Gd(^{56}Fe,^{56}Fe′γ) 2009Ea01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huo Junde, Huo Su, Yang Dong	NDS 112, 1513 (2011)	29-Oct-2009

Coulomb excitation and transient-field technique.
See also 2009Ea02, same authors As 2009Ea01.
E=110 MeV, target=Gd foil of 3.4 mg/cm^2 with a front layer of copper of thickness 0.03 mg/cm^2 and a back copper layer of thickness 6 mg/cm^2 and finally a layer of 0.6 mg/cm^2 thick carbon was added at the front. The target was cooled to ≈5K. External magnetic field of 0.09T was applied to magnetize Gd layer of the target. The γ rays were measured in coincidence with scattered carbon ions using four HPGe detectors for γ rays and array of three silicon photodiode detectors for carbon ions. Particle-γ angular correlations were measured using two NaI(Tl) and two Ge detectors. The g factor of the first 2$^+$ state was measured relative to the g-factor of the 136, 5/2$^-$ state in ^{57}Fe.

^{56}Fe Levels

E(level)	Jπ	Comments
0	0$^+$	
847	2$^+$	g=+0.504 63 (2009Ea01) at low field, g=+0.40 *15* at high field. Using the two literature values from radioactivity measurements, 2009Ea01 recommend an adopted value of +0.509 *53*, the same value is listed in authors′ companion paper 2009Ea02.

γ(^{56}Fe)

E_γ	E_i(level)	J^π_i	E_f	J^π_f
847	847	2$^+$	0	0$^+$

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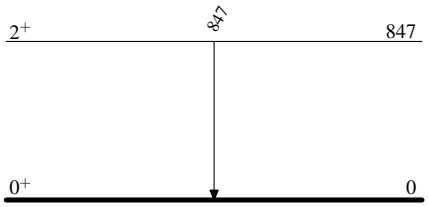
Level Scheme



$^{56}_{26}Fe_{30}$