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M e m o r a n d u m

To : Prof. B.P. Gregory, chairman of the NPRC, and to all the Members of the EEC.

From : CERN - Bologna group

Re : PS time request before next PS shut-down.

In the last paragraph (page 3) of our PROGRESS REPORT, dated 4/2/67, it was pointed out that "further requests of machine time concerning a thorough study of (e^+e^-) production in other missing mass intervals should be postponed until the present program has been accomplished". This program being the measurement of $\frac{\omega \rightarrow e^+e^-}{\omega \rightarrow \text{total}}$ and $\frac{\varphi \rightarrow e^+e^-}{\varphi \rightarrow \text{total}}$ which we consider as the first part of our research program.

The interest of looking for the production of (e^+e^-) pairs for a large range of q^2 values and in particular in the various places where resonances exist with unknown quantum numbers has already been pointed out by us.⁽¹⁾ Taking into account the remarkable amount of work which has been invested into our project, we would like to exploit our apparatus as much as possible within the limits which allow interesting physics research to be performed with it. Moreover, it should be noted that the CERN-Bologna group has also attracted the interest of other Universities and in fact our research activity is already associated with the Physics Institutes of Strasbourg and of Bari.

The reasons for the present note are the following:

- i) one statement contained in the NPRC-62 paper, dated 8 March 1967, point No. 1, in which no mention is made of our request after $\omega \rightarrow e^+e^-$ and $\varphi \rightarrow e^+e^-$;
- ii) another statement contained in the EEC Minutes, dated 9 May 1967, recommendation No.5, in which it is stated that our experiment will lose priority in October, in favour of S-50 ;
- iii) the last PS draft schedule in which the PS week No.43 is marked as "end of experiment".

Our experimental program should be considered along the lines already specified in our proposal⁽¹⁾ of 31/1/66 and in our Progress Report dated 4/2/1967. Therefore, we would like to ask that the research activity of the CERN-Bologna group at PS should not be stopped next October, but extended on the basis of an equal time sharing with S-50 until the next PS shut-down.

(1) Reference: AN EXPERIMENTAL PROPOSAL TO MEASURE THE PRODUCTION OF (e^+e^-) PAIRS FROM TIME-LIKE PHOTONS PRODUCED IN PION-NUCLEON INTERACTIONS, P. Dalpiaz, G. Fortunato, T. Massam, Th. Muller and A. Zichichi.
Paper for the EEC, 31 January 1966, (66/197/3/p/jmf).