**On the Photodisintegration of the Deuteron.**

\[
P(\phi) = \frac{1}{(1 + |\phi|^2)(1 + 2|\phi|^2)} \quad \quad P(\phi) = 1
\]

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<th>(V_{0})</th>
<th>(h\nu)</th>
<th>(\sigma_p)</th>
<th>(\sigma_m)</th>
<th>(\sigma_{tot})</th>
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- \(V_{0}\): Height of the \(2P\) state potential.
- \(h\nu\): Incident \(\gamma\)-ray energy in MeV.
- \(\sigma_p\): Photoelectric cross-section \((10^{-24} \text{ cm}^2)\).
- \(\sigma_m\): Photomagnetic cross-section \((10^{-24} \text{ cm}^2)\).
- \(\sigma_{tot} = \sigma_p + \sigma_m\): Total cross-section \((10^{-24} \text{ cm}^2)\).

The recent experiment by Wilson, Collie and Halban\(^4\) shows that for the 2.6 MeV \(\gamma\)-ray the total cross-section is \((16.2 \pm 1.0) \times 10^{-26} \text{ cm}^2\). It is hardly possible to obtain the agreement with experimental data in all cases. Our results are, rather, in conformity with the Bethe-Peierls' curve.

The authors express cordial thanks to Professor G. Araki who showed his work about new potentials, and to Professor M. Kabayasi for valuable discussions.

**References.**

1) Van Hove, Phys. Rev. 75 (1949), 1819.
2) Amaki, Phys. Rev. 75 (1949), 1101.
   "Soryushiron-Kenkyu" (in Japanese) 3 (1949), 207.
   Bethe and Bacher, Rev. Mod. Phys. 8 (1936), 122.
   Rose and Goertzel, Phys. Rev. 72 (1947), 749.
4) Wilson, Collie and Hallan, Nature 162 (1948), 185.
6) Reports of Birmingham Meeting. (Sept. 1948).

**Erratum.** The sentence "The case (ii) results (2)." in the letters to the editor (Prog. Theor. Phys. 4 (1949), 376) should be omitted.