CERN Bulletin

Issue No. 35-37/2018-Wednesday 05 September 2018
More articles at *http://home.cern/cern-people*

SUCCESS FOR AWAKE

The experiment successfully accelerated electrons with plasma wakefields generated by protons, a world first

The final part of the AWAKE experimental facility, with the accelerating plasma cell and the scintillating screen used to detect the accelerated electrons and infer their energy. (Image: Maximilien Brice, Julien Ordan/CERN)

Early in the morning on Saturday, 26 May 2018, the AWAKE collaboration at CERN successfully accelerated electrons for the first time using a wakefield generated by protons zipping through a plasma. A paper describing this important result was published in the journal *Nature* on 29 August. The electrons were accelerated by a factor of around 100 over a length of 10 metres: injected at an energy of around 19 MeV, they reached an energy of almost 2 GeV.

AWAKE ("Advanced WAKEfield Experiment") is a proof-of-principle "Research and Development" project investigating the use of protons to drive plasma wakefields for accelerating electrons. While traditional accelerators use radio-frequency cavities, in wakefield accelerators, the particles get accelerated by "surfing" on top of a plasma wave (or wakefield).

"Wakefield accelerators have two different beams: the beam of particles that is the target for the acceleration, known as 'witness beam', and the beam that generates the wakefield, known as the 'drive beam'," explains Allen Caldwell, spokesperson of the AWAKE collaboration.

(Continued on page 2)

A WORD FROM...

NOW GOING LIVE – THE LEARNING HUB AT CERN

Education and training are essential parts of CERN's core mission, whether for high school teachers, summer students or our many public visitors. One particularly important audience for training is you – the CERN personnel. That's why we offer a wide range of learning opportunities, varying from the technical skills we need to carry out our jobs to the behavioural competencies we need to make our working lives run smoothly and the courses that enable us to stay safe.

(Continued on page 2)

In this issue

News 1
Success for AWAKE 1
A word from... 2
LHC Report: 48 fb-1 and counting 2
Decay of Higgs boson into bottom quarks observed 3
Computer Security: An old scam in a new disguise 4

Official communications 5

Announcements 7

Obituaries 8

Ombud's corner 9

Published by:
CERN-1211 Geneva 23, Switzerland writing-team@cern.ch
Printed by: CERN Printshop

CERN-ISSN: **Printed version:** 2011-950X
Electronic Version: 2077-9518

A WORD FROM...

NOW GOING LIVE – THE LEARNING HUB AT CERN

Our range of courses is extensive and extremely popular, but we felt that things could be improved, which is why we have invested considerable time and effort in developing the new Learning Hub, which is being launched this week. After several test workshops with learners, whose feedback was taken on board, and further rounds of development, the result is a one-stop shop for finding everything you need in the same place. You can enrol in courses at the click of a button, read learning news and, among other new features, access course documentation and consult your entire training history.

Learning is good for you, and it's good for CERN. And it just got easier! So dive into the Learning Hub (*https://learninghub.cern.ch/*) as of 10 September and sample the rich world of learning offered by CERN.

Doris Forkel-Wirth, James Purvis and Florian Sonnemann
Head of the HSE Unit & Head of the Human resources department & Head of the Finance and administrative processes department

SUCCESS FOR AWAKE

Previous examples of wakefield acceleration have relied on using electrons or lasers for the drive beam. AWAKE is the first experiment to use protons for the drive beam. “Wakefield accelerators relying on protons for their drive beams can accelerate their witness beams for a greater distance, consequently allowing them to attain higher energies,” adds Caldwell.

Drive-protons from the SPS are injected into AWAKE's plasma cell containing vaporised Rubidium. A laser pulse transforms the Rubidium gas into a plasma by ejecting electrons from the gas atoms. As the drive beam of positively charged protons travels through the plasma, it causes the negatively charged electrons within the plasma to oscillate in a wavelike pattern, much like a ship moving through the water generates oscillations in its wake. Witness-electrons are then injected and “ride” the plasma wave to get accelerated.

“AWAKE has demonstrated that it can achieve an average gradient of around 200 MV/m,” says Edda Gschwendtner, technical coordinator and CERN project leader for AWAKE. By comparison, the Large Electron-Positron collider (LEP), which operated between 1989 and 2000, had a nominal acceleration gradient of 6 MV/m. Gschwendtner and colleagues are aiming to attain an eventual acceleration gradient of around 1000 MV/m (or 1 GV/m).

AWAKE has made rapid progress since its approval in 2013. Civil-engineering works for the project began in 2014, and the plasma cell was installed in early 2016 in the tunnel formerly used by part of the CNGS facility at CERN. A few months later, the first drive beams of protons were injected into the plasma cell to commission the experimental apparatus, and a proton-driven wakefield was observed for the first time in late 2016. In late 2017, the electron source, electron beam line and electron spectrometer were installed.

AWAKE will continue testing the wakefield-acceleration of electrons for the rest of 2018. “We are looking forward to obtaining more results from our experiment to demonstrate the scope of plasma wakefields as the basis for future particle accelerators,” explains Edda Gschwendtner. Although still at a very early stage of development, the use of plasma wakefields could drastically reduce the sizes, and therefore the costs, of the accelerators.

Achintya Rao

LHC REPORT: 48 FB-1 AND COUNTING

Since the recovery from the recent machine development period, the LHC has been in luminosity production mode, crawling its way up towards 60 fb-1

Since the recovery from the five-day machine development (MD) period that started on 23 July, the LHC has been in luminosity production mode, crawling its way up the predicted luminosity curve with the aim of attaining the 2018 goal of 60 fb^{-1}. The period of luminosity production will be interrupted by another block of MD and a second technical stop, starting on 12 September. The machine should then be back in production on Monday, 24 September, which coincides with the CERN Council week, by which time we aim to have passed the 50 fb^{-1} mark. Another four weeks of production before the switch to the Pb ion run should then be enough to reach the goal of 60 fb^{-1}.

The last few weeks have unfortunately not been trouble free, as the injectors have suffered from a series of issues that have caused prolonged periods of beam unavailability. Not all of the unavailability translates directly into downtime for the LHC as, in some cases, fills can be maintained until the injectors are available again.

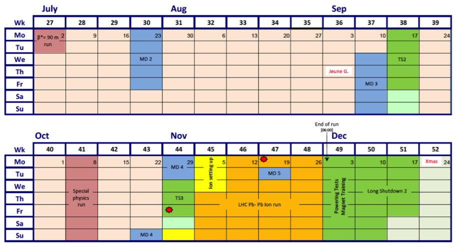
The breakdown of an uninterrupted power supply (UPS) in the PS complex at around 5 p.m. on Wednesday, 15 August was a good example of this. The LHC was in stable beams when many front-end computers (FEC) in the PS complex stopped working due to the UPS breakdown, making beam production impossible. Although the actual UPS issue lasted only 4 seconds, it took 12 hours to fully recover the machines and to resume beam production. The LHC managed to bridge the entire period with a fill that lasted 26.5 hours, which is long, but nevertheless a good 10 hours short of the record fill length.

However, the next day a serious water leak was found in one of the 100 main PS magnets. Unfortunately, the LHC did not manage to fill before the leak occurred and was therefore without beam for the 22 hours it took to repair it.

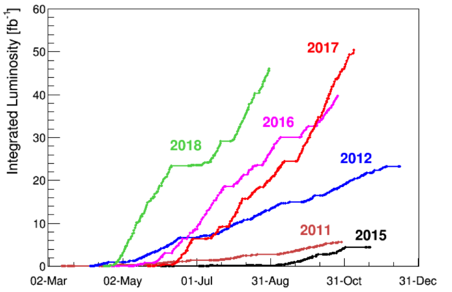
Not long after, at around 5 p.m. on Monday, 20 August, the LHC had dumped the beam to re-fill when, at nearly the same time, beam-induced losses in the SPS caused a vacuum leak in one of the main bending magnets in sextant 3 of the accelerator, preventing any production of beam out of the SPS. After investigation, the magnet had to be replaced and, since the system had been at ambient pressure for some time, prolonged pumping and conditioning with beam were required before the usual 144-bunch trains could be produced again for the LHC.

The LHC team did not sit idle, but used the downtime well by getting many of the interventions requiring accesses that were on the waiting list done. Once that had been completed, they switched to setting up the ion cycle in anticipation of the Pb ion run that starts on 4 November. Initially, this cycle was set up without a beam, but as soon as the SPS could deliver single bunches, which was at around 5 p.m. on Wednesday, 22 August, these were used to validate part of the cycle. By the time the 144-bunch train was available from the SPS, which was at around noon on Thursday, 23 August, substantial progress had been made on the set-up and an efficient switch was made back to the proton cycle to resume luminosity production.

Since this last issue, the injectors have had very good availability and the LHC has managed to fill when necessary. Despite all the issues mentioned above, close to 18 fb^{-1} have been integrated since the recovery after the last MD block on Saturday, 28 July. This is an average of 3.6 fb^{-1} per week, with 4.6 fb^{-1} attained during the last week. Therefore, accumulating 2.1 fb^{-1} in the coming week to reach the 50 fb^{-1} before the MD and technical stop period should be feasible, provided no serious issues loom on the horizon.



The final two quarters of beam production before LS2, with the next MD and technical stop block in weeks 37 and 38, a week of special physics runs as a placeholder in week 41 – although this remains to be definitively scheduled – and the end of the proton physics run scheduled for 27 October.



Multi-annual overview of integrated luminosity, with 2018 well on track to become a record year for the LHC.

Rende Steerenberg

DECAY OF HIGGS BOSON INTO BOTTOM QUARKS OBSERVED

ATLAS and CMS have announced that they have observed this very-difficult-to-spot decay mode

Six years after the discovery of the Higgs boson, ATLAS and CMS have announced that they have observed its decay into bottom quarks. The result was presented on 28 August at CERN by the two collaborations.

The Standard Model of particle physics predicts that about 60% of the time a Higgs boson will decay to a pair of bottom quarks, the second-heaviest of the six flavours of quarks. Testing this prediction is crucial because the result would either lend support to the Standard Model or rock its foundations and point to new physics.

Spotting this common Higgs-boson decay channel is anything but easy, as the six-year period since the discovery of the boson has shown. The reason for the difficulty is that there are many other ways of producing bottom quarks in proton–proton collisions. This makes it hard to isolate the Higgs-boson decay signal from the background "noise" associated with such processes. By contrast, the less-common Higgs-boson decay channels that were observed at the time of discovery of the particle, such as the decay to a pair of photons, are much easier to extract from the background.

To extract the signal, the ATLAS and CMS collaborations each combined data from the first and second runs of the LHC. They then applied complex analysis methods to the data.

Read the full article here (https://home.cern/about/updates/2018/08/long-sought-decay-higgs-boson-observed).
For more information, see the ATLAS and CMS websites.

COMPUTER SECURITY: AN OLD SCAM IN A NEW DISGUISE

Money has always been a catalyst for greed and malice. Blackmail is one way to extort money from the innocent and has existed since ancient times

Money has always been a catalyst for greed and malice. Blackmail is one way to extort money from the innocent and has existed since ancient times. In the digital world, blackmail is not unknown and there are many ways to go about it. We have discussed some of them in previous *Bulletin* articles ("Malware, ransomware, doxware and the like"). Recently, there has been a clever new twist on an old e-mail scam that might make the con far more believable.

A message received at CERN or elsewhere claims that your computer has been compromised and the attacker has full access to your device. This is not beyond the realms of possibility as computers always have some vulnerabilities that haven't been fixed yet (by you or the developer of the operating system). And "full access" really implies full access: to the documents stored on that device like photos, videos, bank statements; to the buffer of its keyboard so that every keystroke – including any passwords being typed – can be logged and stolen; to its screen and whatever is displayed on it snapshotted by the attacker; and to the attached microphone and web camera. In the last case, this allows the attacker to spy on any activity committed in the vicinity of that computer (see also our *Bulletin* article "Curiosity clicks the link"). And the attacker can play dirty tricks with that power. By claiming to have a recording of the webcam's livestream while the computer was accessing webpages with pornographic material, the attacker can threaten to release the video to all locally registered contacts unless a Bitcoin ransom is paid... The new twist? The e-mail does not only include this threat but also now references a real password previously tied to the recipient's e-mail address, which makes the scam much more believable!!!

How come? Passwords are a necessary token for protecting your data in any web service. CERN INDICO, CERN EDH, Facebook, Twitter, Amazon, etc. Hence, they are usually stored in combination with an identifier (i.e. your e-mail address) for that web service – but not always in a perfectly secure fashion. At CERN, we protect your password in accordance with best practice, converting it into a non-recoverable string (technically a "salted hash"), but some other sites might store your password in clear text. If those websites are infiltrated, all clear text passwords are exposed and the access protection for any other data is completely lost. From that moment, all data can be considered to be involuntarily public. This is happening more often than you might think. Whenever the CERN Computer Security Team learns about newly exposed passwords linked to your CERN e-mail address or any other address registered with CERN, we will let you know!

Thus, if you receive such a scam e-mail blackmailing you, please DON'T PANIC. And for sure, do not pay any ransom money! The only thing you should do is to change the password revealed in the e-mail – if you recognise where it was used. Consider terminating that specific account. To be more proactive, recall these simple principles to keep your digital life secure: keep all your devices always up-to-date by using the operating system's auto-update feature ("'WannaCry'? The importance of being patched"); choose complex and/or long passwords and keep them to yourself ("CERN Secure Password Competition..."); have different passwords for different sites and different purposes; and do not click on links in e-mails or on webpages whose origin you don't trust or which look dodgy ("A free click for your awareness")!

Do you want to learn more about computer security incidents and issues at CERN? Follow our Monthly Report. For further information, questions or help, check our website or contact us at Computer.Security@cern.ch.

The Computer Security Team

Official communications

HUMAN RESOURCES DEPARTMENT: 2017 ANNUAL REPORT ON THE SETTLEMENT OF DISPUTES AND DISCIPLINE

Introduction

The Annual Report under Chapter VI ("Settlement of Disputes and Discipline") of the Staff Rules and Regulations serves to report on:

- requests for review;
- internal appeals;
- complaints before the Administrative Tribunal of the International Labour Organization (ILOAT); and
- cases in which disciplinary action was taken.

Requests for review and internal appeals

Under Article S VI 1.01 of the Staff Rules, members of the personnel may challenge an administrative decision by the Director-General where it adversely affects the conditions of employment or association that derive from their contract or from the Staff Rules and Regulations.

If permitted by the Staff Rules and Regulations, a decision may be challenged internally within the Organization:

- through a review procedure; or
- through an internal appeal procedure. In this case, the Joint Advisory Appeals Board (JAAB) shall be consulted by the Director-General prior to taking any final decision on the merits.

Disciplinary Action

Under Article S VI 2.01 of the Staff Rules, the Director-General may take disciplinary action against members of the personnel who, whether intentionally or through carelessness, are guilty of a breach of the Staff Rules and Regulations.

Article S VI 2.02 of the Staff Rules stipulates that, having regard to the gravity of the breach or misconduct in question, the disciplinary action may be:

- a warning;
- a reprimand;
- suspension without remuneration or pay for a period not exceeding six months;
- downward adjustment of the staff member's salary;
- demotion;
- dismissal.

The Director-General shall consult the Joint Advisory Disciplinary Board (JADB) prior to taking any disciplinary action other than a warning or a reprimand (Article S VI 2.04 of the Staff Rules) or summary dismissal for particularly serious misconduct (Article S VI 2.05 of the Staff Rules). In the latter situation, the Director-General may decide to dismiss without notice and without consulting the JADB.

Complaints before the Administrative Tribunal of the International Labour Organization (ILOAT)

A decision may be challenged externally by filing a complaint before the ILOAT:

- when internal procedures have been exhausted and the decision is final;
- when an internal challenge is not permitted by the Staff Rules and Regulations; or
- when the complainant is authorised to proceed directly to the Tribunal.

****

Requests for review:

From 1 January to 31 December 2017, there were four requests for review of administrative decisions taken by the Director-General.

- Four staff members requested a review of the decision to qualify their performance as "fair" for the reference year 2016.

Internal reviews were carried out by the Human Resources Department, following which the Director-General decided to maintain the decisions.

Internal appeals:

From 1 January to 31 December 2017, sixteen internal appeals were examined by the Joint Advisory Appeals Board (JAAB).

- Between 2016 and 2017, 14 internal appeals were submitted against the decisions taken by Council in 2015 as a result of the five-yearly review of financial and social conditions. All 14 appeals challenged the decision to modify the career structure and salary grid and the corresponding individual notifications. In addition, two out of these 14 appeals challenged the decision not to increase the level of salaries in January 2016.

By mutual agreement, a number of these appeals were temporarily suspended pending the outcome of the 2017 MERIT exercise and the confirmation of benchmark job titles. Hearings before the JAAB took place between February and March 2018.

The Director-General decided to follow the JAAB's recommendation to reject the appeals but to initiate career reviews for a number of the appellants concerned. In addition, the JAAB made further general observations and suggestions concerning the implementation of the new career structure, which will be studied by the Director-General.

- Two staff members introduced internal appeals against the decision to qualify their performance as “fair” for the reference year 2016.

In both cases, the Director-General decided to follow the JAAB's recommendation to confirm the Organization's original decision.

- One staff member introduced an appeal against the decision to discontinue their affiliation to the Organization's health insurance scheme beyond the date of termination of contract, further to the staff member's resignation from the Organization.

The Director-General decided to follow the JAAB's recommendationto confirm the Organization's original decision.

Warnings and reprimands:

In 2017, the Organization issued three warnings and two reprimands, as follows:

- A warning was issued to a staff member for anonymously diffusing information intended to undermine a colleague's professional integrity and unnecessarily surveying a colleague's work.
- A warning was issued to a staff member for inappropriate and unprofessional behaviour towards a colleague and demonstrating a lack of hierarchical and professional responsibility.
- A warning was issued to a staff member for inappropriate behaviour at the workplace and making distasteful jokes in front of colleagues.
- A reprimand was issued to a User for the unauthorized use of CERN fuel.
- A reprimand was issued to a staff member for directing orders to a limited number of suppliers and concealing quotes resulting in the potential detriment of fair competition between potential suppliers.

The Joint Advisory Disciplinary Board (JADB):

- From 1 January to 31 December 2017, the JADB was convened to examine two cases, both concerning the fraudulent use of a team account:

- one procedure resulted in a decision by the Director-General to impose two disciplinary sanctions upon a staff member: demotion by one grade and downward adjustment of salary to the midpoint of the new grade.

- the other procedure resulted in the Director-General's decision not to impose any disciplinary sanction against the staff member, following the Board's conclusions that the conduct did not constitute a breach of the obligations under the Staff Rules.

- Also, the Director-General made decisions concerning ongoing disciplinary proceedings launched in 2016 concerning declarations by two staff members under the CERN Health Insurance Scheme. In both cases, following a finding of misconduct by the Board, a downward salary adjustment of 4% of the midpoint grade was imposed and the staff members were requested to reimburse the fund.

Dismissal notified during the probation period:

In 2017, one staff member was notified of the termination of their employment contract due to insufficient performance during the probation period (as per Article S II 5.01 g of the Staff Rules).

Particularly serious misconduct:

In 2017, a User's behaviour was deemed particularly serious misconduct as per Article S VI 2.05 of the Staff Rules and, consequently, the contract of association was terminated at the foreseen expiry date without renewal. This was further to the outcome of a fraud investigation involving repeated theft of fuel from the Organization for personal gain.

Complaints before the Administrative Tribunal of the International Labour Organization (ILOAT):

In February 2017, a former staff member who is in receipt of a total disability pension filed a complaint with the ILOAT against the decision not to recognise the illness as being of occupational origin. The Tribunal's ruling is expected in summer 2018.

The ILOAT ruled in two cases involving the Organization, each of which had been filed in 2015:

- In a case filed by a former CERN fellow whose contract was terminated for serious misconduct, the Tribunal ruled in favour of the Organization and dismissed the complaint.
- The other case was filed by a beneficiary of the CERN Pension Fund seeking:

- recognition of two children who were not previously registered with the Pension Fund and in respect of whose parentage there was ongoing litigation;

- confirmation that the beneficiary's current spouse (the marriage to whom had taken place after retirement) would be entitled to receive a surviving spouse's pension, notwithstanding the legislation in place.

The Tribunal upheld the position of the Organization. It determined that, with regard to the children, the request was irreceivable as a final decision could not be taken by the Fund on the basis of disputed documentation. It dismissed the claims regarding the spouse.

HR Department

Announcements

BECOME A VOLUNTEER FOR RESEARCHERS' NIGHT AT CERN!

Image: Massarotti, Loraine/CERN

On Friday, 28 September 2018 CERN organises Researchers' Night for the 9thconsecutive year! The brand new *Esplanade des Particules*, the Globe of Science and Innovation and Building 33 will open their doors to the public for this great European celebration of science. A myriad of free and bilingual activities will be available from 5 p.m. to 11 p.m.

Robotic and cloud chambers workshops, SC tours, virtual reality headsets, physics shows and demonstrations from CERN experiences, everything is planned to put on quite a show! At the Globe, enjoy a selection of the latest science movies, among which the latest film on CERN, “Almost Nothing: CERN Experimental City”, an award winner at the last Nyon Visions du Réel film festival. Director Anna de Manincor will be present to share her experience and answer all questions.

To run this major event, CERN need help to welcome, inform, guide and spoil its visitors! **Do you want to represent CERN at this event? Become a volunteer by filling this form:** https://indico.cern.ch/event/751881/ **!**

You do not need to be a scientist. The ideal profile is someone from CERN with a good dose of enthusiasm and good mood.

Important information:

- Schedules: there are two shifts organised, one from 4:30 p.m. to 8:15 p.m., the other from 7:45 p.m. to 11:30 p.m.
- Conditions: regardless of your status, each shift will be rewarded at the same price as 1 hour of guiding.
- Languages: fluency in French is recommended in view of the local community expected at the event. English or any other language is definitely a plus.
- Briefing sessions: you must attend one of the volunteer briefing sessions before Researchers' Night (Fri 21.09 10:00-11:00 a.m. or Tue 25.09 from 4:00-5:00 p.m.)

Join Researchers' Night team and make this night unforgettable!

LAUNCH OF THE NEW CERN LEARNING HUB

CERN provides a wide range of learning and development opportunities for personnel. These cover everything from the everyday essentials of safety and computer security, through leadership and communication training to the most arcane technical skills required in a laboratory as large and complex as CERN.

The new Learning Hub provides a new look and feel and is a one-stop shop for CERN's entire range of courses (including online learning). It includes news to inform you of what's new and why, and a range of other new features designed to improve your experience as a learner.

The new Learning Hub will be accessible as of 10 September on https://learninghub.cern.ch.

IMPORTANT INFORMATION :

Access to CTA and SIR will cease at 4 p.m. on Wednesday, 5 September. You will be able to log in to the Learning Hub on Monday, 10 September to continue accessing and enrolling in courses.

Between Wednesday, 5 September at 4 p.m. and Monday, 10 September, please contact safety-training@cern.ch if you need to follow an online safety course in order to obtain some access rights.

WARNING: For technical reasons, any EDH training requests pending signature after 4 p.m. on Wednesday, 5 September will be cancelled and you will need to resubmit your request. Please ensure that your requests are signed as soon as possible.

Obituaries

FRANCIS FARLEY (1920-2018)

The first g-2 team, from left to right: Francis Farley, Johannes Cornelius Sens, Georges Charpak, Théo Müller, and Antonino Zichichi (Image: CERN)

Friends and colleagues of Francis Farley have been deeply saddened to hear that, after a short illness, he passed away on 16 July at his home in the south of France, at the age of 97. Within the particle physics community he is particularly associated with the measurement of the muon g-2 but his career was in fact much broader than this.

He joined CERN in 1957 and started his long and remarkable journey on experiments to measure g-2. This journey would span nearly five decades and four major experiments, three at CERN and one at BNL. The initial result from the first experiment had an accuracy of just 2%, whereas the final result from the last experiment reached 0.5 parts per million. Each experiment was at the time seen as a tour de force and the value measured an important restraint on the fantasies of theorists. It is also striking that each new measurement was within the error limits of the previous ones.

Many others, including many highly renowned physicists, contributed to this long effort, but he is the sole common author, making seminal contributions to all of the experiments. The first experiment was performed on the initiative of Leon Lederman, a CERN visitor at the time, at CERN's first accelerator, the 600 MeV Synchrocyclotron (the remains of which are housed in Building 300 just inside Gate B). The other members of the noteworthy team on this experiment were, in alphabetical order: Georges Charpak, Richard Garwin, Theo Muller, Johannes Sens and Antonio Zichichi! By the time of the second experiment, the CERN PS was operating and the second and third experiments were performed there – taking advantage of the higher energy muons available. Francis alone continued on these experiments, but among others joining the team was Emilio Picasso. Later Francis, again alone, continued as a member of the most recently completed g-2 experiment at BNL.

The first experiment showed that the muon was a 'heavy electron', the second validated electron loops in the photon propagator, the third showed the contribution from virtual hadron loops. Each measurement spurred theoretical physicists to include more and more effects in their calculations: higher order corrections in QED, first order and then higher order hadronic and electroweak contributions. The advances in the theoretical prediction justified in turn the next generation of experiment to give an even more stringent test of theory. The storage rings also provided tests of relativistic time dilation, with the third experiment achieving an accuracy of 0.1% for a 'muon clock' moving at a speed of 0.9994c and the most accurate test of the 'Twin paradox'.

In 1967, he moved back to the UK, taking up the post of Dean of The Royal Military College of Science, but continued on g-2 as a CERN user. In the 1970s, he also started to do research on wave energy. This work continued through his retirement, in parallel to the work on g-2. In this area too he established a formidable reputation, with many papers written and patents produced over a period of 40 years. Indeed, his most recent paper on wave energy was published just a few days after his death.

Early in his retirement, he designed the beam transport for a proton therapy system at a cancer hospital, which was still being used more than 20 years later. He later published a special-relativistic single parameter analysis of data on redshifts of type 1A supernovae that showed no evidence for acceleration or deceleration effects (arXiv:0901.3854v3). Even more recently he worked on other tests of relativity based on analysis of the muon g-2 experiments.

He received many honours: in particular he was made a Fellow of the Royal Society and was awarded their Hughes Medal for his work at CERN on g-2.

Outside of work, he had a passion for flying gliders, was a keen skier, windsurfer and a regular swimmer, and liked large American cars. All of these befitted a hardworking but somewhat playboy image, which years later formed much of the basis of his novel 'Catalysed Fusion'.

He was a wonderful source of new ideas and insights, with a prodigious output. He was always enthusiastic and could be charming, but was forceful and a stickler for precision.

We have lost one of the heroes of CERN's early years.

His friends and colleagues

BARBARA STRASSER (1954-2018)

Sad news for the CERN Accelerator School team.

Barbara Strasser joined CERN in December 1978 and worked for the CERN Accelerator School (CAS) throughout her career at the Laboratory. Initially she worked part-time for the school alongside Suzanne von Wartburg and later became solely responsible for all CAS administrative matters. During her career, she worked with all the directors of the CAS and could recall many details of past courses including the names of former students. During dinner discussions she referred to herself as “the last CAS dinosaur”.

Her professionalism and the way in which she made it her business to take care of everyone's well-being will be fondly remembered by her colleagues at CERN, as well as by the many lecturers and hundreds of students that have been involved in the various courses over the years.

Our sincere condolences go to her husband Georges, their children and family.

The CAS and the ATS Support to Project Office teams

We deeply regret to announce the death of Barbara Strasser on 6 July 2018.

Barbara Strasser, who was born on 10 December 1954, worked in the ATS Sector and first came to CERN on 1 December 1978.

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

Social Affairs
Human Resources department

Ombud’s corner

DIG DEEPER TO FIND THE REAL REASONS FOR CONFLICT

Rebecca*is a programmer known for her sense of initiative and dynamism. She has just started working on a highly visible project, the development of a new application that will be used across the whole of CERN. She comes to see me because she feels her true worth isn't being recognised: *“Laurent* checks my work constantly and keeps me away from the crucial activities of the project. I was expecting a new challenge but now I find myself sidelined doing boring and subordinate tasks. I need to contact stakeholders in other departments in order to progress the project, but he prevents me from doing so. I also feel that my voice should be heard at meetings.”*

Rebecca asks me to have a word with Laurent, since she hasn't been able to get the message through to him. A few days later, Laurent explains his side of the story: *“Rebecca is a highly competent programmer, but she wants to go too fast. This project is very sensitive and has many detractors. So I have to take things one step at a time, ensuring at each stage that we're ready to move on to the next. With her initiatives, Rebecca runs the risk of cutting corners and damaging the credibility of the project.”* In speaking to Rebecca and Laurent, I realised that their expectations were different, but not incompatible. Rebecca wants to work on tasks that are commensurate with her skills. She needs a certain amount of autonomy. For his part, Laurent feels he can't let anyone put a foot wrong, as his project is being watched closely by all the users of the application. Moreover, even though he's a seasoned IT professional, his experience in the field covered by the application is limited. He needs to reassure himself by checking Rebecca's work every step of the way.

But a number of personal issues also lie just below the surface. For Rebecca, this project is a golden opportunity to make a name for herself. Laurent, on the other hand, must defend his reputation as a project leader. This project also has a political dimension, which is a new factor for him.

Fortunately, after my meetings with Rebecca and Laurent, they spoke to each other and were able to smooth things over.

When you find yourself in conflict with someone, ask yourself what might explain the other person's position and try to understand their deeper motivations. An obvious explanation might be concealing something deeper, and if you can identify it, you might just find the key to resolving the conflict. If you can't do it alone, ask for help, for example by contacting the Ombud.

Pierre Gildemyn

If you'd like to comment on any of my articles or suggest a topic that I could write about, please don't hesitate to e-mail me at Ombuds@cern.ch.

** Names have been changed*