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The articles, of which summaries follow below, have been published in the Dutch language in „Verslag van de gewone vergadering der Afdeeling Natuurkunde” of September 25th 1945, Vol. LII, No. 7.

Les articles dont les résumés suivent ci-dessus, ont été publiés en langue néerlandaise dans le „Verslag van de gewone vergadering der Afdeeling Natuurkunde” du 25 septembre 1943, Tome LII, No. 7.

Physics. — CLAY, J.: *The complex of the cosmic rays*, p. 407.

The problems concerning the cosmic radiation complex were reviewed. Especially the dependence of the soft electron component from the meson component was investigated for different materials (Pb, Fe, Al, H₂O, C). It was found that the electrons are excited by collision by the mesons.

Physique. — CLAY, J.: *Le complexe des rayons cosmiques*, p. 407.

On s'occupe des problèmes concernant le complexe des rayons cosmiques. Notamment le rapport entre mésons et électrons est discuté.

Les résultats des essais sont nommés. Il paraît que la radiation molle des électrons est causée par la percussion des mésons et des électrons dans la matière, ce qui fut examiné dans Pb, Fe, Al, H₂O et C.

Physics. — CLAY, J. and A. VENEMA: *The second maximum in the shower-curve of the cosmic rays*, p. 409.

There is a discrepancy in the results of those who find a second maximum in the shower curve produced by cosmic rays under layers of lead and iron. New experiments have accounted for this discrepancy, as the origin of the second maximum could be determined.

The explanation is connected with the production of the secondary electron rays by mesons. By a suitable way of fixing the counters this production could be determined in dependence of the thickness of the layer and of the electron percentage of the layer crossed by the meson. A maximum is then produced in lead and iron, connected with the second maximum in the shower curve. This second maximum arises through a twofold coincidence of a meson and a produced electron and it is not an electron shower in a strict sense. Thus it is that this maximum was found by experimenters who measured twofold coincidences, and that it was not found by those who measured threefold coincidences.