

CERN LIBRARIES, GENEVA



CM-P00073685

MEMORANDUM

To : the members of the Nuclear Physics Research Committee
From : Emulsion Experiments Committee

Experimental Programme for PS - First Half of 1966

Three experiments are recommended strongly by the Emulsion Experiments Committee. They are:

- E 54 : Exposure to high-energy K^- (12 or 14 GeV/c) for hyperfragment studies. (European K^- Collaboration, Strasbourg, Hamburg). The U_1 beam is expected to be suitable. At least $5 \times 10^5 K^-$ will be required; with an intensity of 5 K^- /burst at 14 GeV/c this implies 13 shifts, not including setting up.
- E 57 : Double hyperfragment studies by means of π^- absorption. (European K^- Collaboration). Revised proposal EmC 64/3 Add. 2 suggests a new beam (modified m_4 beam). Aim is a π^-/K^- ratio not greater than 1, and an intensity of 1000 to 2000 K^- /burst. The requirement is for $10^8 K^-$ of 1.3 to 1.5 GeV/c which is expected to give 20 identifiable double hyperfragments. Depending on intensity a running time of 5 to 10 shifts at 100% will be required. If accepted, a detailed beam design will be prepared by a member of the K^- collaboration under the guidance of Dr Petrucci.
- E 58 : Precision Measurement of Λ^0 Magnetic Moment. Proposal EmC 65/8 by CERN and Lausanne Groups. Other laboratories are expected to join the collaboration.

Aim is a reduction of error to $\pm 0,05$ as compared with ± 0.27 in the best published single experiment and ± 0.17 in the average of all published data.

Essentially, the proposal is to perform an improved version of the earlier succesful experiment at CERN. A field of at least 240 kG, with coils designed for 300 kG, is the most important element of improvement. Additional gains in statistical accuracy are to be obtained from other changes in design based on the experience in the earlier experiment.

Proposal for SC Experiment :

E'2 : Experiment on Decay Asymmetry of Pions. Proposal EmC 65/6 by Ausländer (Karlsruhe).
Because of the small effort involved, the Committee felt that the request should be granted.

G. Ekspong.