^{186}Os(α,4nγ), ^{174}Yb(^{16}O,4nγ) 1975De21,1975Pi02,1979Ri08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. C. Batchelder and A. M. Hurst, M. S. Basunia	NDS 183, 1 (2022)	1-Mar-2022

Others: 1967Bu02, 1967Bu18, 2002LaZY.
No change compared to previous evaluation (2003Ba44).
Other reactions ^{181}Ta(^{11}B,6nγ), ^{175}Lu(^{14}N,3nγ), ^{169}Tm(^{19}F,2nγ), ^{197}Au(^{12}C,X).
1967Bu02, 1967Bu18: E(^{11}B)≈85 MeV, E(^{14}N) and E(^{19}F) unstated; measured Eγ, Iγ, Ice. Observed cascade of E2 gammas from 14$^+$ member of g.s. band, also a 551γ whose placement is unknown.
1975De21: E(^{16}O)=95 MeV; measured Eγ, Iγ, $\gamma(\theta)$.
1975Pi02: E(α)=28-50 MeV; measured Eγ, Iγ, $\gamma\gamma$ coin (prompt and delayed), $\gamma(\theta)$, excit.
1979Ri08: E(^{16}O)=77-88 MeV; measured Eγ, Ice, ce(t).
2002LaZY: ^{197}Au(^{12}C,X), E=30 MeV/nucleon; measured Eγ, Iγ.

^{186}Pt Levels

E(level)†	J$^\pi$‡	T$_{1/2}$	Comments
0.0	0$^+$		
191.5 *2*	2$^+$		
490.1 *4*	4$^+$		
877.1 *5*	6$^+$		
1341.4 *6*	8$^+$		
1691.8 *9*	(5$^-$)		
1856.0 *9*	10$^+$		
1951.5 *9*	(7$^-$)	85 ps *10*	T$_{1/2}$: from ce(t) (1979Ri08).
2194.5 *14*	(8$^-$)	4.6 ns	T$_{1/2}$: from fig. 8 of 1979Ri08.
2334.0 *12*	12$^+$	<50 ps	T$_{1/2}$: from 1979Ri08; based on absence of delayed transitions.
2822.9 *13*	(14$^+$)		

† From a least-squares fit of Eγ to the level scheme, assuming 1-keV uncertainty when none has been given explicitly by the authors (viz., Eγ from 1979Ri08).
‡ From Adopted Levels.

γ(^{186}Pt)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.‡	δ	Comments
191.5 *2*	100 *7*	191.5	2$^+$	0.0	0$^+$	E2		
243#		2194.5	(8$^-$)	1951.5	(7$^-$)	M1(+E2)	≤0.46	Mult.: α(K)exp=0.54 *12* from K/L=6.2 *8* (read from fig. 6 of 1979Ri08) and K/K(299)=5.8 *8* from delayed intensities from 4.6 ns isomer (1979Ri08), assuming I(γ+ce)(243)=I(γ+ce)(299), α(M+..)(243)/α(L)(243)≈0.3 and mult(299γ)=E2. δ(M1,E2)≤0.46 from K/L.
260#		1951.5	(7$^-$)	1691.8	(5$^-$)	E2		
298.6 *3*	100 *7*	490.1	4$^+$	191.5	2$^+$	E2		
387.0 *3*	80 *6*	877.1	6$^+$	490.1	4$^+$	E2		
464.3 *4*	68 *7*	1341.4	8$^+$	877.1	6$^+$	E2		
478.0 *8*	46 *14*	2334.0	12$^+$	1856.0	10$^+$	E2		
488.9 *5*	24 *2*	2822.9	(14$^+$)	2334.0	12$^+$	E2		
514.6 *6*	56 *6*	1856.0	10$^+$	1341.4	8$^+$	E2		
1074#@		1951.5	(7$^-$)	877.1	6$^+$			
1202#@		1691.8	(5$^-$)	490.1	4$^+$			

Continued on next page (footnotes at end of table)

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$\gamma(^{186}Pt)$ (continued)

† From 1975De21, unless noted otherwise. Relative Iγ data from the (^{16}O,4nγ) reaction at 95 MeV are given here.
‡ From $\gamma(\theta)$ measurements of 1975De21 and 1975Pi02, except as noted; stretched Q transitions within g.s. band are assumed to be E2.
# From 1979Ri08.
@ Placement of transition in the level scheme is uncertain.

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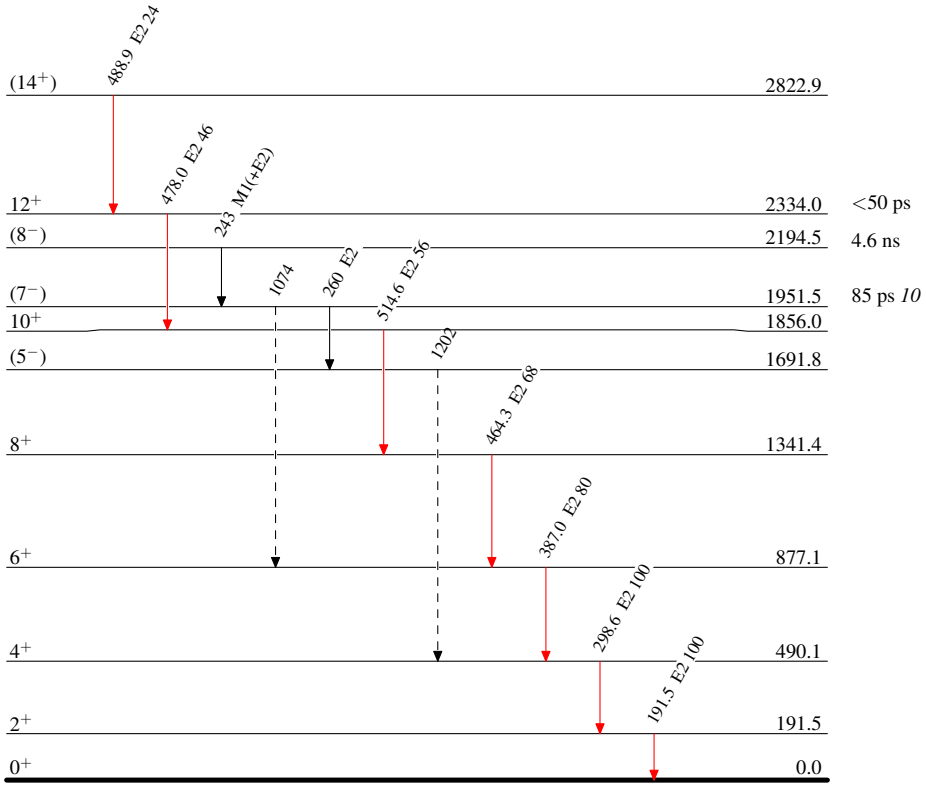
Level Scheme

Intensities: Relative Iγ for (^{16}O,4nγ) At 95 MeV.

Legend
Iγ < 2%×Iγ^{max}
Iγ < 10%×Iγ^{max}
Iγ > 10%×Iγ^{max}
γ Decay (Uncertain)



$^{186}_{78}Pt_{108}$