Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 198,449 (2024)	31-Jul-2022

Q(β^-)=−5920 *syst*; S(n)=8070 *syst*; S(p)=3410 *syst*; Q(α)=8379 *5* 2021Wa16
ΔQ(β^-)=260, ΔS(n)=200, ΔS(p)=170 (syst,2021Wa16).
S(2n)=14920 *200* (syst), S(2p)=5865 *14* (2021Wa16).
Other reactions: ^{232}Th(^{20}Ne,6n), ^{232}Th(^{22}Ne,8n) E=130-150 MeV (1998Sa08).

Theoretical structure calculations:
Q(α), $T_{1/2}(\alpha)$ and $T_{1/2}$ s.f.
2022Az01,2022Ro12,2022Wa06,2022Xu04,2021Ch44,2021El09,2021Ka17, 2021Ko21,2021He09,2019Ak07,2019Sr04,2018Cl01,2017Da09, 2015Ba24, 2013Ra05,2013Se17,2010Sa09.
Fission barrier heights:
2021Po06,2018Po05, 2010Ad04, 2010Sv01, 2009Mo18, 2009St14, 2008Sa24, 2008Xu06, 2007Po01, 2006St04, 2005Xu01, 2004Bo34, 2004Ro01, 2003Po03, 2001Mo13, 1996Lo08, 1992Bh03.
Energy Levels:
2016Li37,2002Pr01.
Potential energy surfaces for fission:
1976Iw02.
α decay systematics:
2010Is01, 2010Ni09, 2010Wa23, 2009Ni06, 2009Sa25, 2009Sa45, 2008Do12, 2007Pe30, 2005Zh24, 2004Gm02, 2003Re32, 2002Re31, 2001Mo07, 2000Po25, 1993Bu09, 1991Bu05, 1987Po06.
Deformation parameters:
1991Pa11.

^{246}Fm Levels

Cross Reference (XREF) Flags

A ^{246}Md ε decay (4.4 s)
B ^{208}Pb(^{40}Ar,2nγ)

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	XREF	Comments
0.0	0$^+$	1.53 s *4*	AB	%α=93.2 *6*; %SF=6.4 *5*; %ε+%β^+<1.3 $T_{1/2}$: From weighted average of 1.50 s *+8−7* (time distribution between implanted recoil nuclei and fission-fragments: 2022Is05), 1.6 s *2* (α(recoil) correlated decay curve: 2012Pi05), 1.54 s *4* (time distribution between implanted nuclei and α particles 2011Ve03) in (^{40}Ar,2nγ). %α,%ε+%β^+: From 2011Ve03. %SF: From weighted average of 6.1 % *5*(2022Is05), 6.8 % *6* (2011Ve03), 5 % *3* (2010Sv01).
0+x			A	%εSF>10 (2010An08)
47?[#] *1*	(2$^+$)		B	Additional information 1.
155?[#] *2*	(4$^+$)		B	Additional information 2.
322?[#] *1*	(6$^+$)		B	
546?[#] *1*	(8$^+$)		B	
824?[#] *2*	(10$^+$)		B	
1151?[#] *2*	(12$^+$)		B	
1523?[#] *3*	(14$^+$)		B	
1937?[#] *4*	(16$^+$)		B	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{246}Fm Levels (continued)

† From Eγ data.
‡ From g.s. band.
# Band(A): g.s. band.

γ(^{246}Fm)

E_i(level)	J_i^π	E_γ †	I_γ	E_f	J_f^π
47?	(2$^+$)	(47)		0.0	0$^+$
155?	(4$^+$)	(108)		47?	(2$^+$)
322?	(6$^+$)	167 *1*	100	155?	(4$^+$)
546?	(8$^+$)	224 *1*	100	322?	(6$^+$)
824?	(10$^+$)	278 *1*	100	546?	(8$^+$)
1151?	(12$^+$)	327 *1*	100	824?	(10$^+$)
1523?	(14$^+$)	372 *2*	100	1151?	(12$^+$)
1937?	(16$^+$)	414 *2*	100	1523?	(14$^+$)

† From (^{40}Ar,2nγ).

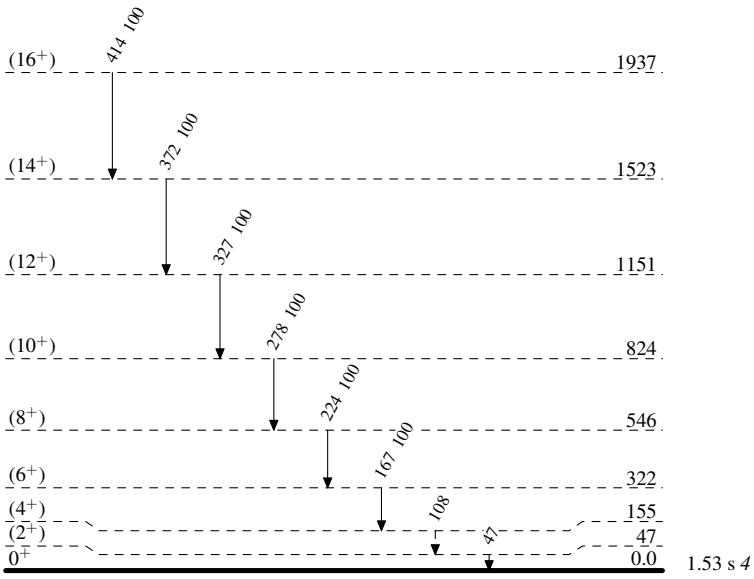
Adopted Levels, Gammas

Legend

Level Scheme

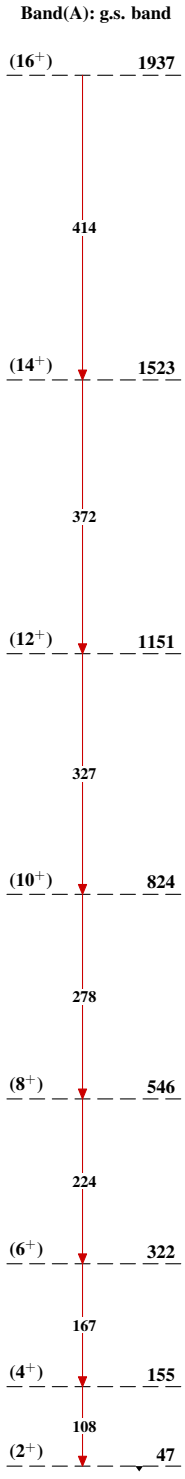
Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{246}_{100}Fm_{146}$

Adopted Levels, Gammas



$^{246}_{100}Fm_{146}$