Adopted Levels, Gammas

History Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109,1103 (2008)	1-Mar-2008

Q(β^-)=4.70×10^3 *7*; S(n)=5.39×10^3 *syst*; S(p)=8.7×10^3 *syst*; Q(α)=−1.61×10^3 *10* 2012Wa38
Note: Current evaluation has used the following Q record 4695 70 *5170* syst 8580 syst-1540 syst 2003Au03,2007Ha57.
Uncertainty in S(n), S(p), Q(α) is 220, 510 and 310, respectively (2003Au03).
Q(β^-): 4695 *70* from 2007Ha57 (see also 2006HaZT) cf. 4830 *100* from 2003Au03. Uncertainty includes statistical uncertainty and 60-keV systematic uncertainty from the Fermi-Kurie plot method.
Production: ^{238}U(p,F) E=15.5 MeV, Gas-jet coupled JAERI-ISOL (1996Ic01,2005Ic02).

^{166}Tb Levels

Cross Reference (XREF) Flags

A ^{166}Gd β^- decay

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	(2$^-$)[‡]	25.1 s *21*	A	%β^-=100 T$_{1/2}$: weighted average of 21 s *6* (1996Ic01; β(t) and X(t)), 25.6 s *22* (2005Ic02; γ(t)).
40.00 *16*	(−)		A	J$^\pi$: 40γ not E1 to (2$^-$); 40γ in prompt coincidence with γ feeding the 40 level.
158.80 *16*			A	
694.8 *3*			A	
1015.50 *23*			A	

[†] From least-squares fit to Eγ.
[‡] The g.s. configuration is likely to Be (π 3/2[411])⊗(ν 1/2[521]) based on J^π(g.s.)=3/2$^+$ for neighboring Tb isotopes and J^π(g.s.)=1/2$^-$ for the N=101 isotones ^{169}Er, ^{171}Yb and ^{173}Hf, so J^π=1$^-$ or 2$^-$ is expected for ^{166}Tb; log $f^{1u}t$<8.5 to 2$^+$ and (3$^-$), log ft=6.8 (log $f^{1u}t$=8.5 *3*) to 4$^+$.

γ(^{166}Tb)

E$_i$(level)	J$_i^\pi$	E$_\gamma$[†]	I$_\gamma$[†]	E$_f$	J$_f^\pi$	Comments
40.00	(−)	40.0 *2*	100	0.0	(2$^-$)	Mult.: not E1 from intensity balance at the 40 level in β^- decay. Additional information 1.
158.80		118.8 *2*	100 *27*	40.00	(−)	
		158.8 *2*	100 *27*	0.0	(2$^-$)	
694.8		536.0 *2*	100	158.80		
1015.50		975.5 *3*	84 *21*	40.00	(−)	
		1015.5 *3*	100	0.0	(2$^-$)	

[†] From ^{166}Gd β^- decay.

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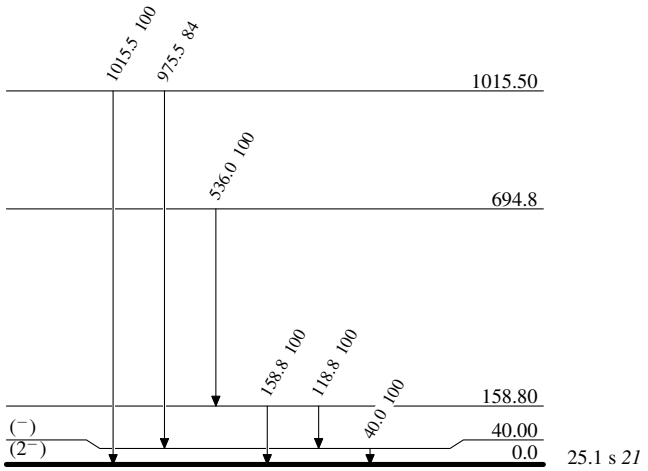
Level Scheme

Intensities: Relative photon branching from each level



$^{166}_{65}Tb_{101}$