Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 204,374 (2025)	30-Jun-2024

Q(β^-)=−5050 *syst*; S(n)=7850 *syst*; S(p)=3970 *21*; Q(α)=7995 *8* 2021Wa16
ΔQ(β^-)=180, ΔS(n)=180 (syst,2021Wa16).
S(2n)=14436 *16*, S(2p)=6770 *9*, Q(ε)=1600 *50* (syst) (2021Wa16).

^{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[†]	0$^+$	34.5 s *12*	AB	%α<100; %SF=0.10 *5*; %ε<7 %SF: from T$_{1/2}$(SF)=10 h *5* (1967Nu01). %α: Measured by 1993An10. T$_{1/2}$: weighted average of 32.3 s *15* from decay curve measurement (2010KeZY) and 35.1 s *8* from evaporation residual-$\alpha\alpha$ correlations measurement (2011Ga19).
46[†] *1*	(2$^+$)		AB	
152[†] *2*	(4$^+$)		B	
317.2[†] *3*	(6$^+$)		B	
538.6[†] *4*	(8$^+$)		B	
813.3[†] *5*	(10$^+$)		B	
≈1080?		10.1 ms *6*	B	%IT=?; %α=?; %ε=? E(level): Firm assignment of this isomer was not possible due to low statistics which did not allow construction of its decay path (2010KeZY). E(level): From the unplaced 904γ in 2010KeZY which is assumed to follow the decay of the 10.1-ms isomer. This transition is in coincidence with electrons with energy up to ≈180 keV. No definitive configuration assignment can be made. See 2010KeZY for a discussion of several possibilities. T$_{1/2}$: From 2010KeZY in ^{202}Hg(^{48}Ca,2nγ).
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.
[#] Member of the g.s. rotational band.

Adopted Levels, Gammas (continued)

$\gamma(^{248}Fm)$

E_i(level)	J^π_i	E_γ †	I_γ	E_f	J^π_f
46	(2+)	(46 *1*)		0.0	0+
152	(4+)	(106 *1*)		46	(2+)
317.2	(6+)	165.2 *3*	100	152	(4+)
538.6	(8+)	221.4 *4*	100	317.2	(6+)
813.3	(10+)	274.7 *3*	100	538.6	(8+)
1137.3	(12+)	324.0 *3*	100	813.3	(10+)
1507.7	(14+)	370.4 *3*	100	1137.3	(12+)
1921	(16+)	413 *1*	100	1507.7	(14+)
2372	(18+)	451 *1*	100	1921	(16+)

† 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.

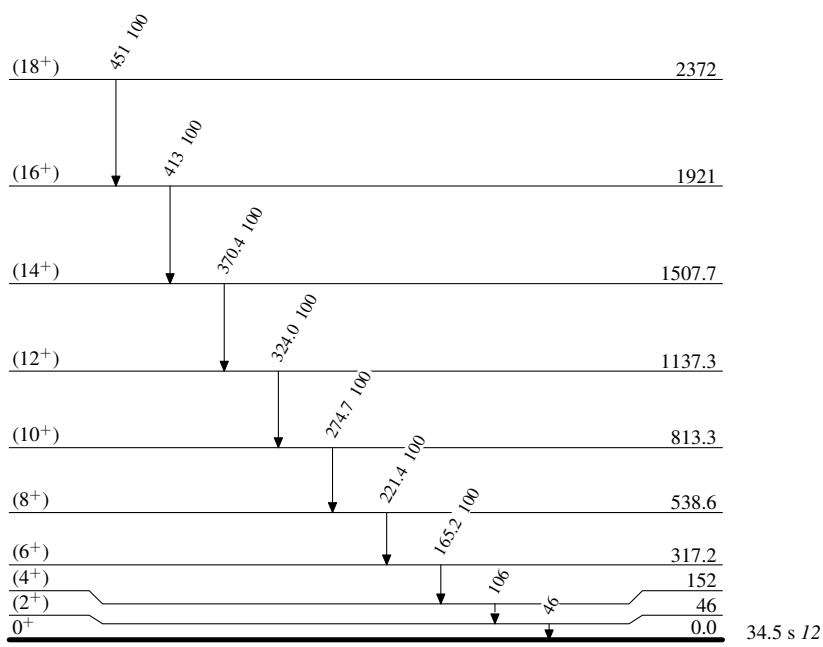
Adopted Levels, Gammas

Legend

Level Scheme

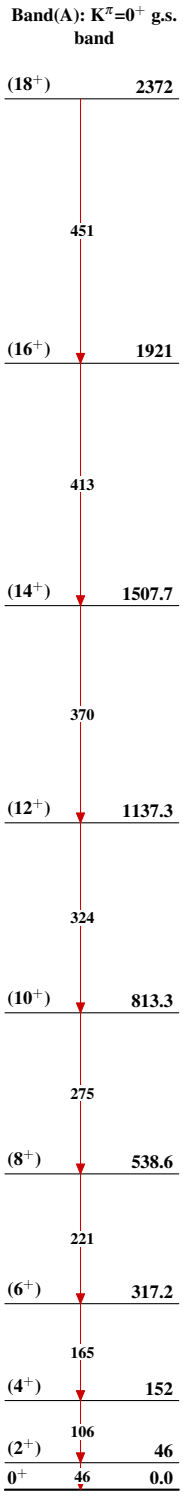
Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



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

Adopted Levels, Gammas



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