

CERN News

member States — such as the improvement programme, the intersecting storage ring project and the preliminary work towards the proposed 300 GeV. He has shown great skill, flexibility and resolution in guiding the Council through these decisions. Professor Gregory spoke of his 'clear, wise analysis of these problems' and praised Mr. Bannier's concern for human relations which have won him many friends in the Council and in CERN.

Finally, at his last Council Session as President, Mr. Bannier proposed the programme described above for preparing the Convention and selecting the site for the 300 GeV Laboratory. This contribution to the solution of a very complex problem was a fine climax to his term of office. We hope to see Mr. Bannier still at the heart of CERN affairs for many years to come.

New film on CERN

For some time recently, a visitor who had not previously been warned before entering a laboratory, office or experimental hall at CERN might wonder whether he had landed by mistake on a film set! Cameras, lights, wires and cables often occupy a large part of the available space.

Since November 1966, the Swiss film producer Guido Franco has been preparing a new film about CERN. The first shots have been taken and the film is intended to be finished in time for the June Council Session.

Why should there be a new film about CERN when one already exists (called 'Matter in Question') which gives a good picture of our Organization and of how its work is carried out? 'Matter in Question' was made in 1960. In seven years many things have changed: the research facilities have been altered and extended, new equipment has been built, many physicists have left CERN and others have taken their place, the work of the organization has advanced and the activities at CERN, though they remain basically the same, have become more ambitious as more and more discoveries during these seven years have increased the challenge of our work. These are some of the reasons which prompted CERN to have a new film made. Several film producers in the member States were contacted and finally the offer from Guido Franco was accepted. We met Guido Franco and put a few questions to him:

For several weeks you have been working on the production of a new film about CERN. We should like to know above all what reasons induced you to offer to make this film and what interests you most particularly about a subject like CERN?

G. Franco: What interests and intrigues me about a subject like CERN is that it concerns a typical phenomenon of our modern age. I suppose that if I had lived in the Middle Ages for example, I would have been interested in the construction of cathedrals. If I had been an ancient Egyptian, I would have been passionately interested in the building of the pyramids, and I think that today it is the resources required by science which are a most es-

sential characteristic of our time and must therefore interest the artist.

CERN is a rather complex organization, unique or almost unique of its kind. It does not in fact produce anything material, by which I mean nuclear power, the launching of a missile, etc. One could say that CERN produces ideas, advancing our knowledge. How have you tried to get hold of this rather particular atmosphere of CERN, and how do you plan to put it onto film?

G. Franco: First, let us be clear, the film has not yet been made. We are still at the stage of taking our first shots and we have not yet got things cut and dried. That said, the fact that CERN does not produce anything material, does not seem to me an obstacle to making a film. On the contrary, I think it will be possible to make this film just as well as if it were about a centre producing atomic energy and I hope, even better. It is obviously a complex problem. We shall tackle it in many ways but to give you some idea, I am inclined to say that we are going to make a film which will be about half-way between a documentary and a news-reel — on the one hand we shall show certain concrete things and try to explain them, and on the other hand we shall delve into what CERN really is and try to grasp its distinctive qualities and its originality.

You have already made a number of films. In particular a documentary about Tunisia which recently provoked rather strong reactions from the Tunisian public, and some time ago you also made a documentary on the building of the Grande Dixence Dam. What are the main differences which you find between the latter film, for example, and the one you are now making at CERN?

G. Franco: The differences are obvious. In the case of the Grande Dixence, we were filming the construction of something very definite from the economic point of view, something destined to produce electric power. Furthermore, the construction of a dam is something which can be followed very clearly, the thing being produced has visible dimensions, whereas in the case of the film about CERN, if I asked the scientists to give me 100 grams of pions or kaons, this would

certainly create some problems for them to produce and for me to film. Here, the reality of the things being studied cannot be seen by the human eye. We have to take account of this and find a suitable way round it.

Apprentice Training

Five apprentices were enrolled at CERN last year — two in design office work, one as laboratory assistant and two in administration. This modest start in apprentice training is in the nature of an experiment to see what sort of contribution CERN can make in this field. The scheme is being supervised by the Training and Education Section who are working in full collaboration with the Careers Guidance Office in Geneva.

The apprentices, starting at the age of about 15, will normally spend three to four years at CERN, according to their field of studies. They have been placed under the guidance of Apprentice Supervisors, namely: Mr. Albrecht, Coet and Reymermier for those in designing, Mr. Fizez and Thurian for those in administration, Mr. Roberts for the laboratory assistant. Due to the variety of disciplines involved in the training of the latter, several other specialists in CERN have agreed to collaborate in this supervisory task.

At the end of their stay, the apprentices may pursue their education further at a technical or commercial higher college to the level of full technicians, secretaries, ... If not, they can move into work in industry, other laboratories or administrations. It is not intended that the trained apprentices necessarily stay or return to CERN.

Especially for the type of education required by a physics laboratory assistant, the wide range of disciplines involved in supporting sub-nuclear physics experiments, provide what is possibly a unique concentration of skills at CERN. There are specialists available in many subjects and CERN may be able to provide valuable training facilities for young people from Geneva as well as from the surrounding French Departments, and later possibly from wider afield.

Visits in 1966

Almost 10 000 people came to CERN during 1966 to tour the Laboratory. The exact figure, 9392, represents a small increase of about 2 % compared with 1965. It indicates the steady interest in CERN by people from a variety of backgrounds in the majority of the member States and even from other continents.

The majority of these visitors were shown around the equipment in use at CERN and met some of the scientists, during the guided tours organized on Saturdays. There were also 193 VIP visitors including many well-known physicists and senior politicians from several of the member States.

The Press has also shown considerable interest in CERN. 101 journalists from newspapers, journals, radio and television were received by the Public Information Office during the year and shown around the Laboratory.

Concerts at CERN

The CERN management has decided that, in 1967, it will take over the organization of concerts of classical music, previously done by the CERN Music Club. This decision was taken partly because of the difficulties encountered by the Music Club, particularly with regard to finance owing to the rather small number of people attending the concerts in the past.

At the end of 1965, the CERN Music Club changed its name to the Record Club as a result of the reduction of its activities. The Club now concentrates on managing a Record Library and organizing concerts of recorded music in the lunch hour.

The management, acknowledging the cultural value of such events, will carry on the organization of the live concerts with certain changes of policy. In particular, the Geneva studio of the Swiss Broadcasting Service will co-operate very closely with CERN in the choice of artists and programmes and will record the concerts which will be given in the CERN auditorium. Radio-Geneva in return will contribute to the cost of the concerts.

Four have been arranged for this year :

6 April, the Michel Corboz Vocal Ensemble will interpret works by a number of composers including Debussy, Ravel, Poulenc, Hindemith and Monteverdi.

27 April, Ayla Erduran (violin) and Roger Aubert (piano) will play three sonatas by Brahms.

18 May, Brigitte Buxtorf (flute) and Catherine Eisenhoffer (harp) will present a programme including works by Frederick the Great, Bach, Inghelbrecht, Roussel and Debussy.

1 June, works by Schubert, Hindemith and Schumann will be interpreted by Stéphan Romascano (violin), Ron Golan (viola), Edgar Fischer (violincello) and Denise Dupont (piano).

It is hoped that this programme will satisfy the most demanding music-lover. That in any event is the wish of the CERN management whose aim is to bring CERN into fuller participation in the musical life of Geneva and, in general, in all events which involve an international organization such as CERN in closer contacts with its host city.

Photo Club exhibition

From 18 to 27 November 1966, the CERN Photo Club organized an exhibition at CERN as it does each year. The exhibition consisted of 138 photographs, the work of twelve members of the Club.

Three of these photographs are reproduced on the opposite page and the cover photograph of this issue was also selected from the exhibition. These were chosen not only for their artistic merit but also for their qualities which would lead to good reproduction in our journal. They are not the prize winners in the exhibition itself who are listed below in the different categories, including colour slides :

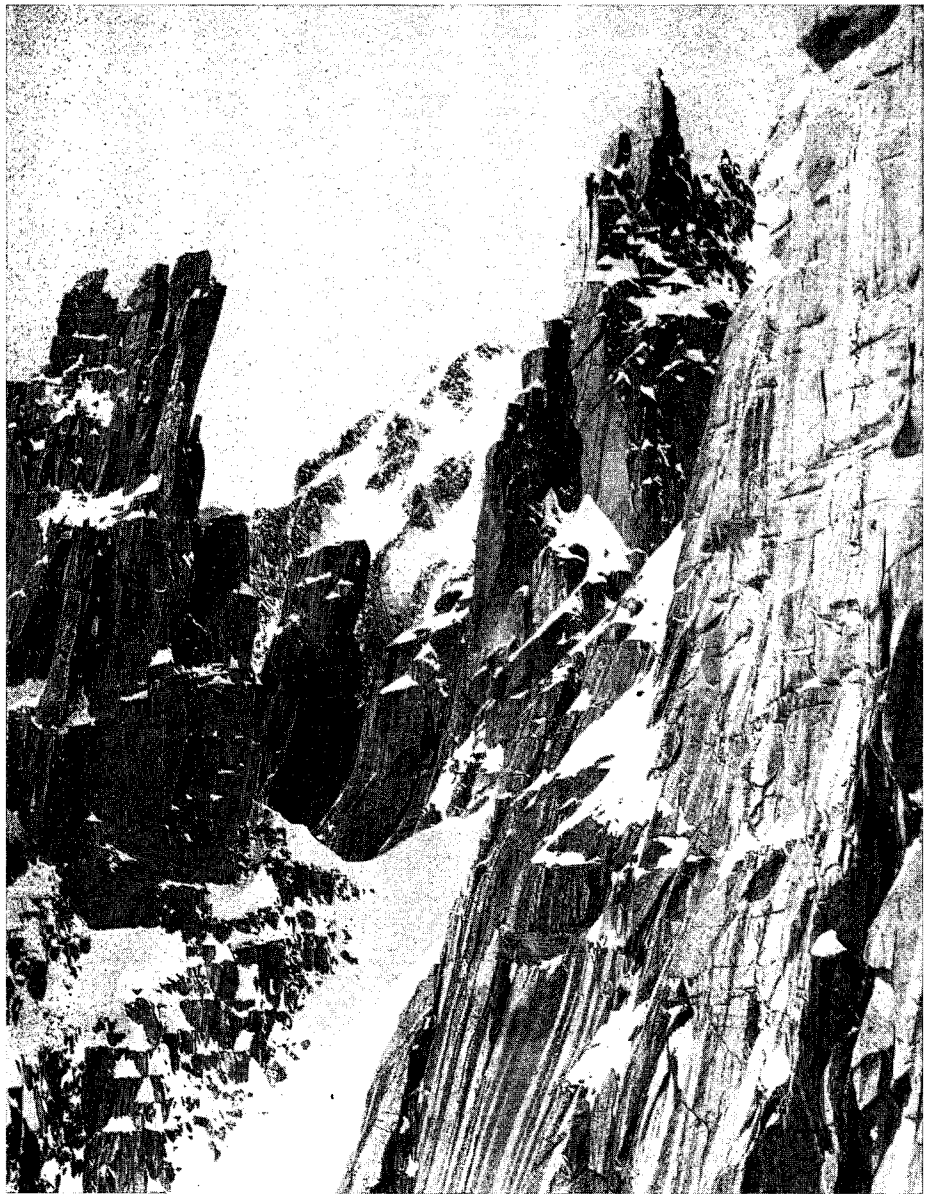
- Beginner : Mrs. Goidadin (general subject), Mr. Vandoni (portrait)
Free : Mr. Frigo (general subject and portrait)
Series : Mr. Høgaasen (general subject)
Colour : Mr. Schneuwly (landscape), Mr. Saladin (general subject).

People in CERN who would like to know more about the activities of the club should contact Mr. A. Malmusi.

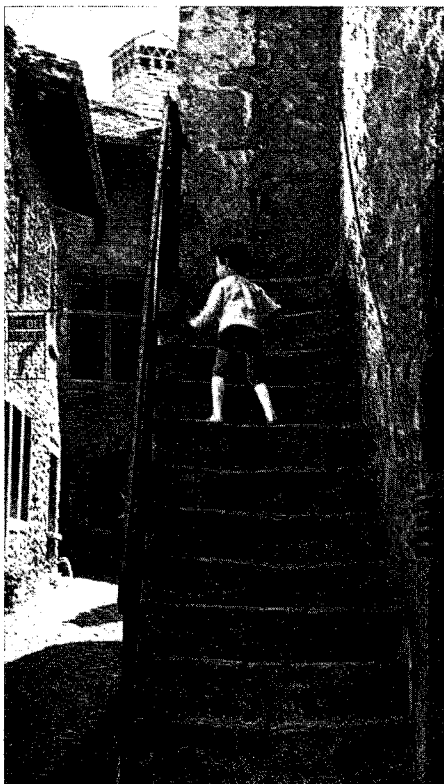
1. A popular subject for people living in a city surrounded by mountains. This photograph, taken by Mr. H. Høgaasen, is of the side of the Grand Capucin (on the right) in the Chamonix area of France.

2. Mr. O. Mendola found this picturesque flight of steps in the little medieval village of Pérouse about 30 km from Lyon on the Geneva-Lyon road.

3. This view of plane trees stripped of their leaves was taken last winter by Mrs. C. Goidadin at the edge of the lake in Geneva near Eaux-Vives.



1.



2.



3.

1. A rear view of a matrix of 72 criss-crossed counters, made by the University of Geneva group, to measure the number of charged decay-products, mainly pions, of heavy mesons searched for in the missing-mass spectrometer experiment. The counters themselves are hidden by the black plastic sheet.
2. A new plastic scintillation counter with its light-guides. The passage of a charged particle through the counter produces a flash of light which passes down the specially designed light-guides with little loss in intensity. It is then converted into an electronic signal using photo-multipliers.

Computers

CERN has decided to purchase a CDC 6400 computer which will become CERN's large, secondary computer (see CERN COURIER, vol. 6, p. 90). It has the great advantage that it is fully compatible with the existing CDC 6600. The machine is scheduled to be shipped to CERN early in April and it is hoped to have it installed by 1 May. It will replace the CDC 3800 which is at CERN on rental contract but it has been decided that the 3800 will stay appreciably longer than a couple of months overlap with the arrival of the 6400.

Colloquia

Three colloquia have been arranged for February. On 2 February, Professor Silvestri will talk about large scale electrical power production by nuclear reactors; on 16 February, Dr. Goodman from the World Health Organization will talk about the biological properties of immunoglobulins; on 23 February, Professor Picciotto will talk about the search for extra-terrestrial particles in the Antarctic snow.

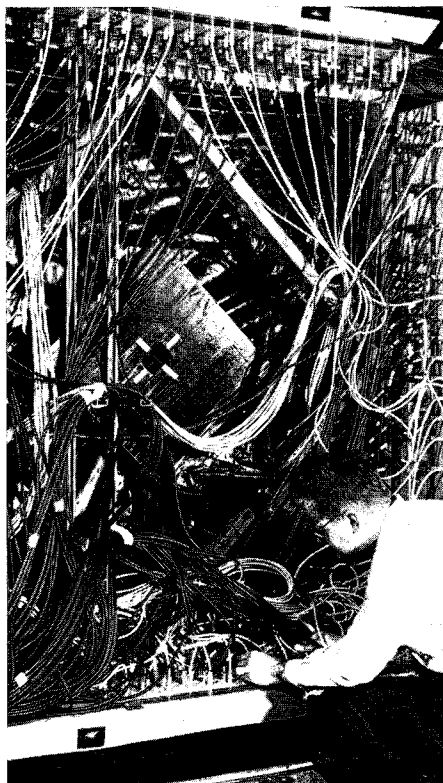
Used in 1966

The operation, maintenance and works section of the SB Division (Technical services and buildings) assembled at the end of 1966, the figures for general consumption at CERN during the year.

The main figures concern the consumption of electrical power which was less than in 1965 — 86,864,684 kWh as opposed to 94,733,242 kWh. This reduction was due mainly to the three months shut down of the PS. The total electrical power consumed at CERN in 1966 represented about $\frac{1}{11}$ of the total consumed in the whole Canton of Geneva.

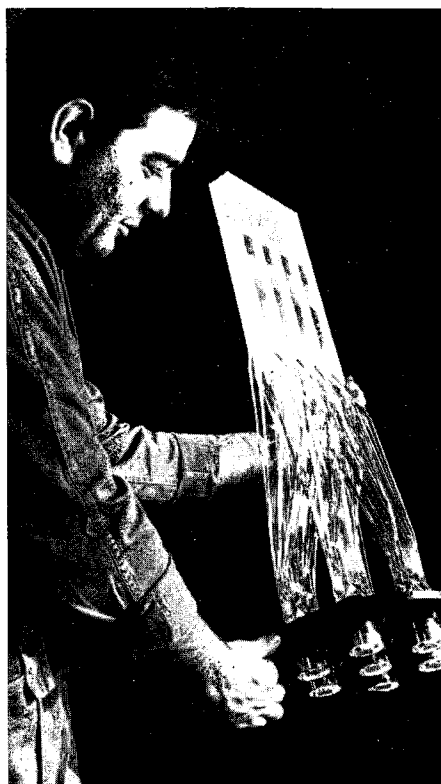
The amount of cooling water used was 4,022,230 cubic metres; the amount of fuel-oil 4,586 cubic metres. The circulation of 1,507,303 tons of hot water distributed about $34,010 \times 10^6$ kilocalories to the site.

Last but not least, we have a figure obtained from another source: 983,740 cups of coffee were served during 1966 to help about 2500 Cernites find the energy necessary for their work.



1

CERN/PI 47.1.67



2

CERN/PI 319.12.66

Professor Preiswerk 60th birthdays

Two of the founder members of CERN are celebrating their sixtieth birthday: Professor Peter Preiswerk on 16 January; Professor Lew Kowarski on 10 February. Both had considerable influence in shaping CERN into the type of Laboratory it is today.

Professor Preiswerk

Professor Preiswerk (photograph top right) was born at Basle, Switzerland, in 1907. He went to the University there and to the University of Berlin, where he heard lectures from many of the great physicists, such as Nernst, Planck, von Laue, Schrödinger and Bothe, who were there at that time. He returned to Basle and received his Doctorate in 1933.

The following year, he moved to the laboratory of Madame Pierre Curie, and became a collaborator of Frédéric and Irène Joliot, who had just discovered artificial radioactivity. He worked later with H. V. Halban on slow neutron physics. Among the papers they published was one which reported that neutrons reach thermal equilibrium in hydrogenous substances, and another that neutron resonance absorption is dependent on the velocity of the neutrons. This research later became significant in the field of the application of nuclear power.

At the end of 1936, Professor Preiswerk returned to Switzerland, to the Eidgenössische Technische Hochschule (ETH) in Zurich, to build one of the first cyclotrons to be constructed in Europe, and later he published a great number of papers on nuclear spectroscopy. He lectured at the ETH on Experimental Physics from 1946, and received the title of Professor in 1950.

In December 1950, he was present at the meeting of the Commission of Scientific Cooperation of the European Cultural Centre, when the creation of a European high-energy physics Laboratory was discussed. At this meeting, he suggested two possible sites for the Laboratory — one near Geneva (in the French Free Zone), and one in Alsace near Basle, giving preference to the first. Professor Preiswerk then played an important role in bringing this Laboratory into reality. He was one of the handful of experts, who were called together by Professor Auger in 1951, to coordinate the thinking of the