

DRAFT MINUTES OF THE CERN EMULSION EXPERIMENTSCOMMITTEE HELD ON 15 FEBRUARY, 1965PRESENT

J. Ausländer	Bucharest	R. Llosa	CERN/Valencia
E.H.S. Burhop	U.C. London	W.O. Lock	CERN
C. O'Ceallaigh	I.A.S. Dublin	E. Lohrmann	Hamburg
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P. Cüer	Strasbourg	P. Rosselet	Lausanne
E. Dahl-Jensen	CERN	J. Sacton	Brussels
A.G. Ekspong (Chairman)	Stockholm	V. Scheuing	Munich
T. Ericson	CERN	A.G. Tenner	Amsterdam
D. Evans	CERN	W.T. Toner	CERN/British Emulsion Committee
H.J. Gerber	CERN		
Ch. Haenny	Lausanne	L. Van Hove (part-time)	CERN
L. Hoffmann	CERN	H. Winzeler	CERN
E. Jeannet	Berne	G. Zhdanov	Moscow

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I. Present state of the experimental programme at the PS and SC.

Comments and decisions.

A. Hyperfragment physics

1. High-energy  $K^-$  around 10 GeV/c mainly for hyperfragment studies

(Brussels, CERN, UC London, Warsaw collaboration, EmC 63/1. Delhi, EmC 64/8 and 64/8 Rev.1. Hamburg, EmC 63/13. Strasbourg, EmC 64/7, 64/7 Add.1 and 64/13).

The  $o_2$  beam will be dismantled during the shut-down. A new beam using an external target will be built after the shut-down. The exposure, if accepted by the NPRC, could probably not be made before the beginning of next year.

2. Stopping  $K^-$  for hyperfragments studies with loaded emulsion (Bombay, EmC 64/21, Strasbourg, EmC 62/22).

These proposals are supported with a priority A and 6 shifts are requested in the low energy  $K^-$  beam which has to be built in the North Hall.

3. Study of  $\Xi^-$  capture events in emulsion (European  $K^-$  collaboration, EmC 64/3 and 64/3 Add.1):

The experiment was accepted since the tests have shown its feasibility. It was proposed to ask for a few shifts of parasitic work in the  $m_4$  beam to see whether it is possible to produce the 1.5 GeV/c  $K^-$  beam needed with the characteristics required. If a suitable beam can be produced, 6 shifts are requested with a priority A for the exposure.

4. Separation of  $\Xi^-$  particles by means of a pulsed field (Munich, EmC 64/25 and 64/25 Add.1).

There was a marked disagreement between some members of the Committee about some figures given in the addendum concerning the performance of the method. The decision was to defer the matter until the next Emulsion Committee meeting after having asked a sub-committee, composed of V. Scheuing and P.V. March to produce less controversial and possibly well estimated figures on the doubtful points.

B. Nuclear structure

5. Fission studies with mica detectors (CERN, Naples, Warsaw, EmC 64/19).

It has already been agreed by the NPRC to allocate 3 shifts after the shut-down for making this irradiation in the South Hall with the fast ejected proton beam.

6. Study of heavy fragments emitted in the interactions of high-energy protons with complex nuclei (CERN, Valencia, Warsaw, EmC 64/4 and 65/1)

The Committee had the opinion that the method proposed was a powerful tool to record and identify samples of various fragments according to their production angle and their energy, but felt that for getting a final decision the proposal should mention more explicitly the points of physics which would be dealt with.

A sub-committee composed of E.H.S. Burhop, T. Ericson and G. Ekspong was set up to give a final decision after the additional information about the physics involved will be procured.

7. Double charge exchange reactions on lithium by pions of around 80 MeV (Strasbourg, EmC 64/24).

Since studies on the contamination of a pion beam in pions of the other sign have shown this to be negligible, the experiment can be made without using a magnetic field on the emulsion stack.

The Committee supported this experiment and asked for machine time (about 3 shifts) allocated to it at the SC.

C. Magnetic moment measurement

8. Precision measurement of the  $\Lambda^0$  magnetic moment ( $\Lambda^0$  magnetic moment collaboration, EmC 65/A).

The Emulsion Experiments Committee strongly supported the proposal of the  $\Lambda^0$  magnetic moment collaboration to undertake a precision measurement of the  $\Lambda^0$  magnetic moment. It seems feasible to aim at an error on the magnetic moment as low as  $\pm 0.05$ .

No other group is known to be planning such an experiment in the near future, and as far as one can judge any technique in its actual state would meet similar difficulties to achieve the precision mentioned above.

Moreover, the Emulsion Experiments Committee supported the view that all the necessary steps have to be taken right now to insure a good preparation stage of the experiment.

II. Election of the members of the Emulsion Experiments Committee

According to the rules fixing the election of the members of the Emulsion Experiments Committee a circular letter asking for nomination of representatives will be sent to all the laboratories in the Member States working with CERN accelerators.

III. Date of next meeting

The next meeting will be held on 3 May 1965 at 2.30 p.m. in the Director-General's Conference Room.

J.C. Combe