

¹⁶⁵Gd

¹⁶⁵Gd was observed in 1998 by Ichikawa et al. as described in “Identification of ¹⁶¹Sm and ¹⁶⁵Gd” (1998Ic02). ²³⁸U targets were bombarded with 20 MeV protons from the JAERI tandem accelerator facility. ¹⁶⁵Gd was separated with a gas-jet coupled thermal ion source system in the JAERI-ISOL. Beta- and gamma-rays were measured with plastic scintillator and Ge detectors, respectively. “[The figure] shows the decay curves of the β -coincident Tb K _{$\alpha_1+\alpha_2$} x rays and Tb K _{$\beta_1+\beta_2$} + 50.3 keV γ ray counts. The respective half-lives were measured to be 11.2 \pm 2.3 s and 9.3 \pm 2.3 s. The average of these two gives the half-life of the β decay of ¹⁶⁵Gd, 10.3 \pm 1.6 s.”

Adapted from reference (2013Ma01)

1998Ic02 S. Ichikawa, K. Tsukada, I. Nishinaka, Y. Hatsukawa *et al.*, Phys. Rev. C **58**, 1329 (1998).

2013Ma01 E. May and M. Thoennessen, At. Data Nucl. Data Tables **99**, 1 (2013).

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