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M E M O R A N D U M

To: Members of the EEC

From: Experiment S137 - Saclay
(Contactman: Y. Ducros)

Subject: Status report and request for machine time

The experiment S137, $K^+n \rightarrow K^op$ using a polarized deuterium target was running for the first time from 5th December to 18th December, 1975.

Taking into account the various stops (PS and ISR machine development and power economy) the effective machine time was about ten days.

During that time 180 out of the total of 205 counters were installed and four out of the five proportional chambers of the forward spectrometer (representing 7360 wires out of the 15000 in the experiment) were used to detect the particles emitted in the forward direction. These detectors performed satisfactorily.

The polarized target was not installed; the magnet PTM7 was used in order to have the actual configuration of the magnetic field around the target.

The acquisition electronics worked correctly and allowed the recording on magnetic tapes of events corresponding to two charged particles in the forward spectrometer and the recoil proton.

This data is currently being used at Saclay to debug the data analysis program. The reconstruction efficiency of tracks in the spectrometer is not quite satisfactory at present. Parameters such as beam and trigger quality have to be improved as well as the operation of the reconstruction program.

In the next period between 25th February and 20th March we have to:

- Improve the beam parameters (size as well as better identification of K^+)
- Perfect the trigger. For this the whole set of anticoincidence counters on charged and gamma particles is being installed.
- Operate the proportional chambers in both left and right recoil proton arms.
- Operate the polarized target.

We hope to have finished the tuning up of our apparatus by the end of this first period of 1976.

We ask the EEC for three more periods during 1976, that is periods 2, 3 and 4, in order to obtain sufficient data for good statistics of the $K^+n \rightarrow K^op$ reaction.