Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin	NDS 122, 377 (2014)	1-Sep-2014

Q(β^-)=−5250 *SY*; S(n)=7850 *SY*; S(p)=3969 *21*; Q(α)=7994 *9* 2012Wa38
The systematics uncertainties are 240 and 120 for Q(β^-) and S(n), respectively.

^{248}Fm Levels

Cross Reference (XREF) Flags

A ^{252}No α decay
B ^{202}Hg(^{48}Ca,2nγ)

E(level)‡	J$^\pi$#	$T_{1/2}$	XREF	Comments
0†	0$^+$	34.5 s *12*	AB	%α=95 *5*; %SF=0.10 *5*; %ε=5 *5* %α: from 100−%ε. 1993An10 measured %α=93 *17*. %SF: from $T_{1/2}$(SF)=10 h *5* (1967Nu01). %ε: from the assumption that log *ft*>6 for any ε branch, one has %ε varying from <0.7% for decay to the expected 0$^+$ level At or near the g.s., to <0.08 for decay to states At or near 1000 keV. The evaluator adopts a conservative upper limit of 10% for the total ε feeding (%β^+ will be negligible). $T_{1/2}$: weighted average of 32.3 s *15* from 2010KeZY In ^{202}Hg(^{48}Ca,2nγ) and 35.1 s *8* from 2011Ga19 In ^{252}No α decay. $T_{1/2}$: from ^{202}Hg(^{48}Ca,2nγ). Others: 24 s *7* (1973Es01), 32 s *6* (1970Dr05), and 36 s *4* (1966Ak01). $T_{1/2}$(SF)=10 h *6* (1967Nu01). Recommended by 2000Ho27. Other:≈60 h (1970Dr05).
46† *1*	2$^+$		AB	
152†	4$^+$		B	
317.2† *3*	6$^+$		B	
538.6† *4*	8$^+$		B	
813.3† *5*	10$^+$		B	
>1074?		10.1 ms *6*		E(level),J$^\pi$: see ^{202}Hg(^{48}Ca,2nγ) for a discussion of the energy and possible configuration assignment for this isomer.
1137.3† *6*	12$^+$		B	
1507.7† *7*	14$^+$		B	
1921† *2*	16$^+$		B	
2372† *2*	18$^+$		B	

† Band(A): K$^\pi$=0$^+$ g.s. band.
‡ From the Eγ data relative to E=152 for the 4$^+$ level.
# Member of the g.s. rotational band.

Adopted Levels, Gammas (continued)

$\gamma(^{248}Fm)$

E_i(level)	J_i^π	E_γ[†‡]	E_f	J_f^π	Mult.	α[#]
46	2^+	(46 *1*)	0	0^+	[E2]	1.05×10^3 *12*
152	4^+	(106 *1*)	46	2^+	[E2]	20.2 *10*
317.2	6^+	165.2 *3*	152	4^+	[E2]	2.88 *5*
538.6	8^+	221.4 *4*	317.2	6^+	[E2]	0.905 *14*
813.3	10^+	274.7 *3*	538.6	8^+	[E2]	0.419 *6*
1137.3	12^+	324.0 *3*	813.3	10^+	[E2]	0.246 *4*
1507.7	14^+	370.4 *3*	1137.3	12^+	[E2]	0.165 *3*
1921	16^+	413 *1*	1507.7	14^+	[E2]	0.122 *2*
2372	18^+	451 *1*	1921	16^+	[E2]	0.0967 *15*

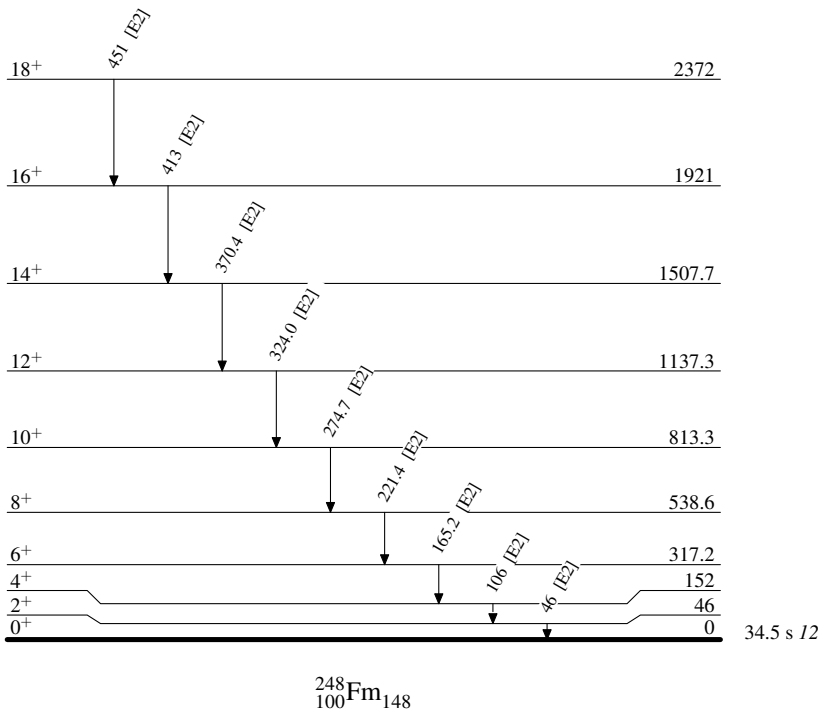
† For unplaced γ's see $^{202}Hg(^{48}Ca,2n\gamma)$.

‡ From $^{202}Hg(^{48}Ca,2n\gamma)$. The 46 and 106 transitions are not observed In that reaction. The energies are from a fit to a rotational band formula. See the source dataset for details and for unplaced γ's. E$\gamma(2^+$ to $0^+)$=44 *10* In α decay.

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.

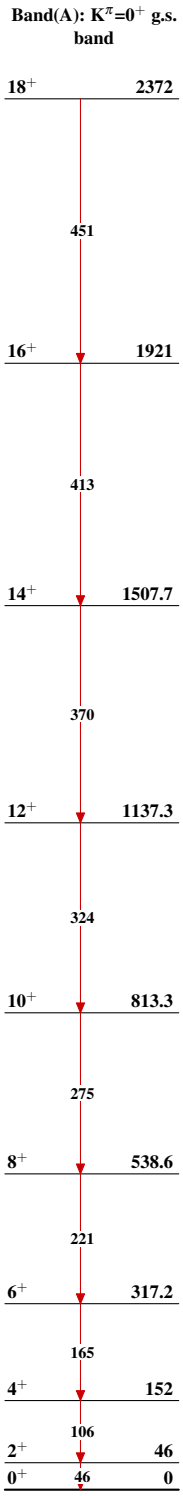
Adopted Levels, Gammas

Level Scheme



$^{248}_{100}Fm_{148}$

Adopted Levels, Gammas



$^{248}_{100}Fm_{148}$