates and Students (Annex R A 7 of the Staff Regulations).
* No modifications to the following social benefits:
  - o Family, child and infant allowances (Annex R A 3 of the Staff Regulations)
  - o Payment ceilings of education fees (Annex R A 4 of the Staff Regulations).

2) Five-yearly review 2010, financial elements:

* Adjustment of basic salaries:
  - o An increase of 1% for Career Path D.
  - o An increase of 2% for Career Paths E to G.
* Technical adjustment of the salary scale:
  - o For Career Paths F and G, adjustments of the step value by 1.37% and 1.36% respectively to ensure consistency over the basic scale.
* Adjustments to the full stipend for the Junior Fellowship Programme of -6% upon entry level (Ze.0) and -3% at the upper level (Ze.1) for those Fellows whose contract offer is made after 1 January 2011 (Annex R A 6 of the Staff Regulations). Current financial conditions for Fellows remain unchanged.
* In addition, adjustments of the Pension Fund member contribution rate to 11.33% and Health Insurance Scheme member rate to 4.27% have been introduced (see https://hr-services.web.cern.ch/hr-services/Ben/chis/news.asp).

Below you will find full details of the Management's proposals, approved by the Council, relating to:

* 2010 Five-yearly Review (http://cdsweb.cern.ch/record/1299088/files/PublicMtg5YR_8Oct10FINAL.pdf)
* Restoring full funding of the Pension Fund (http://cdsweb.cern.ch/record/1306506/files/PublicMeetingNov2010_Pension.pdf).

Department Head Office
HR Department

Take note

REMINDER: ALCOHOL ABUSE, ROAD TRAFFIC AND SAFETY ON THE SITE

You are reminded that:

- the **legal blood alcohol limit** in force under the Host States' traffic regulations (0.5 g per 1000 ml of blood) also applies on the CERN site;

- the **consumption of alcohol** is forbidden during working hours and is only tolerated in the restaurants at certain times, unless an exception is granted for special events (Operational Circular No. 8);

- failure to observe these rules may result in **disciplinary action by the Organization**, independently of any sanctions that may be applicable pursuant to the road traffic regulations of the Host State concerned.

Furthermore, the Reception and Access Control Service, the site guards and the Fire Brigade have been instructed to stop any driver in an obvious state of intoxication and to ask him/her to abandon the vehicle on the spot. In case of disagreement, they may also suggest that he/she submits to a voluntary blood alcohol level test at the CERN Medical Service or Fire Brigade. They will also stop and question any obviously intoxicated pedestrians exhibiting potentially dangerous behaviour and will remind them of the rules in force on the site.

If an apparently intoxicated driver still insists on taking the wheel of the vehicle or behaves in such a way as to present a danger to others, the competent services will take the appropriate immediate safety measures and, if necessary, call in the police of the Host State concerned.

Finally, all cases of obvious intoxication by the driver of a vehicle or a pedestrian on the site will be reported to the Organization's hierarchy.

These simple rules are designed to guarantee the safety of everyone.

HSE Unit

Take note

INFORMATION FROM CARLSON WAGONLIT TRAVEL

Special offer

From 14 to 28 February 2011 no CWT service fee!

For any new reservation of a holiday package (flight + hotel/apartment) from a "summer 2011" catalogue.

For any additional information our staff is at your disposal from Monday – Friday, 8-30–16-30. Tel. 72763 or 72797.

CERN branch of Carlson Wagonlit Travel

THE NEW SERVICE DESK

The Service Desk, a single point of contact will replace the IT Help Desk and the SEM Support Help Desk as of 15 February.

In a joint effort to improve the services provided by the IT and GS Departments, the following changes will be introduced as of 15 February:

* One phone number to remember: 77777;
* You will be provided access to a service portal from the CERN home page under the heading "Services". This Service Portal allows 'google like' searching as well as the creation of service requests (such as "painting") and incident tickets (such as "printing");
* A service counter will welcome you on the 2nd floor of Building 55 and help you between 7-30 and 18-30 during CERN working days;
* E-mails to computing.helpdesk@cern.ch, sem.support@cern.ch or to similar 'support-line' e-mail addresses will be handled as before.

Below the surface a lot is changing (new tool including a service portal, new process, new people), and consequently there is a significant risk that not everything will be perfect from day one.

We kindly ask for your understanding that if we face a few teething problems in the first weeks.

We would very much appreciate it if you could send your feedback and suggestions to service-management@cern.ch

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 2011 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				
Business Objects Basic	21-Feb-11	22-Feb-11	2 days	English
CERN openlab/Intel Computer Architecture and Performance Tuning Workshop	15-Feb-11	16-Feb-11	2 days	English
Introduction to Databases and Database Design	10-Mar-11	11-Mar-11	2 days	English
JAVA 2 Enterprise Edition - Part 2: Enterprise JavaBeans	16-Mar-11	18-Mar-11	3 days	English
JCOP - Finite State Machines in the JCOP Framework	5-Apr-11	7-Apr-11	3 days	English
JCOP - Joint PVSS-JCOP Framework	14-Mar-11	18-Mar-11	4.5 days	English
Linux LPI 101 - Introduction à Linux et LPI 102 Administration systèmes sur Linux	8-Mar-11	11-Mar-11	4 days	English
Oracle - SQL	16-Mar-11	18-Mar-11	3 days	English
Oracle Databases: Advanced PL/SQL Programming	21-Mar-11	23-Mar-11	3 days	English
Electronic design				
Advanced VHDL for FPGA Design	4-Apr-11	8-Apr-11	5 days	English
LabVIEW for beginners	21-Mar-11	23-Mar-11	4 jours/days	Bilingual
Labview for Experts	4-Apr-11	8-Apr-11	5 jours/days	Bilingual
Siemens - STEP7 : level 1	15-Feb-11	18-Feb-11	4 jours	French
Mechanical design				
ANSYS - Introduction to Classical ANSYS	11-Apr-11	14-Apr-11	4 days	English
AutoCAD 2011 - level 1	28-Mar-11	5-Apr-11	4 jours	French
Schneider: Automate Modicon Premium UNPP1	4-Apr-11	8-Apr-11	5 jours	French
Travailler en salle propre	26-Apr-11	26-Apr-11	1 jour	French
Office software				
ACCESS 2007 - Level 1 : ECDL	14-Mar-11	15-Mar-11	2 jours	French
Dreamweaver CS3 - Niveau 1	4-Apr-11	5-Apr-11	2 jours	French
EXCEL 2007 - level 1 : ECDL	7-Apr-11	8-Apr-11	2 jours	French
Indico Advanced - Conference Organization	24-Mar-11	24-Mar-11	3 heures	French
Indico for beginners - Meeting Organization	18-Feb-11	18-Feb-11	2 heurs/hours	French
Powerpoint 2007 - Level 2	21-Feb-11	21-Feb-11	2 jours	French
Project Planning with MS-Project	15-Mar-11	21-Mar-11	2 jours	French
Sharepoint Collaboration Workspace	24-Feb-11	25-Feb-11	2 jours	French
Sharepoint Collaboration Workspace	21-Mar-11	22-Mar-11	2 jours	French
Sharepoint Collaboration Workspace	18-Apr-11	19-Apr-11	2 days	English
Sharepoint Collaboration Workspace Advanced	14-Mar-11	14-Mar-11	4 heures	French
Sharepoint Designer (Frontpage) - Level 1	14-Feb-11	15-Feb-11	2 jours	French
Sharepoint Designer (Frontpage) - Level 2	10-Mar-11	11-Mar-11	2 days	English
WORD 2007 - level 1 : ECDL	11-Apr-11	12-Apr-11	2 jours	French

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.

Language training

Formation en langues
Cours d'anglais
Kerstin.fuhrmeister@cern.ch
Nathalie Dumeaux Tel. 78144
nathalie.dumeaux@cern.ch

GENERAL AND PROFESSIONAL ENGLISH COURSES

The next session will take place:

from 28 February to end of June 2011 (1 week break at Easter).

These courses are open to all persons working on the CERN site, and to their spouses.

For registration and further information on the courses, please consult our Web pages:

http://cta.cern.ch/cta2/f?p=110:9:230045968901998::NO::X_COURSE_ID,X_STATUS:4254%2CD

or contact kerstin.fuhrmeister@cern.ch or Nathalie Dumeaux, tel. 78144.

ORAL EXPRESSION

The next session will take place from 28 February to end of June 2011 (1/2 weeks break at Easter).

This course is intended for people with a good knowledge of English who want to enhance their speaking skills.

There will be on average of 8 participants in a class.

Speaking activities will include discussions, meeting simulations, role-plays etc. depending on the needs of the students.

Duration: 30 hours

Price: 720 CHF (for a minimum of 8 students)

http://cta.cern.ch/cta2/f?p=110:9:230045968901998::NO::X_COURSE_ID,X_STATUS:4250%2CD

WRITING PROFESSIONAL DOCUMENTS IN ENGLISH

The next session will take place from 28 February to end of June 2011 (1 week break at Easter).

This course is designed for people with a good level of spoken English who wish to improve their writing skills.

Duration: 30 hours

Price: 720 CHF (for 8 students)

Timetable will be fixed after discussion with the students.

http://cta.cern.ch/cta2/f?p=110:9:230045968901998::NO::X_COURSE_ID,X_STATUS:4301%2CD

NEW COURSES

Specific English and French courses -Exam preparation/

We are now offering specific courses in English and French leading to a recognised external examination (e.g. Cambridge, DELF and BULATS).

If you are interested in following one of these courses and have at least an upper intermediate level of English or French, please enrol through the following link

English courses

http://cta.cern.ch/cta2/f?p=110:9:1375795393410117::NO::X_COURSE_ID,X_STATUS:4133%2CD

French courses

http://cta.cern.ch/cta2/f?p=110:9:1375795393410117::NO::X_COURSE_ID,X_STATUS:4132%2CD

For registration and further information on these courses, please consult our Web pages: http://cern.ch/Training

or contact kerstin.fuhrmeister@cern.ch or Nathalie Dumeaux: Tel. 78144.

Academic training

CERN ACADEMIC TRAINING PROGRAMME 2011

LECTURE SERIES

22 & 23 February 2011

11:00-12:00 - Bldg. 222-R-001 - Filtration Plant

Tuesday 22 February 2011

A History of the Andrew File System

Derrick Brashear and Jeffrey Altman will present a technical history of the evolution of Andrew File System starting with the early days of the Andrew Project at Carnegie Mellon through the commercialization by Transarc Corporation and IBM and a decade of OpenAFS. The talk will be technical with a focus on the various decisions and implementation trade-offs that were made over the course of AFS versions 1 through 4, the development of the Distributed Computing Environment Distributed File System (DCE DFS), and the course of the OpenAFS development community. The speakers will also discuss the various AFS branches developed at the University of Michigan, Massachusetts Institute of Technology and Carnegie Mellon University.

Wednesday 23 February

The Future of the Andrew File System

The talk will discuss the ten operational capabilities that have made AFS unique in the distributed file system space and how these capabilities are being expanded upon to meet the needs of the 21st century. Derrick Brashear and Jeffrey Altman will present a technical road map of new features and technical innovations that are under development by the OpenAFS community and Your File System, Inc. funded by a U.S. Department of Energy Small Business Innovative Research grant. The talk will end with a comparison of AFS to its modern days competitors.

Organiser: Maureen Prola-Tessaur/PH-EDU

Seminars

MONDAY 14 FEBRUARY

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

Lorentzian AdS Wormholes and Holography
M. BOTTA CANTCHEFF

TUESDAY 15 FEBRUARY

CERN JOINT EP/PP & EP/PP/LPCC SEMINAR
11:00 - Council Chamber, Bldg. 503

Bose-Einstein correlations in pp and PbPb collisions with ALICE at the LHC
A. KISIEL / CERN

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

Holographic dual of collimated radiation
V. HUBENY / DURHAM

WEDNESDAY 16 FEBRUARY

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

Recent Developments in Electroweak Baryogenesis
M. RAMSEY-MUSOLF / U. OF WISCONSIN-MADISON

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

Dark Matter Indirect (and Direct) Detection phenomenology: a status assessment
M. CIRELLI / CERN & CNRS IPHT SACLAY

THURSDAY 17 FEBRUARY

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

Geometrical scaling at the LHC
M. PRASZALOWICZ / JAGELLONIAN UNIVERSITY

FRIDAY 18 FEBRUARY

TH INFORMAL LATTICE MEETING
11:00 - TH Auditorium, Bldg. 4

TBA
M. LUESCHER / CERN

COMPUTING SEMINAR
11:00 - Kjell Johnsen Auditorium, Bldg. 30-7-018

Advanced Features of Intel® C++ Composer XE for Linux
J. ARNOLD / INTEL CORP.

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

The Physics of Glueballs
V. MATHIEU / UNIVERSIDAD DE VALENCIA (UV) AND IFIC (UV-CSIC)

MONDAY 21 FEBRUARY

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

TBA
R. SCHIAPPA

TUESDAY 22 FEBRUARY

ACADEMIC TRAINING
LECTURE REGULAR PROGRAMME
11:00 - Bldg. 222-R-001 - Filtration Plant

A History of the Andrew File System
D. BRASHEAR, J. ALTMAN / YOUR FILE SYSTEM INC.

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

TBA
J. ERDMENGER

WEDNESDAY 23 FEBRUARY

ACADEMIC TRAINING
LECTURE REGULAR PROGRAMME
11:00 - Bldg. 222-R-001 - Filtration Plant

The Future of the Andrew File System
D. BRASHEAR, J. ALTMAN / YOUR FILE SYSTEM INC.

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

TBA
F. ENGLERT / UNIVERSITÉ LIBRE DE BRUXELLES

THURSDAY 24 FEBRUARY

COMPUTING SEMINAR
10:00 - IT Auditorium, Bldg. 31 3-004

The power of event-driven analytics in Large Scale Data Processing
N. SEBASTIÃO, P. MARQUES / FEEDZAI

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

TBA
S. ABEL / SERVICE DE PHYSIQUE DES PARTICULES ELEMENTAIRES

CERN COLLOQUIUM
16:30 - Council Chamber, Bldg. 503

Broken Symmetry
F. ENGLERT / UNIVERSITÉ LIBRE DE BRUXELLES

FRIDAY 25 FEBRUARY

TH INFORMAL LATTICE MEETING
11:00 - TH Auditorium, Bldg. 4

TBA
G. HERDOIZA / UNIVERSIDAD AUTONOMA DE MADRID