



CM-P00053658

EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

66-02
550
6th January 1966MEMORANDUM

To : Members of the E.E.C.
 From : J. Duclos et al.
 Subject: Test run for the experiment on the decay $\Xi^- \rightarrow e^- + \nu + \Lambda^0$

The proposed experiment on the $\Xi^- \rightarrow e^- + \nu + \Lambda^0$ decay rate is planned to be done in the short version m_4 beam. We would like to do a test run in this beam as soon as possible, the results of which are needed for the design of the final apparatus. In this run we intend to study

- i) the beam
 - ii) different K^+ detectors
 - iii) the background conditions
 - iv) the K^+ trigger-rate and the Ξ^- production-rate in CH_2 and in carbon
- and, if time allows,
- v) the polarization of Ξ^- produced in carbon.

The apparatus needed for this run will be ready by the end of February.

As sufficient time should be allowed between the test run and the starting of the actual experiment in order to prepare the final set-up, we would like to carry out the tests before the Easter shut-down of the PS, preferably in March. Before the shut-down, to our knowledge there is no other demand for the m_{4b} beam, whereas after the shut-down the K^-p scattering experiment of Daum and Sens will be installed in this beam and will stay there presumably until October. We hope to start the experiment on m_{4b} beta decay in October, after Daum and Sens have moved out of the m_{4b} beam. A test run in March would then give us 6 - 7 months for the preparation of the final set-up.

The machine time needed for the test run is at least one week. The m_{4b} area would be occupied by our equipment from the middle of February up to the shut-down.

We ask the E.E.C. to approve the test run and to allocate the machine time needed.

66/31/3
p/sb