UCRL-17107

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PRECISE MEASUREMENT OF THE ENERGY OF THE γ RAY FROM K^{40} DECAY

Berkeley, California

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Submitted to Physical Review Letters

UCRL-17107
Preprint

UNIVERSITY OF CALIFORNIA

Lawrence Radiation Laboratory
Berkeley, California

AEC Contract No. W-7405-eng-48

PRECISE MEASUREMENT OF THE ENERGY OF THE γ RAY FROM K^{40} DECAY

Alan R. Smith and Francis M. Miller

September 2, 1966

Precise Measurement of the Energy of the γ Ray from K^{40} Decay

Alan R. Smith and Francis M. Miller

Lawrence Radiation Laboratory
University of California
Berkeley, California

September 2, 1966

We have used a Ge(Li) semiconductor γ-ray spectrometer with a 1600-channel analyzer to obtain a precise measurement of the energy of the γ ray which accompanies one branch of K^{40} decay. We find the value to be: 1459.6 keV with an estimated error of 0.2 keV.

Energy calibration of the system in the region of interest was determined precisely using known γ-ray energies of 1293.3 keV and 1507.5 keV from In^{116m} and 1172.8 keV and 1332.5 keV from Co^{60}.

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