

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 13 Member States, with contributions according to their national revenues: Austria (1.90%), Belgium (4.07), Denmark (1.95), Federal Republic of Germany (19.15), France (20.81), Greece (0.60), Italy (9.90), Netherlands (3.77), Norway (1.58), Spain (4.21), Sweden (4.15), Switzerland (3.23), United Kingdom (24.68). 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

The **proton synchrotron** started operation again on 23 October, after the long shut-down period during which major changes had been carried out in the experimental areas and a considerable amount of work done on the accelerator itself. During the first week, apart from technical development and

various beam studies, special measurements on shielding were carried out by a combined team from the DESY project at Hamburg, the National Institute for Research in Nuclear Science, at Harwell, and CERN. With the start-up for the second week, on 31 October, the **new operating schedule** was put into practice. In future the accelerator will run continuously from 2 p.m. every other Wednesday until 6 a.m. the next Sunday but one, that is, a total of 256 hours in each fortnight, of which some 30 hours will be for machine development and the rest for nuclear physics.

As mentioned last month, in the report of H.M. Queen Frederika's visit, the **main converter** set for the ring-magnet power supply was completely overhauled. Installation was nearly completed of the **electronic filter**, which will considerably reduce the effects of the ripple voltage of this supply on the ring magnetic field. Another important task was the installation of a completely new **security interlock system** for all doors in the ring (including the new ones at the East junction), the linac and the experimental areas. Each experimental area will now

be controlled separately, with the aid of beam stoppers to shut off individual beams when necessary. Television cameras were also installed to watch the doors in the East junction.

The **31-cm hydrogen bubble chamber** is now installed in the North hall in one of the largest concrete blockhouses yet constructed here, with an interior volume of 440 m³. This is in the path of the modified separated kaon beam, formerly k₂, now referred as k₃. Next to it, also in a concrete blockhouse, is the **Wilson Chamber**, set up to detect neutral particles arising from the interaction in a hydrogen target of pions in the beam a\$ (formerly a2). In the South hall, the **CERN 1-m heavy-liquid bubble chamber** has been placed at the end of the m₂ beam, where it will carry out some test runs in connexion with the neutrino experiments.

The **synchro-cyclotron** was also shut down again at the beginning of the month, from 2 to 8 October. Among other things, some modifications were

Continued on p. 10

eContents

Last month at CERN	2
Open day	2
Nuclear physics in Africa and Asia	3
Conference proceedings published	8
CERN Council	9
Niels Bohr	10
Books	11

The cover photograph shows part of the crowd in the PS main control room, listening attentively to the explanations being given by E. Ratcliff, during CERN's 'open day' on 20 October.

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CERN COURIER

is published monthly in English and in French. It is distributed free of charge to CERN employees, and others interested in the construction and use of particle accelerators or in the progress of nuclear physics in general.

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Published by the
European Organization for
Nuclear Research (CERN)
PUBLIC INFORMATION OFFICE
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Editor :
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CERN, Geneva 23, Switzerland
Tel. 34 20 50

Printed in Switzerland

OPEN DAY

On the afternoon of Saturday 20 October, some 600 members of staff and their guests took advantage of the opportunity given them to see as much as possible of the Laboratory's installations.

Between 2 p.m. and 6 p.m. they flowed through the SB gate, each one receiving a collection of site plans. Some started their visit then by inspecting the power house of the 600-MeV synchro-cyclotron, the latter shut down specially until 6.30 p.m. Many others first took a general look at the 41-ha site from the top of the Administration building, and followed this by a spell in the auditorium, where films in three languages — 'Etoiles nucléaires', 'Matter in Question' and 'Das Europäische Kernforschungszentrum' — showed what CERN does.

Outside the auditorium an 'Information' stand distributed booklets by the dozen. A score of 'fixed guides', scattered among the Divisions, answered more specific questions. At the synchro-cyclotron, in the power house, in the building for nuclear-physics apparatus, beside the electron storage ring, near the instruments for examining and analysing bubble-chamber photographs, in the experimental halls, the control room and the funnel of the synchrotron (being got ready for the resumption of operation on 23 October) — everywhere they were bombarded with questions. Less exhausting, perhaps, but equally important, was the task of the 23 auxiliary guards, recruited from among the messengers and cleaners. Thanks to their concern for everyone's safety, and the care of the visitors themselves, the afternoon passed without a single accident •