# CERN Bulletin

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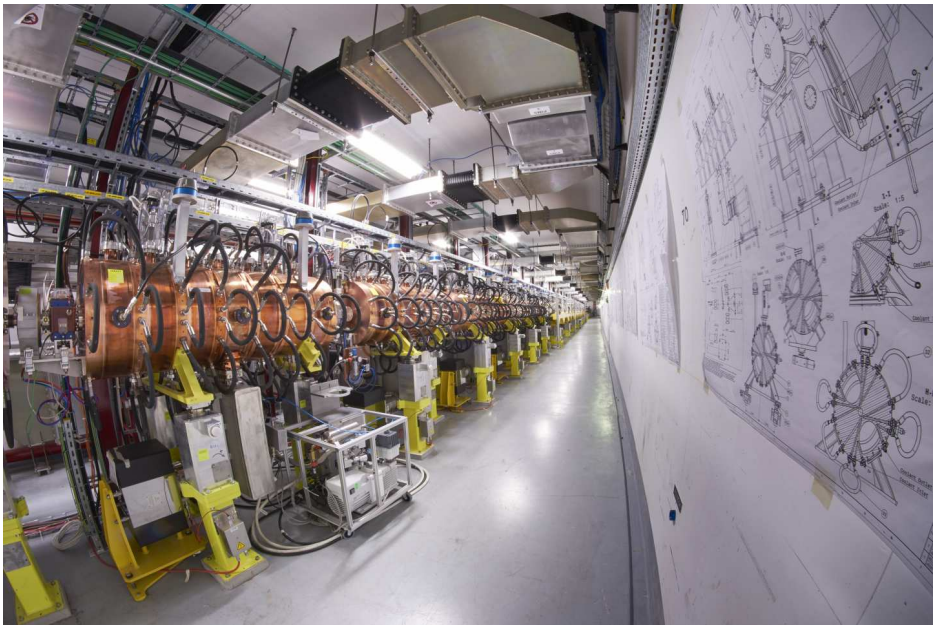
## HERE'S TO A LONG LIFE FOR LINAC 4!



*View of the PI-Mode Structure (PIMS) cavities, which will accelerate the Linac 4 beam from 100 to 160 MeV. These cavities are one of the innovations of Linac 4. (Image : Maximilien Brice/CERN)*

9 May is traditionally Europe Day and it is no coincidence that this date was chosen for the official opening of Linac 4, the first inauguration of a new accelerator at CERN since the LHC started up in 2008. Linac 4 was supported by a research and development programme within the framework of the European CARE (Coordinated Accelerator Research in Europe) project, as well as by special contributions from the European Commission and several European countries.

Linac 4 has been operational since it successfully completed acceleration tests at its nominal energy of 160 MeV at the end of 2016. It will be connected to the rest of the accelerator complex during Long Shutdown 2 in 2019-2020 and will then become the first link in CERN's accelerator chain, replacing Linac 2, which has been in service since 1978. "The acceleration tests at 160 MeV were very encouraging and we are relieved to know that, if we encounter a problem with Linac 2 before the end of 2018, Linac 4 can take over," says Frédérick Bordry, Director for Accelerators and Technology at CERN. "The next two years will be important for us to reach beams of an intensity compatible with the requirements of the other accelerators and particularly to reach more than 95% availability for Linac 4, which is an essential level for the first link in the chain." The 86-metre-long accelerator will undergo various reliability tests over the coming months. The teams will then concentrate on connecting it to the PS Booster.

The inauguration provided a good opportunity to reflect on the accelerator's history.

*(Continued on page 2)*

## A WORD FROM THE DIRECTOR GENERAL

### A NEW SOURCE OF LIGHT FOR THE MIDDLE EAST

**Last Tuesday, I had the pleasure of representing CERN at the official opening of SESAME, the new regional light source facility hosted in Allan, Jordan. It was a very moving experience to be there. As soon as I arrived, I felt at home, because SESAME truly embodies the spirit of scientific curiosity and fruitful collaboration among people of different ethnicities, cultures and traditions that we experience every day at CERN. CERN and SESAME were both established to provide a centre of scientific excellence and to foster peaceful collaboration across borders.**

*(Continued on page 2)*

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# A WORD FROM THE DIRECTOR GENERAL

## A NEW SOURCE OF LIGHT FOR THE MIDDLE EAST

**Today, SESAME's Members are Cyprus, Egypt, Iran, Israel, Jordan, Pakistan, the Palestinian Authority and Turkey.**

**CERN has been involved with SESAME right from the start. In the 1990s, CERN scientists discussed the idea of applying the CERN model of scientific collaboration to the Middle East. This was one of the developments that led to a meeting between Arabs and Israelis in Sinai in 1995, which in turn led to the establishment of a Middle East Scientific Cooperation group, a precursor of SESAME. Since then, three CERN former Directors-General have chaired the SESAME Council: Herwig Schopper, Chris Llewellyn Smith and, taking up his duties last week, Rolf Heuer.**

**Our biggest contribution to SESAME came through the CESSAMag project, which brought together European funding, CERN know-how and the skill and dedication of research institutions and industry in SESAME Member and Observer countries to build the main ring magnet system and power supplies.**

**The official opening of SESAME was the occasion for representatives of the SESAME Members and Observers to celebrate the dawn of research at the laboratory. The main ring is operational and has reached its design energy of 2.5 GeV. The next step is to increase the beam currents to their nominal values and to bring the first beamlines into operation: something that should happen by late summer or autumn this year.**

**Last Tuesday was an important milestone for SESAME. There was a great sense of accomplishment at the opening ceremony, as well as anticipation of the vibrant scientific programme that is now clearly visible on the horizon. With SESAME's first call for experimental proposals resulting in 55 submissions, the fledgling laboratory certainly has reason to be optimistic. I for one am looking forward with relish to seeing the scientific programme unfold at this newest addition to the research landscape and to the efforts of the SESAME community to contribute to building a better world.**

*Fabiola Gianotti*
*Director-General*

# HERE'S TO A LONG LIFE FOR LINAC 4!

Maurizio Vretenar, who led the project until the start of this year, revisited the human and technical feats leading to the birth of the new accelerator: after a gestation period of 20 years. "Roland Garoby and I wrote the first article mentioning the construction of a new linear accelerator in 1996," recalled Vretenar. "It was clear at the start of the 1990s that the LHC injectors would one day reach their limits and we would have to think about replacing or upgrading them."

At the time, the proposed machine was intended to accelerate protons up to 2 GeV and most of its sections would have been superconducting. The concept evolved, the energy level was reduced and the superconducting option was dropped. "But in science, ideas don't die, they float around and sometimes appear in a different form," continued Vretenar. The ESS (European Spallation Source), which is under construction in Sweden, is making use of the principles behind the superconducting option and of many of Linac 4's other components for low-energy acceleration. In 2007, the current design for Linac 4 was adopted, whereby the machine would accelerate $H^-$ ions to an energy of 160 MeV thanks to a chain comprising four different types of accelerating structure.

Nonetheless, there were still some mountains to move. Starting with Mont Citron, the rather hyperbolic name given to the hillock near to the PS that needed to be flattened to allow the construction of the building for the new accelerator. "And it had been 20 years since a proton linear accelerator had been constructed anywhere in Europe," recalled Vretenar. "The know-how was starting to fade and we needed to build an innovative 21st-century machine that would also be reliable." Linac 4 incorporates several innovations, such as its ion source, its two high-energy accelerating structures (CCDTL and PIMS), which are being used in an accelerator for the first time, and its focusing system, which uses 126 permanent magnets. "We have contributed to rebuilding the skills needed for linear accelerators in Europe," adds Vretenar.

But Linac 4 reaches beyond the borders of Europe. As well as contributions from Poland, France, Spain and Italy, the accelerator's design and construction benefitted from the participation of Russia, India and Pakistan.

Maurizio Vretenar concluded by warmly thanking Alessandra Lombardi, his deputy throughout the project, who has now taken the baton and will be in charge of the test and connection phases. He also praised the CERN personnel who developed and constructed the accelerator: "CERN personnel are devoted and motivated. Throughout all these years it has always been a pleasure to work with you."

**Linac 4 in figures**

- 86 metres long, of which 76 metres are for acceleration
- 120 km of cables
- 173 quadrupole magnets (including 126 permanent magnets)
- 27 RF cavities
- 17 klystrons (of which 9 come from LEP) for RF power

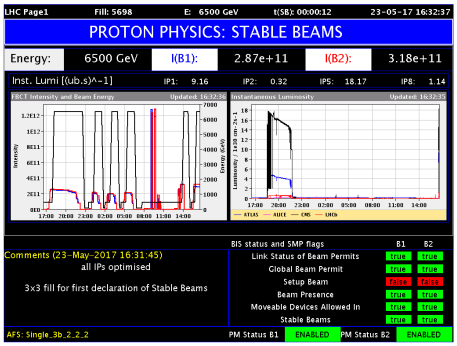
**Did you know?**

- Mont-Citron (40 000 cubic metres) was rebuilt on CERN property on the French side of the border
- The CCDTL-type accelerating structures clocked up a total of 12 440 kilometres travelling from CERN to the Urals and Siberia and back again
- 102 tonnes of steel and copper were used for the accelerating structures
- The $H^-$ ions begin their journey in a simple bottle of hydrogen

*Frédérick Bordry, Director for Accelerators and Technology, Fabiola Gianotti, Director-General, and Maurizio Vretenar, leader of the Linac 4 construction project, officially open Linac 4. "I wish a long life to Linac 4 and its zillions of protons," said Fabiola Gianotti. (Image: Sophia Bennett/CERN)*

*Corinne Pralavorio*

# LHC REPORT: SETTING UP FOR THE NEXT SEASON




The first collisions with stable beams were delivered to the LHC experiments today, with three bunches circulating in each beam. This marks the start of the physics run and the end of the first phase of LHC commissioning with beams, which started 3 weeks ago.

The LHC began running with beam for the first time in 2017 in the evening of Saturday, 29 April. For just over two hours, beams were circulating in both rings, kicking off various beam commissioning activities ahead of the upcoming run of the LHC.

From the moment of first beam, the various teams of the Accelerator and Technology Sector have been alternating day and night, seven days a week, to bring the LHC to the state where stable colliding beams can be delivered to the experiments for data-taking.

To give the teams involved in those activities time to rest and analyse the results, a few commissioning threads are being pushed ahead in parallel.

The first consists of preparing the LHC machine cycle from injection to collisions at 6.5 TeV. This activity is performed with so-called probe bunches of sufficiently low intensity that they pose no or very little risk to the machine equipment while new territory is being explored. Roughly 24 hours after first circulating the beams, one probe bunch per beam was successfully accelerated to 6.5 TeV.

A day later, on 1 May, the optics 'squeeze', an operation where the beam size is reduced at the collision points, was probed for the first time at 6.5 TeV. Over several cycles, the beam parameters and the beam optics are adjusted iteratively until they closely match the targets. Since the LHC is a very reproducible machine, this process is accelerated by reusing corrections established in previous years.

As one of the last steps, the beams are collided by switching off the magnets that keep them separated during injection, energy ramp and optics squeeze. Because the beams are very small compared to the alignment accuracies, the operation crews must 'find' the collisions by scanning the beams against one another until collisions are observed in the detectors.

In parallel to the cycle commissioning, more intense bunches are circulated at injection to setup the beam instrumentation, fine adjust beam steering and feedback systems that stabilise the beams in the vacuum chamber. The systems that protect against equipment failure and beam losses are tested at injection by provoking failures and verifying the correct reaction of the systems.

When bunches with nominal intensity, containing around 100 billion protons, can be circulated in good conditions and the cycle setup is finalised at injection and at 6.5 TeV, it is time to precisely align over 100 collimators and protection devices around the beam orbits.

In 2017, the primary collimator jaws that are closest to the beam will be only 1 mm away from the beam core. Orbit feedback and collimator movement systems must ensure that the distance between the beams and the jaws is stable to just tens of micrometres whenever the beams circulate in the two vacuum chambers. As a final validation of the collimation setup, probe bunches are deliberately shaken until they touch the collimators, while particle losses are recorded around the ring to verify that the collimation system intercepts more than 99.9% of the escaping particles.

After the start of the physics run, in the following days, the operators will interleave periods of fine adjustments and stable beams. They will also start the intensity ramp-up, accelerating the first trains of 12 bunches of protons per beam, foreseen by the end of this week.

*Jorg Wenninger for the Operations group*

# CERN AND FRENCH SPACE AGENCY CNES START R&D COLLABORATIONS

On Tuesday, 25 April 2017, CERN and the French space agency, CNES (*Centre National d'Etudes Spatiales*), signed a cooperation agreement to encourage collaboration on innovations in the aerospace field.

This formalises a long-term partnership in shared areas of interest, such as radiation measurements and their effects on electronic components, which are critical for both particle accelerators and space missions.

The agreement, which was signed by CNES President Jean-Yves Le Gall and Frédérick Bordry, Director for Accelerators and Technology at CERN, describes the wide range of planned collaborations. These will cover a huge range of technologies, from radiation studies, particle detector innovations and big data solutions, to miniature satellites, called cubesats.

"We are proud to have signed this framework agreement. It reflects our two agencies' complementary areas of interest. The RADECS 2017 international conference, which we are organising together in October in Geneva, will give us the opportunity to present the results of our collaboration," they commented in a joint statement.

Three projects formalised in the agreement have already begun:

- Eyesat is a student nanosatellite developed by CNES for its Janus project – a hands-on higher education and outreach programme for space. Eyesat will be studying the phenomenon of zodiacal light in the Milky Way. Eyesat's radiation sensitivity will be tested in CHARM (CERN's High-energy AcceleRator Mixed-field facility).
- NIMPH is another nanosatellite supported by CNES' Janus project, planned for launch in 2021. NIMPH is set to carry a CERN payload designed to measure the radiation environment in orbit, based on CERN's RadMon technology.
- CERN and CNES will also investigate fibre optic radiation and temperature sensors developed at CERN for the LHC and their use in aerospace applications.

These projects, technically led by CERN Engineering Department, have benefited of support from the CERN Knowledge Transfer Fund. More collaborative projects in the pipeline could involve the use of CERN's particle detectors and optoelectronics technologies in space and the exchange of data analysis tools. Future CNES-CERN cooperation will mainly take the form of research and development collaborations, jointly coordinated by both institutes. CNES will also receive privileged access to CERN facilities, while CERN will in turn benefit from CNES validation of its facilities for space qualification tests.

Enrico Chesta, CERN's aerospace applications coordinator, and Julien Mekki, CNES radiation expert, highlighted that valuable knowledge transfers between CERN and CNES have already taken place through the exchange of personnel, and stressed the symbolic importance of the event: "This is both an important achievement and a starting point paving the way to many useful future joint initiatives."

The synergies and competencies in each of the organisations' respective domains of excellence will be particularly important for sharing resources.

Recently, CERN has been developing a network of institutional partnership with space agencies, industry, universities and international organisations active in the aerospace field. CERN is also organising, with CNES involvement, the RADECS conference (Radiation Effects on Components and Systems), which will be held in October 2017 in Geneva. This annual event brings together the world's scientific community working on the effects of radiation on electronic components and systems, an area of study that has a major bearing on both the success of space missions and the reliability of accelerators.

*After the agreement was signed, Jean-Yves Le Gall and Frederick Bordry congratulated the teams involved in the definition of the collaboration for the rapid identification of concrete and promising projects*

*Anaïs Rassat*

# ESA ASTRONAUTS VISIT CERN

*The ESA astronauts at the AMS Payload Operations Control Centre (Image: Sophia Bennett/CERN)*

A group of 13 astronauts* from the European Space Agency (ESA) payed a visit to CERN on 12 May 2017.

Invited by Professor Claude Nicollier and Professor Samuel Ting, the group enjoyed a guided tour around CERN. One of the key points they visited was the Data Centre, where Helen Sharman, Claude Nicollier and Samantha Cristoforetti took part in a live broadcast. During the interview the three astronauts shared what it is like to be in the International Space Station (ISS) and answered the audience's questions left in the comment section.

Next, the astronauts visited the Payload Operations Control Centre (POCC) of the Alpha Magnetic Spectrometer (AMS-02). The AMS is a particle-physics detector assembled at CERN, that looks for dark matter, antimatter and missing matter from a module attached to the outside of the ISS.

On the same day the ISS had its milestone 200$^{th}$ spacewalk, during which a new connector was installed on the AMS to prepare it for a new cooling system next year. Find out more about this operation here.

** Reinhold Ewald, Ernst Messerschmid, Dumitru Prunariu, Samantha Cristoforetti, Michel Tognini, Franz Viehboeck, Claude Nicollier, Ulf Merbold, Andy Turnage, Helen Sharman, Klaus-Dietrich Flade, Alaksandar Aleksandrov and Bertalan Farkas*

*Iva Raynova*

# CERN BESIEGED AT ROYAUME DU WEB

*At the Royaume du Web event at Palexpo, CERN's virtual reality tour mesmerised children and adults alike. (Image: Max Brice, Julien Marius Ordan/CERN)*

Thanks to the invention of the World Wide Web in 1989 at CERN, people all over the world are now more connected than ever before. At the moment, you are most likely reading this article on your computer or smartphone. Also, social media could not exist without the World Wide Web.

Since the World Wide Web was invented here, CERN was invited to the *Royaume du Web* event at Palexpo, a festival that gathered 10 500 YouTube enthusiasts who came to meet some of the most famous French-speaking stars of the internet. Big names such as Norman, Dear Caroline and Le Grand JD (who came to visit CERN a couple of months ago) were present. You may not have heard of them, but they gather millions of viewers.

This edition was the first of its kind with stage performances, Q&A-sessions, word-battles and even yoga on stage. In addition, various stands invited participants to discover web culture.

CERN explained the origins of the Web and proposed virtual-reality tours of its Data Centre and a game of football with protons. Over 1000 people visited CERN's stand. This was the first time that CERN has used VR videos at a public event and it truly was an innovative way to show places people can only rarely visit.

*Marika Matilda Annila*

# WHO NOW RUNS THE (PROGRAMMING) WORLD? ICT GIRLS

*Girls at the CERN stand getting ready for an interview on their projects (Image: ITU)*

In the past 10 years, the percentage of female personnel at CERN has barely increased: women still only account for about 20% of the total. One of the reasons for this slow growth might be that, in general, girls and women are not encouraged to study or work in a technical field. Diversity is an important objective in our work community, so CERN has been trying to narrow this gender gap.

A couple of weeks after organising the Django Girls programming workshop at IdeaSquare, CERN participated in the annual Girls in ICT Day event held on 27 April at the International Telecommunication Union (ITU) in Geneva. These events, held simultaneously in several countries worldwide, aim to inspire young women and encourage them to follow a career in the field of information and communication technology (ICT).

This year, six motivated participants from the Django Girls workshop at CERN seized the chance to present their projects on website programming, which they started in IdeaSquare with the help of ICT experts.

The girls were happy to explain their learning and creative process, and their projects got a remarkably good response from the audience.

The event kicked-off with an interactive opening ceremony, connected with Beirut and Vilnius via a live webcast, and with a live smartphone-based quiz – to the participants' surprised delight.

Other schools presented projects varying from robotics to programming a satellite. In addition, ITU had organised relaxed small-group discussions between the attendees and an international group of female role models, where the professionals could answer questions and explain what motivated them to work in ICT.

All the incredibly talented girls who took part in the Girls in ICT Day confirmed what we already knew: girls and women in this field are much needed and should be taken seriously. With the amount of knowledge that was packed in one big room at the ITU headquarters, these girls could rule the world, no doubt!

*Marika Matilda Annila*

# WOMEN IN SCIENCE: BREAKING THE CLICHÉ


*Professor Dame Julia Slingo, DBE, former chief scientist of the Met Office in the UK, Ms. Elena Manaenkova, Deputy Secretary-General of the WMO and Fabiola Gianotti, CERN Director-General, discussing their experiences in science. (Image: Max Brice/CERN)*

On 4 May, Fabiola Gianotti, CERN Director-General, participated in a panel discussion called "Breaking the cliché-Women in science", which took place in Geneva. The event was co-organised by the International Gender Champions, the Mission permanente de la France auprès de l'ONU à Genève and the World Meteorological Organization.

The main goal of the event was to share experiences and discuss possible ways to increase the participation of women in all scientific fields.

Fabiola Gianotti shared how reading the biography of Marie Curie at the age of 17 contributed to inspiring her to study physics and then undertake a career in science. She emphasised the importance of diversity in general – not only in terms of gender, but also ethnicity, culture and traditions.

Diversity and equality have always been CERN's strengths and they must be nurtured constantly. As the Director-General said in a recent article addressed to the CERN community: "It is incumbent on all of us to ensure that diversity is cherished as a fundamental value of this Organization, with zero tolerance for sexist, homophobic or racist behaviour."

*Iva Raynova*

# COMP. SECURITY: "WANNACRY"? THE IMPORTANCE OF BEING PATCHED


Mid-May has seen a big weekend for the cyber-threat landscape, as "WannaCry" (also known as "WannaCrypt") came onto the scene with a bang and affected many Microsoft Windows systems worldwide. Using an old exploit developed by the US National Security Agency and published by the ShadowBroker hacker group, WannaCry tried to infect non-patched PCs. As Microsoft has already provided fixes to this underlying vulnerability, this shows once more the importance of patching...

What if you haven't patched? WannaCry installs ransomware ("Ransomware-when it is too late..."), i.e. software that encrypts a wide variety of files hosted on the computer, including MS Office documents, photos, films, etc. – hence the alias "WannaCrypt". It also tries to identify external storage systems connected to the PC in order to encrypt those files, too. Unless you have a recent unaffected back-up, the only way to recover the files is to pay the ransom of 300 USD (see photo). Even if the ransom is paid, there is no guarantee that the attackers will provide the decryption details...

How can we fight WannaCry? Like any other malware, the primary infection vector is e-mail (also see our *Bulletin* article "One click and BOOM... (Reloaded)"). The motto "Stop-think-don't click" therefore applies once more. Fortunately, this time, the CERN e-mail system and its anti-spam filtering identified and quarantined potentially malicious incoming e-mails. More importantly, all centrally managed Windows PCs were already patched against any exploitation of that kind. Microsoft made the corresponding updates available in March 2017 (i.e. MS17-010). The early bird catches the worm! So no harm was done to those computers. For non-centrally managed PCs, patching should be done regularly; a little effort today could save you tons of headaches in the future. Hence our recurring plea to you to keep your Windows, Linux or Mac computers, and also your Android and iOS smartphones and tablets, up-to-date using their auto-update features (see for example our *Bulletin* articles "Agility for computers" and "Android is the new Windows"). Windows Update, Mac's

Software Update and Linux's YUM auto-update are an essential first line of defence of your computer. Running decent antivirus software adds to this: the native Windows Defender (and probably all major antivirus software) was able to detect WannaCry from the beginning. CERN's anti-virus solution is available to you for free for download and use on your home computers. In fact, the few infected computers this time were sub-optimal private laptops owned by people temporarily visiting CERN. Too bad for them if they didn't have reasonable recent back-ups of their local files... In the end, as luck would have it, it turned out that the creators of WannaCry had included a "kill switch" inside their code. The kill switch tests successful connection to a certain domain name on the Internet, and, if it exists, WannaCry will not execute. This kill switch was quickly identified by a security researcher, who then ensured that the domain name existed. Connections from inside the CERN network to that domain are redirected to a website maintained by the CERN Computer Security Team thus preventing the devices from being infected and giving us visibility into the affected systems.

For more on this subject, join us for the "Ransomware: Trick or Treat" seminar on Thursday, 1 June 2017 at 2 p.m. in the IT auditorium (31 3-004): https://indico.cern.ch/event/639653/

*Do you want to learn more about computer security incidents and issues at CERN? Follow our Monthly Report (http://cern.ch/security/reports/en/monthly_reports.shtml). For further information, questions or help, visit our website (http://cern.ch/Computer.Security) or contact us at Computer.Security@cern.ch.*

*The Computer Security Team*

# Official communications

## DUTY TRAVEL, DUTY OF CARE: CERN SIGNS AN AGREEMENT WITH INTERNATIONAL SOS FOR MEDICAL AND SECURITY ASSISTANCE ABROAD

Since January this year, CERN has partnered with a specialised travel assistance company, International SOS (iSOS), to provide medical and security assistance to its members of personnel travelling for official purposes.

iSOS offers advice and assistance 24/7 prior to, during and after official travel. The company will prepare members of the personnel before official travel and assist them while abroad with medical and security matters or other issues requiring support.

Full details about this cover and its modalities are detailed the Admin e-guide (*https://admin-eguide.web.cern.ch/en/assistance-related-official-travel-provided-international-sos*).

**Note**: iSOS is a service provider and is neither a substitute for, nor a supplement to, personal health insurance. It will act as an intermediary between the member of personnel and their health insurance provider.

*HR Department*
*HR-Official-travel@cern.ch*

## 116TH ACCU MEETING

**Agenda for the meeting to be held on Tuesday, 30 May 2017 at 9:15 a.m. in Room Georges Charpak (Room F, 60/6-015)**

1. Chairperson's remarks
2. Adoption of the agenda
3. Minutes of the previous meeting
4. News from the CERN Management
5. Report on services from SMB Department
6. Reports from ACCU representatives on other Committees: Restaurants' Supervisory committee (CSR)
7. Users' Office News
8. Matters arising
9. Any Other Business
10. Agenda for the next meeting

The **Advisory Committee of CERN Users (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 mandate of ACCU is available on: http://accu.web.cern.ch/content/mandate.

There are one or two Delegates from each Member State (two Delegates from the large Member States), one Delegate from each of the Associate Members, four Delegates from non-Member States (NMS), and two from CERN. The list of ACCU members is available on: http://accu.web.cern.ch/content/accu-members.

ACCU meetings are attended by the Director General and members of the Directorate, other members of the CERN management and departmental representatives, the Head of the Users' Office and a representative of the CERN Staff Association. Other members of the CERN

Staff attend as necessary for specific agenda items.

***Chairperson:*** *Dragoslav-Laza Lazic (Dragoslav.Lazic@cern.ch)*

***Secretary:*** *Michael Hauschild (ACCU.Secretary@cern.ch)*

Anyone wishing to raise any points under "Any Other Business" at the upcoming ACCU meeting is invited to contact the appropriate User representative, or the Chairperson or the Secretary.

## ANNOUNCEMENT FOR "FRONTALIERS" REGARDING THE CHOICE OF HEALTH INSURANCE SYSTEM

In view of the Agreement concluded on 7 July 2016 between Switzerland and France regarding the choice of health insurance system* for persons resident in France and working in Switzerland (*"frontaliers"*), the Swiss authorities have indicated that those persons who have not "formally exercised their right to choose a health insurance system before 30 September 2017 risk automatically becoming members of the Swiss LAMal system" and having to "pay penalties to their insurers that may amount to several years' worth of contributions". Among others, this applies to spouses of members of the CERN personnel who live in France and work in Switzerland.

As a result, the Swiss authorities recommend that all frontaliers who are members of the French health insurance system check whether they have already formally declared this choice or not. If they have, nothing else needs to be done. Otherwise, they must complete the relevant form and submit it to the French and Swiss authorities **by 30 September 2017** (the detailed procedure is set out on page 3 of the form).

It is advisable to begin the process as soon as possible as it may take several weeks.

Given the large number of people expected to contact it on this subject, the *Service de l'assurance maladie* (SAM) of the Canton of Geneva has introduced a special service to help those with any questions about exercising their right to choose a health insurance system. It is possible for the persons concerned to request information about their current status by completing the online enquiry form here.

A special hotline has also been opened (+41.22.546.19.42) and an information website is available here (*http://www.ge.ch/deas/conferences.asp?id=2017*).

*Frontaliers* who work in Swiss cantons other than Geneva are invited to contact the relevant service in the canton in which they work.

** i.e. the choice between the Swiss health insurance system (LAMal) and the French system.*

*HR Department*

# Announcements

## US-CERN-JAPAN-RUSSIA INTERNATIONAL ACCELERATOR SCHOOL 2017

Registration is now open for the Joint US-CERN-Japan-Russia school on RF Technologies, to be held in Hayama, Kanagawa, Japan, from 16 to 26 October 2017. This school will cover the full spectrum of subjects related to RF systems in modern particle accelerators. The lectures will include subjects such as longitudinal beam dynamics, design and construction of NC and SC RF structures, and low-level RF design and realisation. Seminar-style descriptions of international projects are also included. More details on the programme can be found on the website. The course is aimed at both beginners in the field and more advanced students.

Further information can be found on the http://www-conf.kek.jp/accschool17/index.html">JAS website (*http://www-conf.kek.jp/accschool17/index.html*).

# 29 MAY: THE EXIT BARRIERS AT GATE B WILL BE OPERATIONAL

Please note that as of **Monday 29 May**, the exit barriers at Gate B (road Pauli – Meyrin site) will be fully operational 24/7.

Thank you for your understanding.

*SMB department and group BE-ICS*

# LEAVE YOUR CAR AT HOME: JOIN THE MOBILITY CHALLENGE


*On 8 June, travel green to work!*

On 8 June 2017, if you travel to CERN **in any way, other** than alone in a car, please let us know, even if you do it daily already!

For the third year running CERN is participating in the *Challenge Mobilité* organised by the Auvergne-Rhône-Alpes region. The purpose is to motivate all CERN personnel to come to work by alternative transport, even just for one day. This includes transportation such as walking, cycling, public transport, carpooling, etc.

CERN has been signing up to a similar campaign-Bike to Work-for several years, and we encourage you to join both activities. If you already come to work with alternative transportation, let us know!

Think green, be sporty and join the challenge!

On 8 June, go to ***cern.ch/challengemobilite*** and register your participation.

*PS: We are competing against other companies and organisations in the area, so let's show what CERN is capable of.*

# THE PORT HUMANITARIAN HACKATHON 2017: CALL FOR PARTICIPANTS


Are you innovative and do you like to share your ideas with other enthusiasts? Would you like to apply your knowledge and skills to humanitarian problems? If the answers to the above questions are yes, then THE Port Humanitarian Hackathon may well be for you!

During this year's event, which takes place from 6 to 8 October, multidisciplinary teams will tackle several humanitarian challenges in less than 60 hours at CERN's IdeaSquare. The objective is to build a working prototype for each challenge within this timeframe.

The challenges have been proposed by NGOs, international organisations and members of civil society. Here is a preliminary list:

- Age assessment for migrant children
- Wearable device to monitor Parkinsons patients
- Renewable energy in the developing world
- Improving conditions in refugee camps
- Medical waste disposal to fight counterfeit drugs
- Job searching platform for refugees
- Online interpreters in crisis situations

If you're interested but don't have expertise in one of the specific topics listed above, don't worry! We are looking for innovators from all backgrounds. We believe that diversity breeds innovation.

Apply by 4 June at www.theport.ch. Any questions? Check out the FAQ on our webpage. Still need help? E-mail us at info@theport.ch.

# CENTRAL HEATING BEING TURNED OFF

As of Monday 22 May 2017, the central heating will be progressively turned off throughout CERN. Within the next few days, all buildings will no longer have heating.

We thank you in advance for your understanding.

*SMB/SE*

# BIKE2WORK - TIME TO REGISTER YOUR TEAM

*Teams cycle to work at CERN's Meyrin site in June, as part of Bike2Work 2016. (Image: Sophia Bennett/CERN)*

Commuting to work by bike is getting more and more popular, and the preparations for Bike2Work 2017 are well underway – already some 50 CERN teams have signed up.

Last year's big Mobility achievement was the new bike path from Meyrin to Prevessin-which was inaugurated on 14 October 2016. The inauguration was attended by representatives from Prévessin and Saint-Genis-Pouilly, CERN and the département de l'Ain, all of whom contributed to the funding of the project. Martin Steinacher, CERN Director for Finance and Human Resources said: "With this project, we are on the right track, or rather on the right [bike] path, to improve mobility in the Pays de Gex."

In the next two weeks, we hope you and your colleagues will sign up for the annual Bike2Work campaign that will run until the end of June. According to numbers from the Geneva authorities from 2010, 45% of 'motorized' journeys were under 5km, so if you find yourself in this group, you have no excuse. Sign-up a team this week.

To see how best to get to work-see the APIcy's great online map.

Lastly, please remember to be vigilant. If you are involved in an accident or near-miss at work or on your way to/from work, per CERN Safety Code A2 please remember to fill out an internal accident report on EDH.

Ride responsibly and stay safe.

# CONCERT: SAX MEETS PIANO | 2 JUNE 12 P.M. | MAIN AUDITORIUM

CERN physicists perform music for saxophone and piano in the Main Auditorium.

Ruth Jacobs (saxophone) and Jim Cline (piano, voice) will perform works by Ravel, Hindemith, Rueff and Berg during this noon recital, that will still leave you time to get lunch!

**Friday, 2 June, 12 p.m. in the Main Auditorium (building 500)**

All are welcome!

# Obituaries

## JOCELYNE JERDELET (1959-2017)

*Jocelyne Jerdelet (Photo : CERN)*

We deeply regret to announce the death of Jocelyne Jerdelet on 11 May 2017.

Jocelyne Jerdelet, who was born on 28 January 1959, worked in the SIS group, RC sector, and had been at CERN since 1 November 1983.

The Director-General has sent a message of condolence to her family on behalf of the CERN personnel.

*Social Affairs*
*Human Resources Department*

*CERN's flags were flown at half-mast on Wednesday 17 May 2017, the day of the funeral, in accordance with the procedure for the death of an employed member of the personnel.*

# Ombud's corner

## FOURTH LETTER FROM OMBUDSLAND - BYSTANDER ACTION MATTERS

I'm just back from the annual conference of the International Ombudsman Association, and this time the keynote presentation was focused on the role of the 'bystander' or the person who witnesses an unacceptable or potentially harmful situation and does nothing. Yet they have an influence simply by being there.

Why does bystander presence matter?

- It matters because we are there, and by being there we have an opportunity to act;
- It matters because we are social beings and as such we have a responsibility to protect the values of our community;
- It matters because, whether through action or non-action, we influence each other, and the simple presence of a third party affects the dynamics of interaction between the people in disagreement or dispute;
- Finally, it matters because we are co-creators of the culture in which we evolve, and by our behaviour we affirm or refute the development of the norms and climate around us.

What it boils down to ultimately is that we need to embrace the fact that we are all bystanders at times and when faced with inappropriate behaviour, we need to leverage that relationship with positive intentionality. In other words, we need to care about making a difference and overcome our reluctance to act, while carefully considering what might be the best intervention possible in any given instance.

So what causes this 'bystander apathy 'and stops us from taking action? It may be because we don't want to get involved, that we tell ourselves it is not our business or that we feel inadequate or ill-equipped to intervene. Perhaps the situation appears to be ambiguous or there are other people

around whom we believe are better placed to act? Perhaps we are concerned about possible consequences or that our action might backfire against us?

All these are legitimate concerns in themselves but they can limit us in situations where it may be important for us to react, in particular when others need us. It is therefore important to understand and acknowledge our inner reasons if we are to overcome our reluctance and choose instead to affirm our 'response-ability' in order to take considered and appropriate action in situations where our colleagues find themselves in difficulties. Once we do that, we will find ourselves more apt to notice such situations, interpret whether or not they warrant our intervention and decide on the action needed, either directly from us or via the appropriate channels or services available.

Indeed, in Ombuds' offices around the world, people are heard saying: "It was very hard for me to react directly to that inappropriate – joke, comment, behaviour – but what really hurt me was that nobody else said anything. . . " This speaks for the fact that bystander action really does matter as, in the words of Martin Luther King Jr, "in the end, we remember not the words of our enemies, but the silence of our friends".

*Sudeshna Datta-Cockerill*