

The European Organization for Nuclear Research (CERN) came into being in 1954 as a co-operative enterprise among European governments in order to regain a first-rank position in nuclear science. At present it is supported by 14 Member States, with contributions according to their national revenues: Austria (1.87%), Belgium (4.02), Denmark (1.93), Federal Republic of Germany (18.92), France (20.57), Greece (1.12), Italy (9.78), Netherlands (3.73), Norway (1.56), Spain (4.16), Sweden (4.10), Switzerland (3.19), United Kingdom (24.40), Yugoslavia (0.65). The budget for 1962 is 78 million Swiss francs.

The character and aims of the Organization are defined in its Convention as follows:

'The Organization shall provide for collaboration among European States in nuclear research of a pure scientific and fundamental character, and in research essentially related thereto. The Organization shall have no concern with work for military requirements and the results of its experimental and theoretical work shall be published or otherwise made generally available.'

Last month at CERN

As part of the study of possible **future accelerator projects** the Accelerator Research Division arranged at the end of March and beginning of April a concentrated study of the physics possibilities of storage rings attached to the CERN proton synchrotron. Several visitors from

other European and American laboratories, together with staff from various parts of CERN, participated in this study, which resulted in interesting suggestions for research that could be done and for the experimental techniques to be used with such a device.

Fritz Grüffer, Leader of the Engineering Division, returned to CERN in April after a 3-month visit to the Lawrence Radiation Laboratory at Berkeley, California. This visit was in response to an invitation to participate in some preliminary studies on the problems of designing a large proton synchrotron in the energy range of several hundred gigaelectronvolts.

Colin Taylor, of the proton-synchrotron Linac Group, and Dr. **Bruce Cork**, at present at CERN from the Lawrence Radiation Laboratory, Berkeley, spent a week during April at the Institute of Nuclear Research at Swierk, near Warsaw. They went at the invitation of Prof. Danyasz, Director of the Institute, for consultation on the 10-MeV linear accelerator under construction there.

Two members of the CERN staff travelled to Washington for the Spring Meeting of the **American Physical Society**, held from 23-26 April. At a banquet held during the meeting, Prof. **L. Van Hove**, Director of the Theory Division, was presented with his 1962 Dannie Heineman Prize, awarded for 'his contributions to statistical mechanics and to field theory as examples of outstanding publication in the field of mathematical physics'. The preceding afternoon he gave one of the invited papers on 'A few problems in many degrees of freedom'. Dr. **G. F. von Dardel** read an invited paper, on 'Recent high-energy experiments at CERN'.

Prof. **L. Leprince-Ringuet**, Vice-president of CERN's Scientific Policy Committee, also read an invited paper on

'Strange-particle research at high energies performed at CERN by École Polytechnique and Collège de France'.

The normal **proton-synchrotron** programme, with the machine running continuously each week for nuclear physics or technical development from 15.30 on Tuesday until 23.00 on Saturday, was changed last month to minimize loss of time due to the Easter holiday. Beginning as usual on Tuesday 10 April, the run was continued through the following week-end right up to 6 o'clock on Friday morning 20 April — some 230 hours in all, including 14 hours for machine development.

Among experiments which were particularly successful during this time were those using the Saclay **81-cm hydrogen bubble chamber** and the **1-metre heavy-liquid chamber** of the Paris École Polytechnique.

The former obtained some 200 000 photographs contributing to studies of different interactions in hydrogen. Incident particles, obtained by means of the beam **mi**, were positive pions or anti-protons, each of momentum 4 GeV/c, and positive or negative pions of momentum 2.7 GeV/c. The photographs **aK**, being analysed by laboratories in England, France, Germany, Italy, Sweden, and at CERN.

About 270 000 photographs were obtained with the heavy-liquid chamber, using negative kaons as incident particles, obtained by means of the beam **ki**. These photographs are being analysed in England, France and Norway, as well as at CERN, particular attention being given to xi-zero particles.

The **CERN electrostatic separator** used in the beam **mi**, in the South Hall (see CERN COURIER for February, p. 8), operated smoothly during these runs, with a plate separation of 14 cm and potentials between the plates of from 430 kV up to 840 kV.

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The cover photo shows that Spring has returned to CERN. Once again the restaurant terrace is a place where fresh air can be added to the discussion of high-energy physics - or anything but that - over after-lunch coffee.

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