Coulomb excitation 1999Ma06,1982Jo04,1970Be36

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin	NDS 114, 1497 (2013)	31-Aug-2013

1999Ma06 E(^{32}S)=100 MeV, E(^{58}Ni)=180, 212.5 MeV.
1982Jo04 E(^{40}Ar)=147.2 MeV.
1970Be36 E(α)=10 MeV, E(^{16}O)=36 MeV.

^{152}Gd Levels

E(level)	J^{π} †	$T_{1/2}$ ‡	Comments
0.0	0^+		
344.3	2^+	32.0 ps *27*	B(E2)↑=1.97 *13* (1970Be36) g/g(^{156}Gd)=1.24 *12* (1970Be36). $T_{1/2}$: Weighted average of 34.2 ps *15* from Doppler-shift recoil-distance (1982Jo04) and 28.6 ps *19* from B(E2), using α=0.0397 *6* and Eγ=344.2785.
615.3	0^+	37 ps *8*	
755.3	4^+	7.3 ps *4*	g/g(2^+)=1.10 24 (1999Ma06) (transient field).
930.6	2^+	7.3 ps *6*	
1226.8	6^+	2.5 ps *5*	g/g(344 2^+)=0.8 7 (1999Ma06) (transient field).

† From Adopted Levels.
‡ Measured by Doppler-shift recoil-distance method (1982Jo04).

γ(^{152}Gd)

E_γ †	E_i(level)	J^{π}_i	E_f	J^{π}_f	Mult. ‡	α #	Comments
271.0	615.3	0^+	344.3	2^+	E2	0.0827	
344.3	344.3	2^+	0.0	0^+	E2	0.0397	
411.0	755.3	4^+	344.3	2^+	E2	0.0238	
471.5	1226.8	6^+	755.3	4^+	E2	0.0163	
586.3	930.6	2^+	344.3	2^+	E2+M1+E0	0.0243 *9*	α: from adopted gammas.

† From 1982Jo04.
‡ From adopted gammas.
# Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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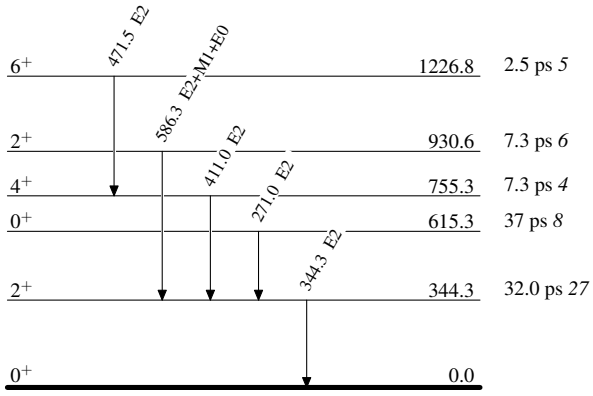
Level Scheme



$^{152}_{64}Gd_{88}$