

sure that it is good for us to search for them, in the same way that Spanish explorers, when they first pushed northward from the central parts of Mexico, were searching for the seven golden cities of Cibola. They didn't find them, but they found other useful things, like Texas.

Let me also say what I don't mean by final, underlying, laws of physics. I don't mean that other branches of physics are in danger of being replaced by some ultimate version of elementary particle physics. I think the example of thermodynamics is helpful here. We know an awful lot about water molecules today. Suppose that at some time in the future we came to know everything there is to know about water molecules, and that we had become so good at computing that we had computers that could follow the trajectory of every molecule in a glass of water. (Neither will probably ever happen, but suppose they had.) Even

though we could predict how every molecule in a glass of water would behave, nowhere in the mountain of computer printout would we find the properties of water that really interest us, properties like temperature and entropy. These properties have to be dealt with in their own terms, and for this we have the science of thermodynamics, which deals with heat without at every step reducing it to the properties of molecules or elementary particles.

There is no doubt today that, ultimately, thermodynamics is what it is because of the properties of matter in the very small. But we don't doubt today that thermodynamics is derived in some sense from deeper underlying principles of physics. Yet it continues, and will continue to go on forever, as a science in its own right. The same is true of other sciences that are more lively today and in a greater state of excitement than thermodynamics, sciences like condensed matter physics and the study of

chaos. And of course it's even more true for sciences outside the area of physics, especially for sciences like astronomy and biology, for which also an element of history enters.

I'm also not saying that elementary particle physics is more important than other branches of physics. All I'm saying is that, because of its concern with underlying laws, elementary particle physics has a special importance of its own, even though it's not necessarily of great immediate practical value. That is a point that needs to be made from time to time, especially when elementary particle physicists come to the public for funds to continue their experiments.

The realistic hope of finding a small set of simple principles that underlie all of physical reality dates back only sixty years, to the advent of the great revolution in physics which Paul Dirac put in its final form, the revolution known as quantum mechanics.'

People and things

On people

Julius Wess of Karlsruhe and Bruno Zumino of Berkeley receive this year's Dannie Heineman Prize for Mathematical Physics for 'crucial contributions to the discovery and development of supersymmetry, a profound extension of the notion of space-time symmetry, that may underlie unification of the fundamental forces'. The two theorists collaborated on this work in the CERN Theory Division in 1973.

A.H. Wapstra has been appointed Knight of the Order of the Lion of the Netherlands. From 1970 to 1983 he was Director of the Institute for Nuclear Physics Research (IKO), now the Nuclear Physics Division of NIKHEF, as well as being Professor at Delft Technical University.

Quantum theorist John Stewart Bell of CERN receives an honorary D.Sc. from Queen's University, Belfast, Northern Ireland.

Physicist Bill Ash steps down as the CERN Courier's correspondent at the Stanford Linear Accelerator Center, where he took over the slot from Lew Keller in 1984, continuing the West Coast tradition of enlightened but refreshingly informal despatches. He was also the first correspondent to communicate with us via electronic mail. His place is taken by physicist and author Michael Riordan, whose book 'The Hunting of the Quark' was published by Simon and Schuster in the US last year.

Strengthening scientific and technological cooperation between CERN and the Commission of the European Communities (CEC). CERN Director General Herwig Schopper looks on approvingly as Karl-Heinz Narjes, CEC Vice-President in Brussels and responsible for industrial matters, information technology, science and research and the Centre

commun de recherche, signs the visitors' book during his visit to CERN in February together with Herbert Allgeier, Director in the CEC Directorate-General for Science and Technology.

(Photo CERN 0653.2.88)

A lecture by Denys Wilkinson, a dinner and general festivities at the University of Durham, UK, in February marked the 80th birthday of G.D. Rochester.

During the March meeting of the German Physical Society (DPG) in Karlsruhe the 'Physik Preis 1988' was awarded to Alfred Petersen for his contributions clarifying the 'string effect' predicted by the Lund model for multihadron production in quark-antiquark-gluon formation processes. This work was done for the analysis of three-jet events produced at DESY's PETRA electron positron collider. Petersen was then a member of the JADE collaboration and is now working in industry.

Seth Neddermeyer 1907-1988

Seth Neddermeyer, co-discoverer with Carl Anderson of the muon in cosmic ray studies in 1936, died in January. As Anderson's first research student, Neddermeyer participated in pioneer studies using a sophisticated counter-controlled cloud chamber. Most of his subsequent career was spent at the University of Washington, Seattle.

Colin Fisher

Experimentalist Colin Fisher from the UK Rutherford Appleton Laboratory died tragically in February, aged 51. A classical bubble chamber physicist with a flair for innovation, he helped develop the 1970s' generation of rapid cycling chambers, going on in the early 1980s to hone the technique to a peak of perfection with specially designed small detectors. Subsequently he turned his attention to newer tech-

niques using scintillating fibres and silicon microstrips in the study of short-lived particles containing heavy quarks.

Books

'How Experiments End' by Peter Galison (University of Chicago Press) traces how the pattern of physics emerges from the laboratory. By way of illustration, a sizeable chapter deals with the fascinating saga of the quest for the neutral current of weak interactions, discovered at CERN in 1973 by the famous neutrino experiment using the Gargamelle bubble chamber.

Meetings

The 5th Workshop on Nonlinear

Evolution Equations and Dynamical Systems (NEEDS '89) will be held in Kolymbari, near Chania, Crete, from 2-19 July 1989. Further information from F. Calogero, Dipartimento di Fisica, Università di Roma 'La Sapienza', p. Aldo Moro, 00185 Rome, Italy.

This year's DESY Theory Workshop ('Flavor Physics') will be held in Hamburg from 28-30 September. Further information from Peter M. Zerwas, Institute for Theoretical Physics, RWTH-Aachen, D-5100 Aachen, W-Germany, bitnet: ZERWAS at DACTH51

In conjunction with Daresbury Laboratory, the CERN Accelerator School is organizing a course on synchrotron radiation and free electron lasers in Chester, UK, from 6-



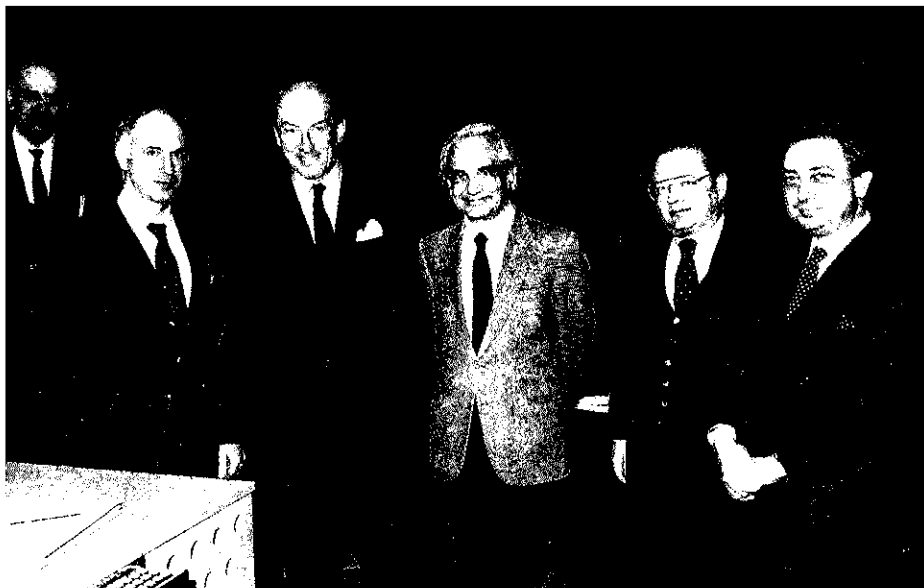
12 April 1989. Further information from Mrs. S. Wartburg, CERN Accelerator School, LEP Division, CERN, 1211 Geneva 23, Switzerland.

The topic for this year's SLAC Summer Institute is 'Probing the Weak Interaction: CP Violation and Rare Decays'. The dates of the Institute are July 18th – 29th, 1988. The Institute includes a 7-day Summer School and three days of topical conference. Further information from Eileen Brennan, SSI Coordinator, SLAC, Bin 62, PO Box 4349, Stanford, CA 94309

The 1988 Summer Study on High Energy Physics in the 1990s, sponsored by the Division of Particles and Fields of the American Physical Society, the US Department of Energy, the National Science Foundation, and Universities Research Association, will be held in Snowmass, Colorado, from 27 June to 15 July. The aim is to examine and evaluate the opportunities for high energy physics in the 1990s, including the possibilities with existing facilities, the proposed US Superconducting Super Collider (SSC), new accelerator technology, non-accelerator experiments, special purpose facilities, and innovations in instrumentation and detector technology. A sub-meeting on July 5-7 will review progress of detector research and development for future proton-proton colliders. Working Groups cover Astrophysics/Particle Physics (J. Cronin, E. Kolb), Electroweak Symmetry Breaking (A. Seiden, H. Georgi), Strong Interactions, (M. Shapiro, I. Hinchliffe), New Quarks, Leptons and Gauge Bosons (C. Baltay, G. Kane), Weak Decays (M. Witherell, R. Peccei), Accelerator Physics, B Factories (R. Siemann), Large Linear

Italian high technology was on show at the German DESY Laboratory in Hamburg for one week in February, with one day given over to a symposium 'Scientific collaboration between Germany and Italy' concentrating on basic research and accelerators, organized by DESY and the Italian Institute for Foreign Trade.

At the exhibition, left to right, F. Venturini of the Italian Institute for Culture in Hamburg, DESY Director Volker Soergel, Italian Ambassador in Bonn Raniero Vanni d'Archirafi, Antonino Zichichi, Italian Consul General in Hamburg G. Germano, and organizer M. di Capua from the Italian Institute for Foreign Trade.



Colliders (R. Ruth), SSC (A. Chao, R. Talman), and K Factories (M. Craddock). Further information from Joanne Day, Argonne National Laboratory, Argonne, IL 60439, US, telephone (312) 972-6181, bitnet JSD at ANLHEP.

Electronic Mail

The CERN Courier editorial desk can be contacted through electronic mail using the EARN/BITNET communications network. The Editor's address is

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Contributions coming in through electronic mail are edited on the screen, and are now coded for typesetting before being sent to the printer through a telephone modem link, making for increased flexibility.

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For additional information contact: Dr. Jules Sunier (MS D456), Los Alamos National Laboratory, Los Alamos, NM 87545. (505) 667-5505.

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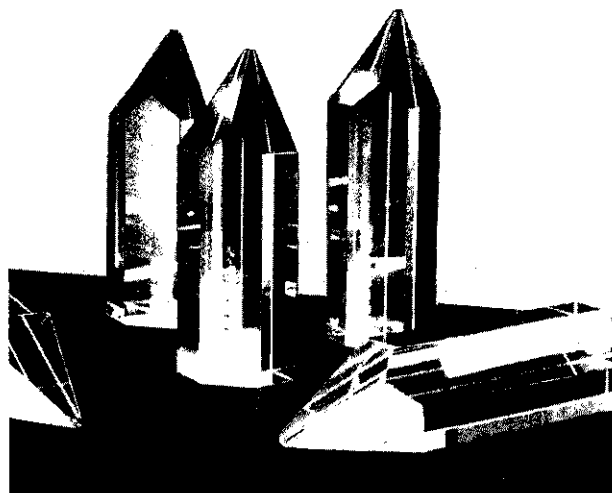
Physics/engineering background is necessary, and prior experience with high energy accelerators is desirable.

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