

CERN/AC/27
22 July, 1960

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

ADVISORY COMMITTEE ON VISITING TEAMS

Sixth Meeting

Geneva - 13 May, 1960

DRAFT MINUTES

CERN LIBRARIES, GENEVA



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DRAFT MINUTES

The Advisory Committee consisted of the following:

Chairman : Prof. W. GENTNER *

Alternate Chairman : Mr. S.A. ff Dakin

Members : Prof. M. Conversi
 Prof. F.G. Houtermans
 Prof. W. Paul
 Prof. G.H. Stafford
 Prof. J. Teillac

Alternates : Prof. P.C. Gugelot
 Prof. M. Jean
 Dr. A.W. Merrison

CERN officials : Mr. J.B. Adams Acting Director-General *
 Prof. G. Bernardini Director, SC Division *
 Mr. D. Harting SC Division
 Dr. B. Hedin SC Division
 Dr. A. Lundby' SC Division
 Prof. P. Preiswerk SC Division

* Part-time

1. APPROVAL OF THE DRAFT MINUTES OF THE FIFTH MEETING (CERN/AC/23)

Professor GENTNER opened the meeting and remarked that neither Professor Bøggild nor his substitute were present. He asked if there were any comments on the Minutes of the previous Meeting.

Professor CONVERSI considered the last sentence of the Minutes to contain an understatement, as the cyclotron time allocation to the Italian teams was "very small" and not "rather small". He did not require any changes however.

The Draft Minutes of the Fifth Meeting were approved.

2. ADOPTION OF THE AGENDA OF THE SIXTH MEETING (CERN/AC/24)

The Agenda of the Sixth Meeting was adopted.

3. PERFORMANCE OF THE SYNCHRO-CYCLOTRON, OCTOBER 1959 - MAY 1960

Dr. HEDIN reported on the changes to the cyclotron that were undertaken during the shut-down of 20 November 1959 to 25 April 1960. The reliability of the high-frequency system was greatly improved, as were the low-frequency limit and the starting-up time.

The motor-generator set for the cyclotron magnet was sent to the manufacturer for overhaul and was equipped with a better cooling system for the bearings. Preliminary tests were made on the stochastic injection system which is intended to give an improved beam intensity. An intensity of $0.54 \mu\text{A}$ internal beam was achieved with ion source conditions that would give $0.15 \mu\text{A}$ under normal operation. While the stochastic system is being built in its final version, the extra dees have been removed and a normal beam intensity of $0.3 \mu\text{A}$ is again available.

Professor PREISWERK gave some figures about the intensity of the pion beams, measured after the new lay-out of the pion channels had been completed. These intensities are higher than those of the old arrangement.

Tests on the μ meson channel have started, but figures for the muon fluxes are not yet available.

b) Visiting teams

Professor BERNARDINI gave a short review of the experiments as they were discussed at the last meeting of the Advisory Committee. Professor Hahn (Exp. 20) is now also working on the proton synchrotron and no more SC time is required for this group.

Professor GENTNER then asked the representatives for recent information about the visiting teams of their countries.

Exp. 2 - Valckx group (Utrecht)

Professor GUGELOT explained that efforts to obtain a pion beam of high energy resolution and high intensity had not been successful. It would therefore not be possible to get a good result for the inelastic scattering of π^+ from carbon and oxygen, but it would still be possible to obtain a good measurement of the elastic scattering process.

Professor CONVERSI remarked that for the elastic scattering good results were already available from Chicago and Columbia.

Professor GUGELOT agreed to this, but the Valckx group has still a slight advantage in the very high resolution (2%) of their pion detector.

Dr. LUNDBY asked whether it was feasible to measure the inelastic scattering by observing in coincidence the γ -rays emitted in transitions from the excited state of the nuclei.

Professor GUGELOT answered that this was not possible as the appropriate apparatus was not available.

Exp. 4a - Whitehead group (Harwell)

Professor STAFFORD said that the conditions for this experiment were excellent. A neutron beam with 20% polarization had been obtained and the experiment could certainly be completed in the time allocated.

Exp. 4b - Hanna group (UCL)

Professor STAFFORD confirmed that also this experiment is in advanced state of preparation. Some improvement is still called for in the polarization detector but this should be easy to achieve.

Professor CONVERSI expressed some doubts about the value of the experiment as the results of a similar experiment at Berkeley had already been published. He asked whether Hanna had a distinct advantage from the point of view of intensity.

Exp. 31 - Brix group (Darmstadt)

Professor PAUL said that the equipment of the Brix group is now ready, and the first part of the experiment could start immediately. The second part will have to wait until a μ^- beam of higher intensity is available.

Professor HOUTERMANS asked whether separated isotopes will be used, as these are available.

Professor PAUL answered that this was an unnecessary refinement, as it should be possible to resolve the isotope shifts.

Professor GENTNER now proposed that the Advisory Committee would express their opinion on the experiments that had not already been definitely accepted. Also he would like to hear their advice as to the priority that had to be given to each of the experiments now on the list. He thought an experiment should only be shifted forward in the programme if it could be considered exceptionally important. Groups that had already been started should now first get an opportunity to finish their experiments before other groups were invited to come to CERN, as there is only a limited amount of laboratory and office space available. Professor Gentner also proposed not to make any changes in overall machine time allocated to the visiting groups which was fixed at 40% of the total in the last meeting.

Mr. ADAMS asked whether running two or more experiments at the same time would be a possible way to relieve the pressure on machine time and thought that the suitability of an experiment to run parallel with other experiments should be a criterion for or against its acceptance by the Advisory Committee.

Professor PREISWERK agreed that it was very important to keep this point in mind and everything possible was being done in this direction already. It was, however, impossible to say at this stage how much machine time could effectively be gained by running several experiments in parallel.

Professor GENTNER then asked whether any of the visiting teams now at CERN thought they would need less machine time than they had asked for.

Here Professor Gentner had to leave and Mr. Dakin took over the chair.

Whitehead and Hanna groups

Professor STAFFORD asked the Advisory Committee to keep in mind that the machine time allocated to the Harwell and UCL visiting teams during 1959 had actually been used for beam production and for

The Advisory Committee agreed that 12 shifts should be allocated to the Bassi group as soon as possible.

There followed a long discussion on the relative priorities of the four other experiments under discussion, i.e. Exp. 21, 27, 31 and 33. The majority of the Advisory Committee was of the opinion that first priority should be given to Experiments 21 and 31.

The Trieste group had already been at CERN for some time waiting for machine time, whereas the Darmstadt group had already been promised machine time for the end of 1960. There were already several Italian teams working at CERN, whereas the Darmstadt group was the first German team that was accepted.

Professor CONVERSI protested that the experiments planned by his group were important and would lose much of their value if no machine time could be had in the near future. He was convinced that Exp. 33 could run in parallel with either the Trieste or the Darmstadt experiment. The main problem for him was laboratory and office space which had to be made available at CERN. Following a proposal by Professor Stafford:

The Advisory Committee agreed that the Conversi experiments were important and should be started as soon as possible, taking into account the requirements of the other groups which have already been accepted.

In practice this would mean that every effort would be made to have the Rome experiments run in parallel with those of the Trieste or the Darmstadt groups. CERN would try to find accommodation for the Rome group immediately. The Brix group would take over from 1 August, 1960 the laboratory and office space which is now occupied by the Utrecht team.

Mr. DAKIN proposed that at the next meeting of the Advisory Committee some time would be set aside for a discussion on the best way to solve the visiting team problem in view of the difficulties with the present system of allocating time to the visiting teams.

Professor HOUTERMANS asked whether, if there were any proposals for a reorganization, the proposals could be circulated well before the date of the next meeting.

The Advisory Committee agreed to a proposal by Mr. Dakin that Dr. Hedin would be asked to send a questionnaire to all member countries as soon as possible asking whether they have any new proposals about future tasks or procedures in the Advisory Committee for Visiting Teams.

Mr. Dakin closed the meeting at 5 p.m.

DATE OF NEXT MEETING

A date in October, that will be announced later.