

Comparison of the Reactions $p+d \rightarrow \text{H}^3 + \pi^+$, $p+d \rightarrow \text{He}^3 + \pi^0$ as a Test of Charge Independence, KENNETH C. BANDEL, WILSON J. FRANK, AND BURTON J. MOYER [Phys. Rev. **106**, 802 (1957)]. We are indebted to Dr. Sigurd Köhler of CERN for bringing to our attention an error in the reduction of our data. The final ratio of the (t, π^+) to (He^3, π^0) cross sections is raised from 2.3 ± 0.3 to 2.6 ± 0.35 . The ratio of 2 predicted by assuming charge independence is now two standard deviations from the measured value.

In recalculating the ratio of the cross sections we used the latest mass values for pions. Because only 88.7-Mev total energy is available in the center-of-mass system for these reactions, the kinematics are sensitive to small mass differences such as the $\pi^+ - \pi^0$ mass difference. The bombarding proton energy was taken to be exactly 340 Mev.

Particle	Mass (Mev)	Particle	Mass (Mev)
proton	938.23	He^3	2808.27
deuteron	1875.53	π^+	139.63
triton	2808.80	π^0	135.04

The heavy particle was observed at 10.5° in the laboratory. The newly calculated angles and ratios are now

$$\begin{array}{ll} \pi^+, 50.1^\circ; & \text{H}^3, 129.9^\circ; \\ \pi^0, 47.7^\circ; & \text{He}^3, 132.3^\circ. \end{array}$$

$$R_1 = (\text{the raw experimental data}) = 2.86 (\pm 11\%),$$

$$R_2 = \frac{d\sigma}{d\Omega_{\text{c.m.}}}(\pi^+, 47.7^\circ) \bigg/ \frac{d\sigma}{d\Omega_{\text{c.m.}}}(\pi^+, 50.1^\circ) = 1.08 (\pm 8\%),$$

$$R_3 = \frac{d\Omega_{\text{lab}}}{d\Omega_{\text{c.m.}}}(\pi^+, 50.1^\circ) \bigg/ \frac{d\Omega_{\text{lab}}}{d\Omega_{\text{c.m.}}}(\pi^0, 47.7^\circ) = 0.86,$$

$$R = R_1 R_2 R_3 = 2.6 (\pm 14\%).$$

Problem of Spin Arrangements in MnO and Similar Antiferromagnets, F. KEFFER AND W. O'SULLIVAN [Phys. Rev. **108**, 637 (1957)]. We wish to acknowledge a prior publication by Loeb and Goodenough,¹ parts of which we unknowingly duplicated in parts of our paper. They give the general form for the dipolar anisotropy energy of ordering of the second kind [our Eq. (2)], and they also make a very good estimate of the value of the multiplicative constant. Also Loeb² has independently discovered the proportionality between the dipolar interaction energy and the powder neutron diffraction shape factor, and hence he has also noted that the neutron diffraction data cannot distinguish among the possible minimum-energy dipolar configurations. Loeb and Goodenough present an interesting discussion of other sources of anisotropy,

and our general discussion is similar to theirs in a number of points. However, the MnO uniaxial antiparallel spin arrangement which they present is quite different from the Kaplan³ arrangement which formed the basis of our model.

¹ Arthur L. Loeb and John B. Goodenough, *Proceedings of the Conference on Magnetism and Magnetic Materials, Boston, October, 1956* (American Institute of Electrical Engineers, New York, 1957), pp. 55-68.

² A. L. Loeb, *Congress of International Union of Crystallography, Montreal, July 10-19, 1957*; published in *Acta Cryst.* **10**, 780 (1957).

³ J. I. Kaplan, *J. Chem. Phys.* **22**, 1709 (1954).

Circular Polarization of Bremsstrahlung from Polarized Electrons in Born Approximation, KIRK W. McVOY [Phys. Rev. **106**, 828 (1957)]. Figure 1, giving the circular polarization of bremsstrahlung emitted in the forward direction, is incorrect and should be replaced by the figure presented herewith. The degree of polarization is seen to rise much less rapidly with photon energy than was indicated in

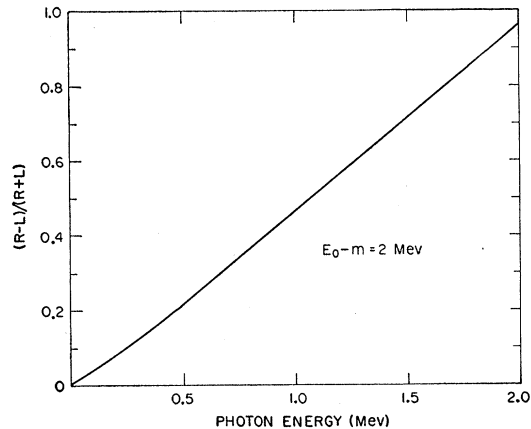


FIG. 1. Circular polarization of the forward bremsstrahlung from 2-Mev "spin-forward" electrons.

the earlier figure; this appears to agree somewhat better with the experimental curve (Fig. 2, lower part) of Goldhaber, Grodzins, and Sunyar.¹

The error was due to an incorrect sign which arose in the angular integration, and I wish to express my thanks to Dr. C. Fronsdal and Dr. H. Überall for pointing it out to me. It should be noted that this error did not affect any of the expressions [including Eq. (8)] given in the Letter.

¹ Goldhaber, Grodzins, and Sunyar, *Phys. Rev.* **106**, 826 (1957).

Pseudoscalar Interaction and the Beta Spectrum of RaE, M. E. ROSE AND R. K. OSBORN [Phys. Rev. **93**, 1315 (1954)]. In Eq. (62), the factor $3^{\frac{1}{2}}$ which appears as a coefficient of the AP interference term should be deleted.