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Edwin M. McMillan

August 25, 1972

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August 25, 1972

The Half-Life of ^{10}Be: A Correction*

Yiou and Raisbeck[1] have published a redetermination of the half-life of ^{10}Be, which differs from the previous measurements of Hughes et al[2] and McMillan[3]. This discrepancy motivated me to check my original work sheets, and I discovered no mistakes except in the last step of the calculations, the conversion of decay constant to half-life, where I neglected to include the factor ln 2. Since both the decay constant and the half-life are given in the published paper, any reader can see where the mistake was made. I would therefore like to revise my 1947 result from $(2.5 \pm 0.5) \times 10^6$ years to $(1.7 \pm 0.4) \times 10^6$ years.

The result of Yiou and Raisbeck for the half-life is $(1.5 \pm 0.3) \times 10^6$ years, in agreement with my revised value. There remains the discrepant value of 2.9×10^6 years (no error given) of Hughes et al., but their publication gives no details from which the precision of this measurement can be judged, and it should probably be given very little weight. It seems most likely that a value close to 1.5×10^6 years is the correct one for the half-life of ^{10}Be.

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(1) F. Yiou and G. M. Raisbeck, Phy. Rev. Lett. 29, 372 (1972)

(2) D. J. Hughes, C. Eggler and C. M. Huddleston, Phy. Rev. 71, 269 (1947)

(3) E. M. McMillan, Phy. Rev. 72, 591 (1947)

*Work done under the auspices of the United States Atomic Energy Commission

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