Errata: On the Tripartition of Heavy Elements

[Phys. Rev. 72, 1257 (1947)]

TSIEN SAN-TSIANG
Laboratoire de chimie Nucléaire, Collège de France, Paris, France

AND

The Uncertainty Principle and the Yield of Nuclei Formed in Fission

[Phys. Rev. 72, 1265 (1947)]

P. F. GAST
The General Electric Company, Hanford Engineer Works, Richland, Washington

THE Editor regrets that Fig. 1 of the first of the above letters has been interchanged with Fig. 1 of the second paper. The captions, however, are correct as they stand.

In addition, in the correct figure in the letter by Tsien San-Tsiang, the diagram on the left should be labeled *A*, and that on the right, *B*.

The Relative Energies of the Gamma-Radiations from Co^{60} and Zn^{65}

ERLING N. JENSEN, L. JACKSON LASLETT, AND WILLIAM W. PRATT
Institute for Atomic Research and Department of Physics, Iowa State College, Ames, Iowa

December 1, 1947

THE energies of the gamma-rays from Co^{60} and from Zn^{65} have been previously reported[1–4] by a number of investigators who made use of magnetic spectrometers. The energy given[3,4] for the Zn^{65} gamma-ray (1.14 Mev is slightly greater than that originally cited by Deutsch *et al.*[1] for the lower energy Co^{60} line (1.10 Mev) but below that subsequently reported by Miller and Curtiss[2] (1.16 Mev) for this latter radiation. Although the probable errors given in the above investigations were such that no real inconsistency is implied, we would like to present here evidence to the effect that the radiation from Zn^{65} has the lower energy.

We have examined the gamma-ray spectra of Co^{60} and Zn^{65} with a thin-lens magnetic spectrometer,[5] using the photoelectrons ejected from a thin lead foil. The energies obtained for the Co^{60} lines were 1.16 and 1.32 Mev, and that for Zn^{65} was 1.11 Mev. The calibration of the spectrometer was based on the use of annihilation radiation from Zn^{65}. To effect a direct comparison of the gamma-ray energies in question, a source with *both* activities was placed in the spectrometer and the composite spectrum obtained. The results of this test are shown in Fig. 1 and, when compared with our previous curves for these materials, permitted the individual peaks to be definitely identified. It therefore appears that the gamma-ray from Zn^{65} is of lower energy than either of the Co^{60} lines.

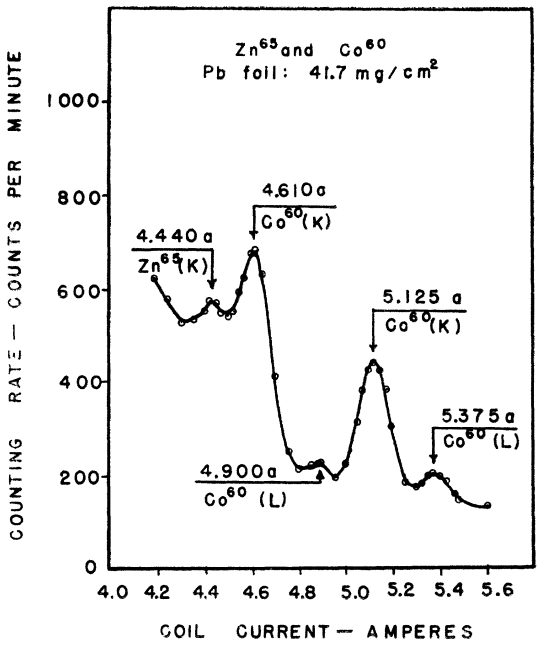

FIG. 1. Composite curve for the comparison of Co^{60} and Zn^{65} gamma-ray energies.

We are indebted to Dr. A. Roberts for calling to our attention the apparent inconsistency between our data and some of the earlier work and for discussing with us the practicality of a direct comparison of the gamma-rays in question.

* Work performed under contract W-7405-eng-82 between the Atomic Energy Commission and the Iowa State College Institute for Atomic Research. Paper No. 26 from the Institute for Atomic Research.

[1] M. Deutsch and L. G. Elliott, Phys. Rev. **62**, 558(A) (1942); M. Deutsch, L. G. Elliott, and A. Roberts, Phys. Rev. **68**, 193 (1945).

[2] L. C. Miller and L. F. Curtiss, J. Research Nat. Bur. Stand. **38**, 359 (1947).

[3] C. E. Mandeville and H. W. Fulbright, Phys. Rev. **64**, 265 (1943).

[4] M. Deutsch, A. Roberts, and L. G. Elliott, Phys. Rev. **61**, 389(A) (1942).

[5] This work is described in a paper shortly to be submitted for publication. The effect of the radiator thickness is considered and a suitable correction made.