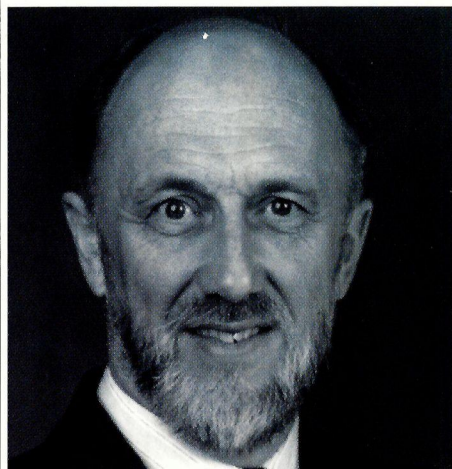


AWARDS

EPS prizes for nuclear physics and outreach

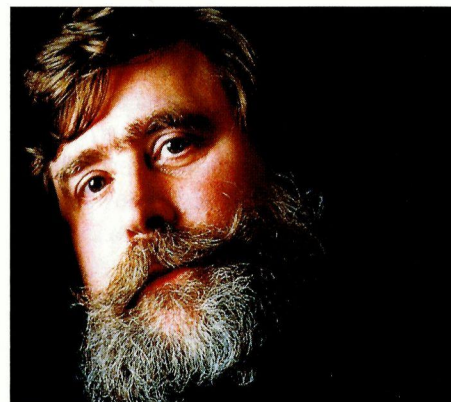


Peter Twin (left) and Bent Herskind won the 2004 Lise Meitner Prize for Nuclear Science.

The European Physical Society (EPS) has awarded the Lise Meitner Prize for Nuclear Science 2004 to Bent Herskind of the Niels Bohr Institute, Copenhagen, and Peter Twin of the University of Liverpool. They receive the prize for their pioneering development of experimental tools, methods of analysis and experimental discoveries concerning rapidly spinning nuclei, resulting in particular in the discovery of super deformed bands. Medals

and cheques were presented to the two laureates at a ceremony last summer during the International Nuclear Physics Conference, INPC2004, in Goteborg, Sweden.

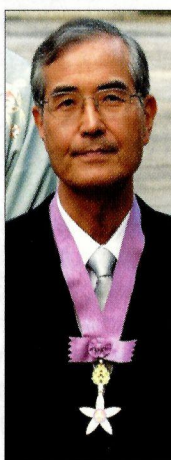
Alessandro Pascolini of the University of Padua and INFN has been awarded the 2004 Outreach Prize of the EPS High Energy Particle Physics Board for his contribution to public awareness of high-energy particle physics, astroparticle physics and nuclear physics in



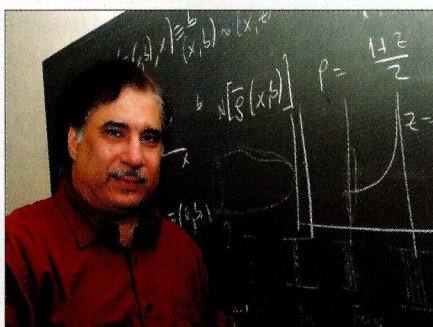
Alessandro Pascolini of the University of Padua has won the 2004 Outreach Prize of the EPS High Energy Particle Physics Board.

Italy and Europe. A lecturer and researcher in theoretical and mathematical physics at Padua, Pascolini has for many years devoted a great deal of energy to promoting scientific culture, in particular through a variety of exhibitions in Italy and further afield. He has also collaborated with teachers and high schools, and was the founder of *INFN-Notizie*, the magazine of INFN. He will receive the prize at the EPS meeting in Berne in July 2005.

The most prestigious prize in Japan, an Order of Culture, has been awarded to Yoji Totsuka, director-general of KEK, for his distinguished research in neutrino physics, in particular for discovering the oscillation of atmospheric muon neutrinos with the Super-Kamiokande detector.



Totsuka received the prize directly from the Emperor of Japan at the Imperial Palace on 3 November, the Culture Day of Japan. The previous recipient of the prize from the field of particle physics and astrophysics, in 1997, was Masatoshi Koshiba. Koshiba taught Totsuka at the University of Tokyo and was leader of the Kamiokande collaboration that preceded Super-Kamiokande.



TWAS, the Third World Academy of Sciences, has awarded its 2004 Prize in Physics to Spenta Wadia of the Tata Institute of Fundamental Research "for his significant contributions to non-perturbative quantum field theory and string theory, in particular (i) in the use of the large N limit; (ii) two-dimensional gravity and non-critical string theory; and (iii) the treatment of black holes in string theory". Wadia has also been responsible for creating a world-class research group at the Tata Institute, widely regarded as the strongest in Asia.



On 15 November, Belgium honoured Robert Cailliau of CERN with the distinction of *Commandeur de l'Ordre de Léopold* for his pioneering work in developing the World Wide Web. Cailliau, who is Belgian, worked closely with Tim Berners-Lee, the inventor of the Web.

FERMILAB

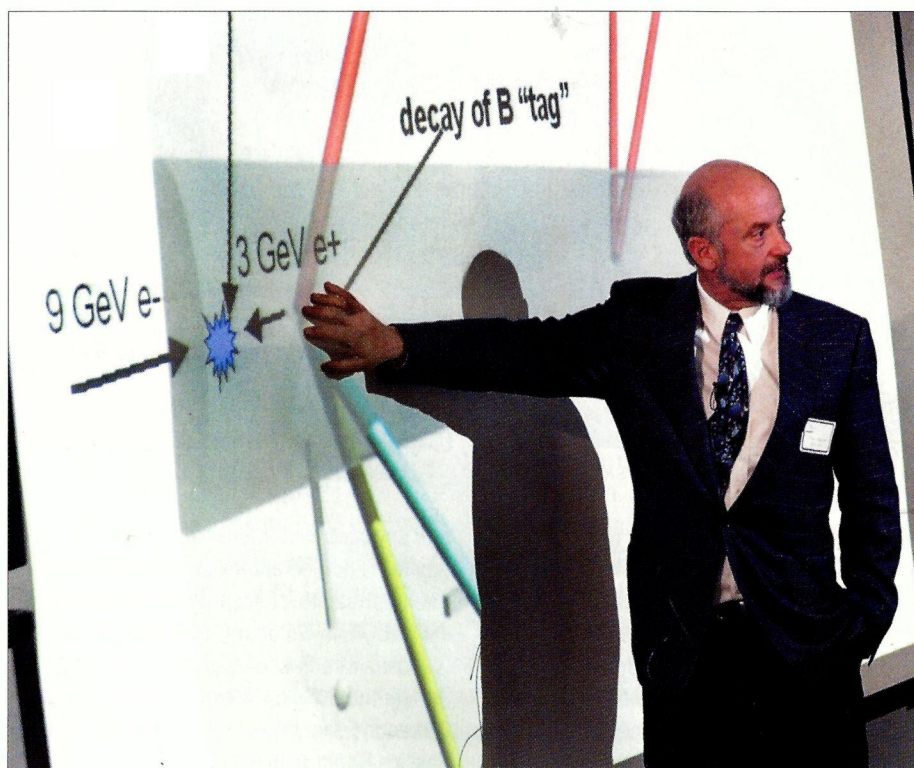
Oddone chosen as Fermilab's next director...

Officials of the Universities Research Association, the consortium of universities that operates the US Department of Energy's Fermi National Accelerator Laboratory, have announced the appointment of Pier Oddone as the laboratory's fifth director. He will succeed the current director, Michael Witherell, on 1 July.

Oddone is at present deputy director of Lawrence Berkeley National Laboratory and is well known as the inventor of the asymmetric B-factory, for which he has been awarded the 2005 Panofsky Prize of the American Physical Society (*CERN Courier* December 2004 p30).

Witherell, in turn, is to become vice-chancellor for research at the University of California, Santa Barbara. He was recently honoured by Secretary of Energy Spencer Abraham with the Secretary's Gold Award "for outstanding leadership combining excellence in science with excellence in safety" during his tenure as Fermilab's director since 1999.

Oddone says he is looking forward to the opportunity to serve as Fermilab's director at a key moment for the field of high-energy physics and for the laboratory. "We are living in a time of remarkable opportunity for particle physics. The next few years will bring



Pier Oddone, who will take over at Fermilab. (Lawrence Berkeley National Laboratory.)

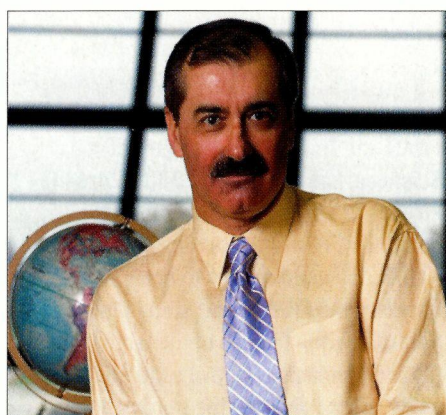
a revolution in our understanding of the universe. As one of the world's great physics laboratories, Fermilab will make vital

contributions to the discoveries ahead. I am excited and honoured to lead this unique laboratory during such an extraordinary era."

...while Kolb will direct new Center for Particle Astrophysics

A new centre to provide a focus for efforts in particle astrophysics is to be established at Fermilab, with cosmologist Edward "Rocky" Kolb of Fermilab and the University of Chicago as director. The Center for Particle Astrophysics will bring together the Theoretical and Experimental Astrophysics Groups and will also encompass existing projects, including the Sloan Digital Sky Survey and the Pierre Auger Cosmic Ray Observatory, as well as proposed projects, including the SuperNova Acceleration Probe to study dark energy as part of the Joint Dark Energy Mission.

Following his appointment, which was made public on 1 November, Kolb announced that the Center for Particle Astrophysics will also support a graduate student for a year of work and study at Fermilab. The Brinson Pre-



Edward "Rocky" Kolb will be the director of Fermilab's Center for Particle Astrophysics.

Doctoral Fellowship will be funded by The Brinson Foundation of Chicago, whose

interests in scientific research include astrophysics and cosmology as well as geophysics and medical research. The Brinson Foundation lists Chicago's Adler Planetarium among its many annual grants. The Fellowship will be offered to students in the final year of their doctoral studies, who would work alongside a member of a Fermilab project.

Kolb noted that, while Fermilab is not specifically an educational institution, the opportunity to train "the stars of the future" in particle astrophysics is invaluable. "Particle cosmology is a reasonably new field," he said. "Establishing this world-class centre means we can attract future leaders with the chance to further their career and their education, and to have an impact on the field for many years to come."

CELEBRATION

Aachen honours laureates Rubbia and Ting

The Rheinisch Westfälische Technische Hochschule (RWTH), Aachen, chose a particularly suitable academic tribute to CERN's 50th anniversary, by granting Carlo Rubbia and Samuel Ting the *Doktor rerum naturalium honoris causa* on 22 November.

To begin the celebration, former director-general Herwig Schopper summarized CERN's history, highlighting its scientific successes and its contributions to bringing nations together peacefully. Then in his *laudatio* Günther Flügge of RWTH outlined the scientific careers of the two outstanding scientists.

When modern particle physics began in the late 1960s and early 1970s Rubbia and Ting were already highly respected experimentalists, and groups from Aachen, centred on Helmut Faissner and Albrecht Boehm, were already working with Rubbia. Then in November 1974 news broke of the discovery by Ting and his team, then at Brookhaven, of the J particle – discovered also (as the Ψ) by Burton Richter's group at SLAC (*CERN Courier* December 2004 p25). For their discovery Ting and Richter were awarded the Nobel prize in 1976.

That same year Rubbia came up with his revolutionary idea of a proton-antiproton collider at the International Neutrino Conference in Aachen, paving the way to his discovery of the heavy vector bosons, W and Z.

Meanwhile Ting had moved to DESY to set



Left to right: Carlo Rubbia, Sam Ting and Burkhard Rauhut, Rector of RWTH Aachen.

up the MarkJ experiment at the new PETRA electron-positron collider, then the highest-energy machine of its kind worldwide. Several groups from Aachen joined MarkJ and other collaborations at PETRA. Success came soon after the machine was switched on – in 1978 the first evidence for gluons, the carriers of the strong interaction, was seen, and in 1979 their existence was finally established (*CERN Courier* November 2004 p33).

In 1978 Rubbia also set up the UA1 collaboration at CERN to build a detector for the hunt for the heavy bosons, with major contributions from Aachen, which provided the big muon chambers that covered the outside of the huge detector. The W and Z bosons were discovered in 1983, and the following year Rubbia was awarded the Nobel prize together with Simon van der Meer.

In the meantime CERN had opted for the new Large Electron Positron collider, LEP. Like many researchers at PETRA, Ting moved his activity to the new machine to build the gigantic L3 detector. This time he could convince all the high-energy physics institutes in Aachen to join his enterprise.

LEP was a great success. It showed that the current Standard Model remains valid even under the closest scrutiny. However, the masses of the particles vary widely and their origin is not understood at all. To attack such problems, Rubbia, who became director-general of CERN in 1989, pushed for the Large Hadron Collider (LHC) to be built in the LEP tunnel. One of the important meetings to prepare for the LHC took place in Aachen in 1990 and attracted more than 500 people; several groups at Aachen are now involved in the experimental programme.

The two laureates are now working on new projects: at the meeting Rubbia presented "The Future of Energy" and Ting "The Anti Matter Universe". Some groups in Aachen have again joined in this latter activity, with the antimatter search in space with the Alpha Magnetic Spectrometer. The ceremony illustrated the successes of the collaboration of RWTH and other universities with two brilliant scientists within the framework of two great laboratories – altogether a fitting celebration of CERN's 50th anniversary.

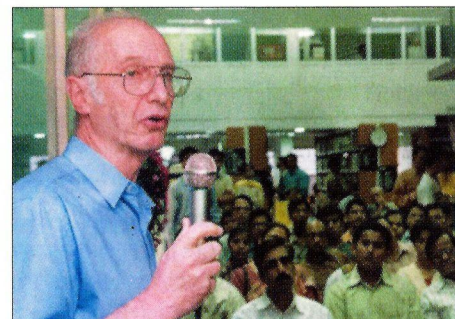
OUTREACH

Particle physics goes on the road in India

In a tour organized and sponsored by the British Council of India, Peter Kalmus, emeritus professor at Queen Mary, University of London, recently visited India to give lectures on particle physics.

He gave 15 talks in 10 days in Delhi, Kolkata, Mumbai, Pune, Ahmedabad and Bhopal, to audiences ranging from 14-year-old pupils to university academics and national laboratory staff, as well as members of the general public. There were also discussions with Indian scientists and staff of the British Council, as well as interviews with newspaper and television journalists.

An experienced speaker in the UK and elsewhere, Kalmus noted interesting differences in India. These included Hindu prayers sung by 14-year-old girls before and after his talk, the presentation of flowers and other gifts, and celebrity treatment such as requests from the audience for autographs and photographs. The tour involved a great deal of travelling, but as the presentations had been e-mailed to India in advance, and computer-projection worked at all venues, Kalmus had no need for his laptop, and even the back-up CD-ROM was not used. This left the speaker able to savour the enthusiasm of

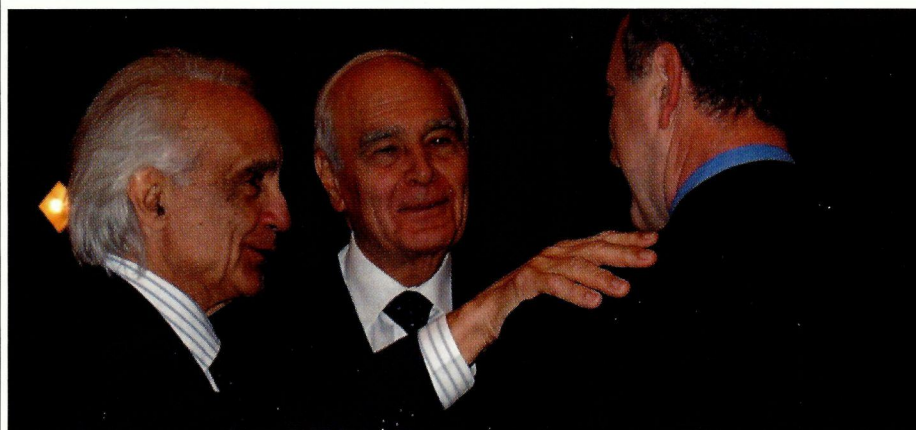


Peter Kalmus talks on the forces of nature in the British Library in Bhopal, India. (Courtesy of the British Library, Bhopal.)

the audiences, who asked many good questions, and the friendship shown by his hosts at all the venues.

CELEBRATION

Fermi, CERN and the renaissance of INFN



Italian minister Girolamo Sirchia, centre, with Antonino Zichichi, left, and Lucio Rossi.



Italian minister Gianfranco Fini.

Some 170 scientists from all over the world came to Rome at the beginning of December to commemorate the legacy of Enrico Fermi 50 years after his untimely death, to celebrate the 50th anniversary of CERN, and to mark the 25th anniversary of the “renaissance” of INFN. Invited by Antonino Zichichi, president of the Enrico Fermi Centre and of the World Federation of Scientists, they met in the International Meeting Hall of the Italian Foreign Ministry, in the Palazzo La Farnesina, under the patronage of the minister of foreign affairs, Gianfranco Fini.

The symposium was opened by Zichichi, who reminded the audience of Fermi’s legacy of a great alliance between science and society. Fermi’s “pupil”, Tsung-Dao Lee, and Yoichiro Nambu from the Enrico Fermi Institute in Chicago talked about his life in the city and their personal encounters with him. Robert Aymar, director-general of CERN, then presented CERN’s scientific projects and strategy for the future. He recalled the roots of the Large Electron Positron (LEP) collider and the Large Hadron Collider (LHC), as documented in a CERN report recently published in Zichichi’s honour. A special memoir highlighting CERN’s history, edited by Zichichi, was presented to the minister.

The talks that followed covered the renaissance of INFN, after Zichichi became the institute’s president. Twenty-five years ago, he elaborated a new scientific strategy for INFN based on three projects – Gran Sasso, LEP and the HERA machine at DESY – and convinced the Italian government to

increase the budget considerably to allow adequate financial support for Italian research activities at the frontier of physics at CERN and other international laboratories.

Lorenzo Foà recalled the impact of INFN’s renaissance on physicists working at CERN, citing his personal experience. As an example of the impact in Germany, Günter Wolf presented the latest scientific results from HERA, a project that was approved thanks to the participation and contribution of INFN. The current president of INFN, Roberto Petronzio, then gave the keynote speech on 25 years of INFN, its renaissance and its future. Carlo Rizzuto recalled the impact of INFN’s renaissance on the establishment of Italy’s Institute for Material Science, and Enzo Boschi spoke of the impulse given to the Institute for Geophysics and Vulcanology. Lucio Rossi, head of the LHC magnet group at CERN, recalled Zichichi’s vision of investing in advanced superconducting magnet technology in Italian industry.

Among further talks, Alex Müller spoke of a workshop at Erice, where he first had the idea about where and how to look for high T_c superconducting materials, which later won him a Nobel prize. Finally, Raffaella Schneider presented the projects of the young researchers holding special grants from the Enrico Fermi Centre. During the meeting, several welcome messages were read out from the Italian President and various ministers.

The second day was devoted to presentations on projects, planned and implemented within the framework of ILSEAT,

the International Laboratory for Science, Engineering and Advanced Physical and Biomedical Technologies. Speaking in the Augustinian conference hall in the Vatican, Zichichi introduced ILSEAT with its three components: science, technology and global emergencies. The morning session continued with presentations on interdisciplinary topics ranging from extreme weather events and pollution, to health physics, to accelerator and detector R&D, and parallel computing.

In the afternoon, a talk by the minister of health, Girolamo Sirchia, was followed by several presentations on the Cultural Emergency and the Extreme Energy Events project – an educational project to measure the effects of very-high-energy primary cosmic rays (*CERN Courier* July/August 2004 p35). The meeting closed with a review by the national representatives on the status of the World Federation of Scientists’ National Scholarship Programmes, established in 30 countries around the globe. The day concluded with a concert in the Basilica Santa Maria degli Angeli e dei Martiri, when the Erice Prize winners for 2003 and 2004 were announced and the awards presented to Robert Clark, Maurice Cosandey and Alex Müller.

Further reading

CERN/DG-2004-306, “The Roots of LEP and LHC”, published in honour of Antonino Zichichi and his contribution to particle physics in Italy as INFN president and in Europe as chairman of the 1979 ECFA Working Group defining the layout of LEP.

WORLD YEAR OF PHYSICS

'Cryo-illustrator' helps to open the door to physics in Japan

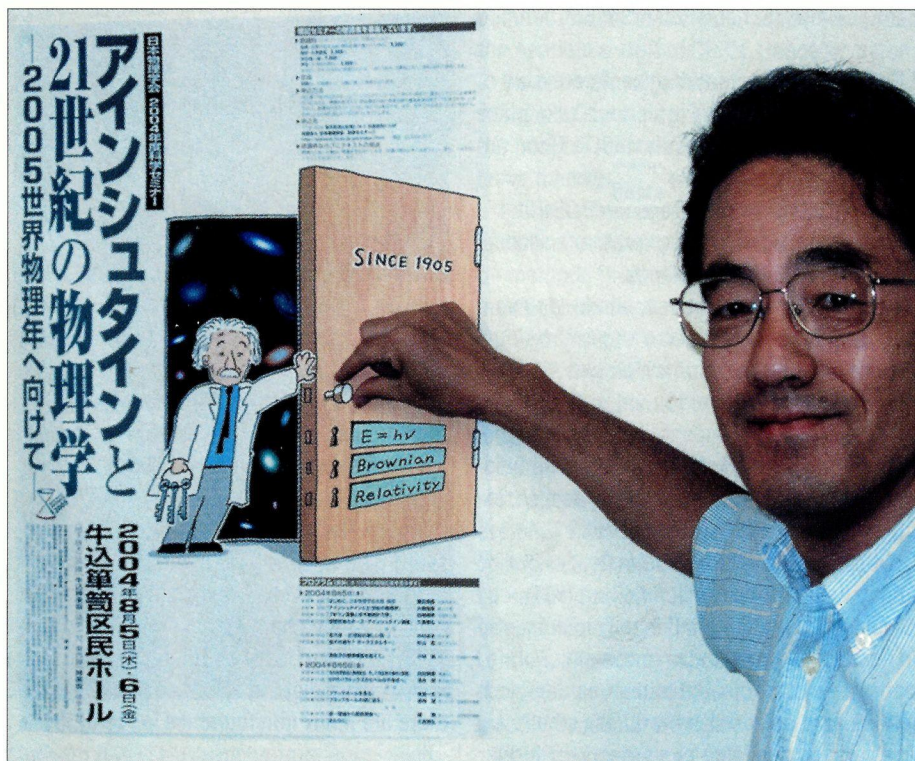
The World Year of Physics – 2005 – marks the centenary of Albert Einstein's *annus mirabilis*, when he published his three seminal papers on Brownian motion, the photoelectric effect and the special theory of relativity. In the image shown here, Tom Haruyama of KEK is assisting Einstein in opening the door he unlocked with these discoveries.

The illustration was adopted by the Japan Physics Society as the promotional poster for a seminar held in Tokyo last summer in anticipation of the World Year of Physics.

Haruyama is a specialist in cryogenics for the high-energy physics experiments at KEK. He is also well known as Asian editor of the international journal, *Cryogenics*, published by Elsevier, and has been the secretary of the International Cryogenic Engineering Committee for many years.

At the same time, Haruyama is able to create this kind of illustration to enhance the popularity of physics with young people in Japan, without compromising his own work in cryogenic research.

● For more on the World Year of Physics, see www.wyp2005.org.



Tom Haruyama of KEK and the journal *Cryogenics*. The Japan Physics Society used this poster to promote a seminar held last year in Tokyo anticipating the World Year of Physics.

NEW PRODUCTS

Creative Group has released a new high-vacuum manual in-line valve, which operates down to 10^{-8} mbar. The unit has a particularly high molecular conductance for this type of valve, and its stainless-steel construction makes it ideal for high-temperature applications. It is small, lightweight and easily serviced, and can accommodate any combination of fittings.

For further information tel. +44 1903 204542, e-mail sales@creativevacuum.co.uk or see www.creativevacuum.co.uk.

Bede has announced BedeMetrix X-ray metrology tools for enhanced spot measuring of semiconductor wafers from 50 to 300 mm. This new capability allows

measurement of sub-100 μm test pads in chips and scribe lines on processed wafers, and provides automated characterization of fabrication processes. The BedeMetrix-L tool measures fundamental properties and structures of materials, including epitaxial and non-epitaxial layers.

For further information contact Dan Esdale: tel. +1 978 794 5441, e-mail desdale@wardhillmarketing.com or see www.bede.co.uk.

Glassman has developed low-profile 300 W regulated HV DC power supplies covering the range 1–60 kV. The FX series of supplies deliver high power density in a compact, lightweight unit 4.45 cm (1.75 inch) high in a standard 48.3 cm (19 inch) panel. Air-insulated, the units feature tight voltage

regulation of better than 0.005% and current regulation better than 0.05%.

For further details contact Phil James: tel. +44 1256 883007, e-mail phil.james@glassman europe.co.uk or see www.glassmanhv.com.

Montena emc, which offers high-voltage and high-frequency products such as pulse generators, coupling networks, sensors and antennas, has recently produced a new pulse generator with a peak voltage of 320 kV, a rise time of 5 ns and a half-value time of 100 ns. The device is very compact, thanks to the choice of insulation (high-pressure nitrogen plus sulphur hexafluoride), which enables the fast rise time.

For further information tel. +41 26 411 9333 or see www.emc.montena.com.

MEETINGS

The **3rd CERN-CLAF School of High Energy Physics** is to take place in Malargüe (Mendoza), Argentina, from 27 February until 12 March. This school is intended mainly for young experimentalists from Latin America preparing a PhD in high-energy physics or engaged in postdoctoral work. For further information see <http://physicschool.web.cern.ch/PhysicSchool/LatAmSchool>.

LEAP '05, the international conference on Low Energy Antiproton Physics, will take place at the Gustav-Stresemann-Institut in Bonn on 16–22 May. Organized by the Research Centre Jülich it will bring together users of past, present and future antiproton facilities. Topics will include symmetries, hadron-antihadron systems, quark-gluon phenomena, atomic physics and future facilities. For further information see www.fz-juelich.de/leap-05.

A course on **Small Accelerators** will be held at the Hotel Golden Tulip Drenthe, Zeegse, in the Netherlands from 24 May until 2 June. Organized by the CERN Accelerator School and Kernfysisch Versneller Instituut (KVI), Groningen, the course will mainly interest staff in accelerator laboratories, university departments, medical-treatment centres and industries specialized in producing small accelerators or related equipment. For further information see www.cern.ch/schools/CAS.

The **14th IEEE-NPSS Real Time Computing Conference 2005** takes place at the Alba Nova University Centre in Stockholm, Sweden, on 4–10 June. This conference is devoted to the latest real-time applications in plasma physics, nuclear physics, particle physics, astrophysics, space science, accelerators, medicine and biology. For more information see www.physto.se/RT2005.

TAUP 2005, the ninth international conference on Topics in Astroparticle and Underground Physics, will be held in Zaragoza, Spain, on 10–14 September. Topics include cosmology and particle physics, dark matter and dark energy, high-energy astrophysics and cosmic rays. For further information e-mail the TAUP 2005 Secretariat at taup2005@unizar.es or see www.unizar.es/taup2005.

CERN

Supplier gets ATLAS award



Vojtech Novotny, director-general of the Czech company Skoda Hute (left), receives an ATLAS supplier award from Marzio Nessi, ATLAS technical coordinator.

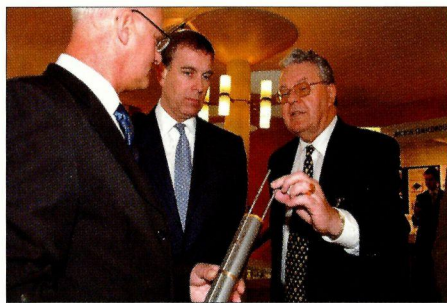
On 3 November the ATLAS collaboration honoured its supplier, Skoda Hute of Plzen in the Czech Republic, for the company's work on forward-shielding elements for the detector. These huge cylinders surround the beam pipe at either end of the detector in order to prevent stray particles from entering ATLAS's muon chambers.

The shields consist of 10 cast-iron pieces with a total weight of 780 t, and although there are many iron foundries in the CERN

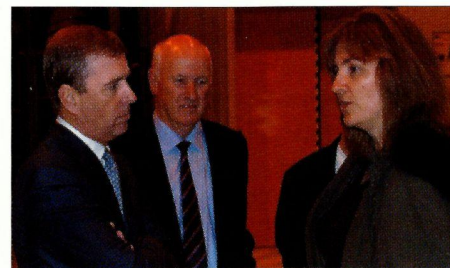
member states, only a limited number can produce castings of the necessary size – 59–89 t in weight and up to 1.5 m thick.

The forward shielding was designed by the ATLAS Technical Coordination in close collaboration with the ATLAS groups from the Czech Technical University and Charles University in Prague. The Czech groups also supervised the production of the shielding, which was in part a Czech in-kind contribution to ATLAS.

Duke of York opens UK@CERN exhibition



Robert Aymar, right, discusses a piece of technology with the Duke of York, centre.



The Duke of York with UK ATLAS physicists Jo Pater of Manchester University (right) and Neil Jackson of Liverpool University (centre).

HRH Prince Andrew, the Duke of York, visited CERN on 23 November and, in his capacity as the UK's special representative for international trade and investment, inaugurated the UK@CERN exhibition. This biennial trade show was initially held in 1968, the first such exhibition by a CERN member

state. This year 22 companies displayed goods and services that could be of interest to physicists and engineers working at CERN. The Duke also met UK researchers working at CERN, in particular at the site where the ATLAS detector is being installed at Point 1 on the ring of the Large Hadron Collider.

OBITUARIES

Bryan Montague (1921–2004)

Bryan William St Leger Montague grew up in London. He left school at 15 and started training as an auto-mechanic, but also took evening classes in electrical engineering. At the outbreak of the Second World War he volunteered for the Royal Air Force, where he became a “radio-mechanic” attached to a top-secret radar division. He received rather little training in the field, but became so interested in the underlying microwave techniques that he signed up for correspondence courses.

When the war was over, Bryan decided to study physics at the University of London, which accepted him after he had passed the required entrance exams. He graduated in 1951, though by that time he had already become a technical information assistant for the Philips office in London.

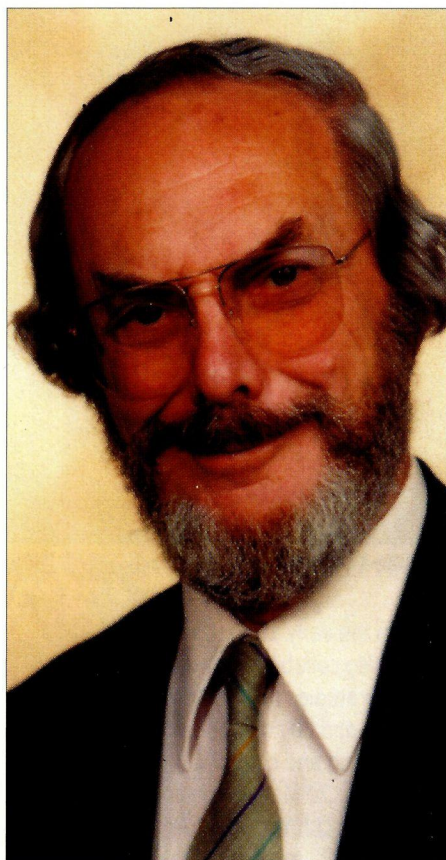
After graduation he joined the television research group, working on electron optics and magnetic amplifiers before moving to the linear accelerator group, where he participated in the design and construction of a 15 MeV microtron. His interest in particle accelerators – as well as the challenge of joining a laboratory recently created to rebuild the unity of Europe – led him to apply for a job at CERN.

Bryan came to Switzerland in May 1955 and was attached to the CERN-PS division. His first task was testing high-power amplifier tubes in the linac group, before he was asked to take on the design of the modulator, as the specialist foreseen for this task had died in an accident. The modulator design was completed by 1960, when the PS was successfully commissioned.

Around 1962 Bryan joined – and later led – the RF separator project in the newly formed Accelerator Research division. The goal was to develop a separator for secondary particles above 5 GeV, where electrostatic separation becomes inefficient.

The design was based on ideas of Panofsky and Schnell for transverse separation, but was modified by Bryan to use hybrid modes, which he and Peter Bramham had (re)discovered experimentally when measuring propagation on disc-loaded structures.

From 1965 Bryan also took part in the



study for a 300 GeV synchrotron, from which the CERN Super Proton Synchrotron evolved. However, when this project was postponed *sine die* in 1969, Bryan joined the newly formed Intersecting Storage Rings (ISR) project led by Kjell Johnson. Here Bryan worked first on the design of scrapers and collimators and then took part in commissioning the ISR, using the scrapers to measure the beam profile.

Later he joined the theoretical group whose task was to analyse and improve the ISR performance, and developed a computer code for the automatic measurement of luminosity. In the general studies group, he worked on the design of proton colliders with higher energy and proposed a method of increasing the luminosity of the ISR by reducing the crossing angle to give head-on collisions, using dipoles over the interaction regions to separate the counter-rotating proton beams. He also investigated non-linear coupling resonances caused by space charge – an effect still

referred to as “Montague resonance”.

Bryan became a member of the Senior Staff Consultative Committee to the Director-General for three years, and during the third year acted as its spokesman. The task of this committee was to represent the interest of the academic staff of CERN. Hence he acted to balance the negative effects of the Abragam Committee, constituted to reduce the cost of CERN so that the UK would not leave the organization.

In 1980 Bryan began work on the Large Electron Positron collider and concentrated on methods to obtain polarized beams in the machine. He developed rotator magnets, and studied Siberian snakes and spin matching. His most original contribution was a very clear description of polarization effects in storage rings using spinor algebra.

He also participated in the search for new methods of the acceleration of particles to even higher energies, and initiated a collaboration with the Rutherford Appleton Laboratory, which had the highest-power lasers in Europe, and Imperial College, London, to perform experiments on the acceleration of electrons with beat-waves created by two laser beams in a plasma.

From its inception in 1985, Bryan participated in the CLIC study at CERN. In this he explored methods for obtaining polarized beams, and suggested the use of the extremely sensitive Hanbury–Brown–Twiss intensity interferometer for the exact alignment of beams, using the synchrotron radiation emitted in bends.

In 1985, the University of London awarded Bryan the degree of Doctor of Science (DSc) for his work on particle accelerators. He gave lectures at several CERN Accelerator Schools and contributed to the book on accelerator physics edited by Herwig Schopper. Even after retirement Bryan continued to work on accelerators, and also contributed to quantum mechanics, pointing out the importance of the usually neglected phase factor of the complex wave function.

In his early eighties, Bryan suffered a severe aneurysm during a holiday trip to Italy, and finally passed away in May 2004.

Bruno W Zotter, CERN.

OBITUARIES

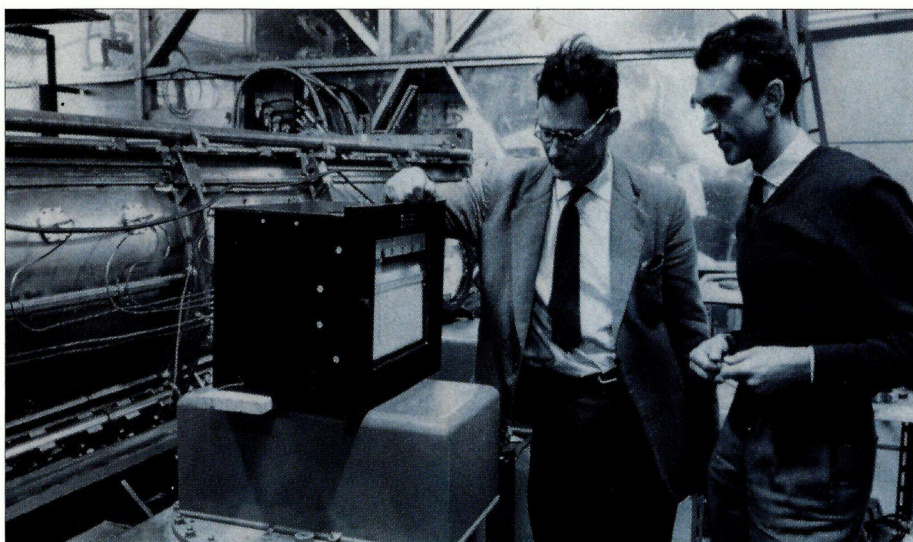
Pierre Lapostolle (1922–2004)

Pierre Lapostolle died in June 2004 at the age of 82 in Paris. He was one of the leading European accelerator physicists who made significant contributions to the development and understanding of linear accelerators, in particular of their beam dynamics.

After attending the prestigious Ecole Polytechnique in Paris, Pierre continued his studies at the Ecole Nationale Supérieure de Télécommunications and defended his thesis in 1947, while working for the Centre National d'Etudes des Télécommunications (CNET). Louis de Broglie was the president of the jury.

In 1953, François Perrin, the French delegate to CERN Council, convinced Pierre, who had become leader of the Electronics Division of CNET, to join CERN for a short period. It turned out that he would stay at CERN for 17 years while being detached from CNET! Hired by John Adams, Pierre was quickly recognized as an outstanding physicist. He served as leader of the PS Linac Group in 1958 and as leader of the Synchro-Cyclotron Division from 1960 to 1962.

Pierre made numerous contributions to the development of analytical approaches and numerical methods for the calculations of particle dynamics in linear accelerators. These treatments are included in many of the computer codes in use today for the design of linear accelerators. His publications have become the Bible for generations of designers and engineers of proton and ion linear accelerators.



Pierre Lapostolle (right) with Peter Standley at CERN's first proton linac in the late 1950s.

From the early 1960s to the mid-1970s Pierre also collaborated with Saclay and Orsay on studies for various accelerator projects, and he contributed to the design, construction and commissioning of a new injector – a 20 MeV proton linac – for the Saturne synchrotron at Saclay.

In 1971, Pierre decided to return to CNET. Despite the fact that he had many responsibilities in important bodies in France, for example scientific director of CNET and scientific advisor for GANIL, he continued his scientific work with great perseverance. He was a frequent and welcome visitor to CERN, lecturing and actively contributing to the

development of computational tools. His competence and deep insight, combined with great rigour, were also very much appreciated in the US, in particular by the linear-accelerator experts at LANL, with whom he collaborated very fruitfully over the years.

Pierre is remembered not only as a very talented accelerator physicist who had a significant impact on the field, but also for his personality. His enthusiasm for physics, his generosity, modesty and noble, unassuming attitude deeply impressed all colleagues who had the privilege and pleasure to be taught by him and to work with him.

Kurt Hübner and colleagues, CERN.

LETTERS

CERN Courier welcomes letters from readers. Please e-mail cern.courier@cern.ch. We reserve the right to edit letters.

Remembering the J/Ψ

I read with great interest the account by Frank Close of the day the news of the J/Ψ discovery arrived at CERN (CERN Courier December 2004 p25). I would like to add two remarks.

Frank speaks of Jean-Jacques Aubert being called “professor” by Jack Steinberger, and then really becoming a professor. I happen to have been involved in this. My friend, the late Tony Visconti, co-founder with

Daniel Kastler of the Centre de Physique Théorique in Marseilles, wanted someone to start a group of experimental high-energy physics in Marseilles. After a previous unsuccessful attempt, he turned to Jean-Jacques, but for this Jean-Jacques had to become a professor in Marseilles. I did some lobbying for that and in the end, Tony and I succeeded. Everybody knows that the lab that Jean-Jacques built in Marseilles was a great success.

Concerning the week of hesitation between the $c\bar{c}$ bound state and the Z^0 , I heard that all the distinguished theoreticians of the Rome group were inclined towards the Z^0 . The energy of the Frascati machine had been

upgraded after the discovery of the J/Ψ and at first the experimentalists believed they were seeing a pattern that would be characteristic of interference between the Z^0 and the photon. This is strange because, in 1970, Luciano Maiani, in Erice, stated that the mass of the charmed quark should be 1–2 GeV and that one should expect $c\bar{c}$ bound states. (These predictions are generally attributed to Gaillard, Lee and Rosner, because they were using a *bona fide* gauge theory, which was not the case with Glashow, Iliopoulos and Maiani). I was present at Luciano's talk, which is published in the Erice proceedings.

Andre Martin, CERN.