

The delegation of physicists from China photographed during their visit to CERN.

1. During a lecture on the ISR. Professor Chang Wen-Yu, Deputy Director of the Institute of Atomic Energy at the Chinese Academy of Sciences in Peking, who led the delegation can be seen in the middle of the front row.

2. At the Split Field Magnet. L. Resegotti is describing the magnet system installed at intersection region 1-4 of the Intersecting Storage Rings.

A visit from China

A delegation of scientists from the People's Republic of China, including twelve specialists in particle physics, visited the CERN Laboratories from 26 June to 3 July. The Group was led by Professor Chang Wen-Yu, Deputy Director of the Institute of Atomic Energy at the Chinese Academy of Sciences in Peking. He was no stranger to CERN since he attended the International Conference on High Energy Physics in 1958.

The scientists were welcomed by members of the CERN Directorate and embarked on an intensive eight day tour during which they showed a keen interest in the various large installations and discussed at length with the leaders of the physics teams and with the machine designers. They heard a series of lectures on the CERN accelerators and ancillary equipment.

Before coming to CERN, the Chinese delegation had visited several research centres in America including Brookhaven, Batavia and Stanford. The reason for this tour was to gather information on the particle physics Laboratories with a view to discussing a similar Laboratory in China. A cosmic ray Observatory has already been built near Kun Ming (Yun Nan province).

At the farewell party held in honour of the Chinese visitors, the possibility of closer co-operation between European and Chinese research workers in particle physics was discussed. Throughout the visit there was a very open and fruitful exchange of views.

Books on CERN

Mrs. Margaret Gowing, Professor of the History of Science at Oxford University, is preparing the groundwork for a book on the history of CERN. She has already talked with a number of those who were party to the setting up



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the Organization in the early 1950s.

To provide a direct link with the evolution of CERN, from its beginnings and through the various stages of its development, L. Kowarski, former CERN Director who retired in 1972, is serving as consultant to the author. Amongst other things he will help with the preparation of a file on the 'prehistory' of CERN and with the chapter on the implementation of the scientific programme.

Mrs. Gowing is well-known for her history of nuclear energy in Great Britain, a publication running to several volumes the last two of which are due to appear on the bookstalls shortly.

Another book on CERN's activities is also being prepared. It will describe the SPS project which began in 1971 and will continue through until 1979.

Maurice Goldsmith is compiling this book and is making regular visits to the site to gather information as the project progresses. Mr. Goldsmith is

the Director of the Science Policy Foundation in London.

Storm hits CERN

Late in the afternoon of 12 June a freak storm hit the Geneva region and caused serious flooding. A cloudburst lasting an abnormally long time (over an hour) swept down on the CERN Laboratories and left flood damage amounting to millions of Swiss francs in its wake.

Preceded by a violent wind of nearly 50 miles an hour, the storm began with hail which fell for fifteen minutes. The effect of this combination was to choke the drains with hailstones and leaves so that they were no longer able to cope with the subsequent torrent of rain. Hardly a building or installation, surface or underground, went unscathed but three areas in particular were hit very

The sad results of the storm on 12 June:

1. In the building of the Track Chambers Division exposed bubble chamber film stored in the basement was damaged by mud and water. Boxes of film are seen here stacked in the open air while their usual home was cleaned. It will be difficult to save much of the film.

2. In the Main Building the flooding was spectacular but did not cause as severe damage as elsewhere. Nevertheless this indoor swimming pool in the basement illustrates how the unusual volume of water which fell during the freak storm far exceeded the ability of the drainage system to cope with it.



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hard: the installations of Nuclear Physics Division, of Track Chambers Division and of Health Physics Group.

The NP Division suffered its main damage to the equipment in Hall I-1 of the Intersecting Storage Rings and in Laboratory 3. Water and mud inundated Hall I-1 to a depth of a metre and the delicate equipment there — mainly electronic counters and spark chambers — can be considered a write-off. The basement of Lab. 3 was in similar shape with various other items of equipment for the most part destroyed — spark chambers, vacuum pumps, detectors, recorders, stabilized power supplies and the like.

A wave of water passing down the road from the ISR penetrated the electricity substation and thence by underground tunnels reached the basements of Laboratory 13, where there was a large quantity of electronic and mechanical apparatus belonging to the TC Division — counters, scalars, power supplies, spares for measurement tables, etc. Valuable technical documents, as well as the air-conditioning units were almost totally destroyed. In addition many reels of unexposed film were completely submerged, together with 400 km of film which had been exposed and developed and was in the process of being scanned; part of film may be recoverable but the possibility of distortion of the emulsion makes this a faint hope. In the case of film from experiments performed several years ago it will be extremely difficult to recreate the same conditions if the film is lost.

The 2 m hydrogen bubble chamber was the scene of much activity. The operating crew took quick action when, right at the beginning of the storm, water was seen infiltrating under the chamber building in the tunnels housing the 10 kA power supplies and the power, monitoring and safety lines of the entire installation. It was possible to cut the magnet

A programme of lectures has been arranged as usual for the Summer students. In the photograph V.F. Weisskopf (former Director General of CERN who is also a summer visitor) continues discussion after one of his, by now traditional, introductory lectures on high energy physics.

power supply before the water actually rose (it rapidly reached a height of 1.4 m). The refrigeration plant had to be shut down and water was also threatening the pumps providing the vacuum which isolates the chamber thermally. It was therefore decided to evacuate the liquid hydrogen from the chamber. The muddy water was by then no longer coming from the surface but was welling up from the drains — as was the case in most of the flooded areas of the site.

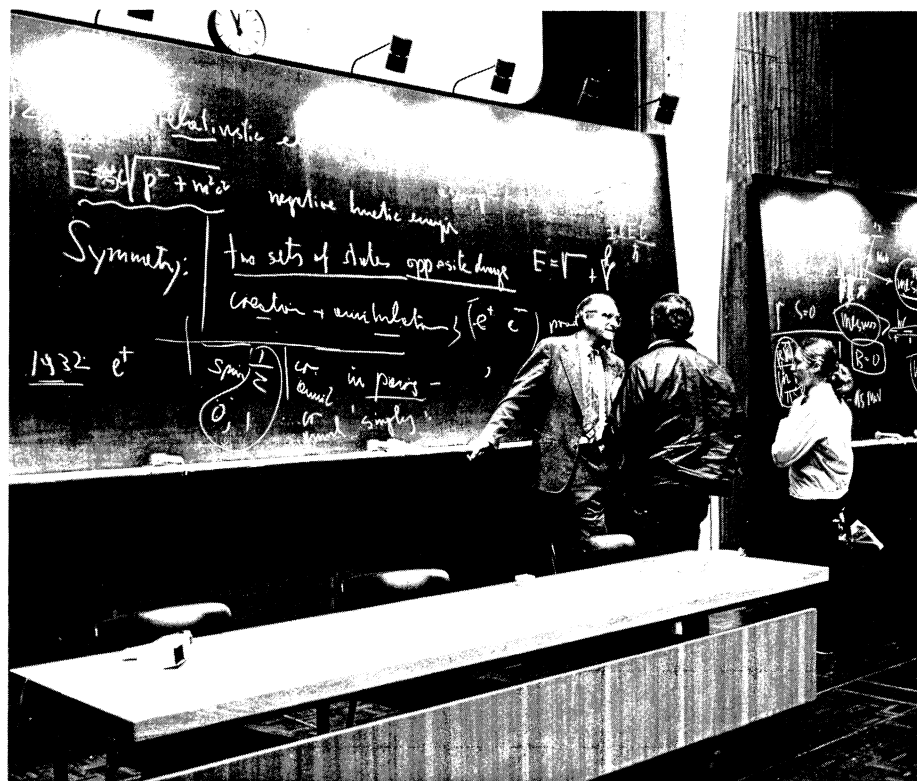
The entire staff of the 2 m chamber was on duty for 48 hours, carrying out safety precautions manually, clearing some two cubic metres of mud and cleaning up the vital circuits in the tunnels. The necessary repairs have meant a considerable interruption in the bubble chamber's experimental programme. Gargamelle, the heavy liquid chamber, and the large European bubble chamber (BEBC) were fortunately only slightly affected.

The most serious damage in the building of the Health Physics Group was the complete destruction of the low level counting laboratory. The laboratory is in the basement to reduce the influence of environmental radiation and its specialized equipment is a total write-off.

Every building suffered in some way or other. The new computer centre was inundated by mud covering a large area containing the converter units and power supplies of the CDC 7600 computer and its satellite machines. There was also damage to the linac, the booster and the PS itself. The total bill is still being worked out by insurance experts who have no easy task in front of them.

Vacation courses

As in previous years, during the season when many CERN employees are off on holiday, vacation students have



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arrived to follow a two to four months' course.

Circulars on the programme for these courses, which have been held for eleven years now, are sent out at the end of every year by the Fellows and Associates Service to the Universities in all the Member States. Students reading physics, electrical and electronic engineering, mathematics and information science at these Universities and Technical Colleges are invited to submit their applications before the following March.

A difficult choice then has to be made from among the applicants, taking into account their interests and the available places. CERN defrays travelling and board and lodging expenses.

There were some 350 applicants this year, of whom 148 were invited to follow the courses. They are distributed over the various scientific and technical Divisions — joining groups

working on experimental and applied physics, data handling, accelerators, technical services or Health Physics. Taking part as they do in the daily work of the groups, the students should be able to obtain a useful supplement to their education from the people they meet and work with. As well as their work in the groups, the students are offered a series of fifty-three lectures on elementary particle physics, accelerators, detectors and computer science through which they can become familiar with the various facets of particle physics research.

Booster struggles with instabilities

Commissioning of the 800 MeV Booster is at an intensive 'machine physics' stage where the behaviour of