between the frequencies of events in paraffin and graphite.

The results of 1382 hours of measurements are given in Table I and in Fig. 2a and 2b. The production in hydrogen ($P - G$) of the MS with 3, 4 or 5 charged particles appears to have a greater frequency (cross-section) in the case of the incident $MS_{(n)}$ than in the case of incident proton $MS_{(p)}$. Indeed the ratio of these two frequencies appears to be ≥ 3 (we cannot say more owing to the insufficient statistical data).

In the cases of higher multiplicity no difference between frequencies of the events due to charged and to neutral particles is observed. Further measurements are in progress.

The existence of a multiple production in the neutron-proton collision seems to follow from these measurements and confirms other recent results on multiple production. The effect of plural production is in the present experiment negligible (since a second collision with a carbon nucleus in paraffin can occur on the average in only 14% of the cases,

if the interaction length l in paraffin is assumed to be $\sim 97 \text{ g/cm}^2$, and $\sim 20\%$, if $l \sim 60 \text{ g/cm}^2$).

On the basis of present results the statement made in a previous paper ⁽¹⁾ on the average multiplicity ~ 10 in collisions with protons in paraffin must be corrected in a sense of a lower multiplicity ~ 3 . The previous statement was due to the application of formulae which did not take into account multiplication events (production of secondary cascades and bursts) in the mass of the shield of Pb.

The asymmetry in the behaviour of neutrons and protons in the processes considered above can be due to the unknown mechanism of multiple production of pions and K-mesons.

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ADDENDUM

A. DERENEDETTI, C. M. GARELLI, G. LOVERA, L. TALLONE and M. VIGONE:
An Analysis of Two Positive τ -Mesons, *Nuovo Cimento*, 11, 420 (1954).

We wish to point out that in our work we have taken into account only the errors which depend on the apparatus.