

$^{186}\text{Os}(\alpha, 3n\gamma)$ 1975Pi02, 1976Pi03, 1978DaZC

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110, 999 (2009)	1-Nov-2008

1975Pi02:1976Pi03: Target: 62% enriched ^{186}Os ; Projectile: α , E=28-50 MeV; Detectors: a Ge(Li) at 55° and a low energy photon Ge(Li) at 125° with respect to the beam direction; Measured: prompt and delayed $E\gamma$, $\gamma\gamma$ coin, $\gamma\gamma(\theta)$, γ -ray angular distribution, $T_{1/2}$.

1978DaZC: Target ^{186}Os ; Projectile: α , E=not given; Measured: prompt and delayed $E\gamma$, $\gamma\gamma(t)$, $\gamma(\theta)$.

All references are from the same group.

 ^{187}Pt Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0.0 [‡]	3/2 ⁻		
57.11 [‡] 14	(7/2 ⁻)		
174.38 [‡] 22	(11/2 ⁺)	311 μs 15	Additional information 1. $T_{1/2}$: Determined by 1976Pi03 from 117.3 $\gamma(t)$.
203.4 8	(13/2 ⁺)		
465.4 8	(15/2 ⁺)		
505.5 11	(17/2 ⁺)		
903.3 11	(19/2 ⁺)		
928.4 13	(17/2 ⁺)		
943.7 13	(21/2 ⁺)		
1212.5 15	(19/2 ⁺)		
1400.4 17			
1454.0 13	(23/2 ⁺)		
1497.7 16	(25/2 ⁺)		
1658.5 13	(21/2 ⁻)		
1840.5 17	(23/2 ⁻)		
2093.0 17	(27/2 ⁺)		
2144.7 19	(29/2 ⁺)		
2175.5 20	(27/2 ⁻)		

[†] From a least-squares adjustment to the γ -ray energies, assuming $\Delta E=1$ keV for all the γ -rays.

[‡] From Adopted Levels.

 $\gamma(^{187}\text{Pt})$

E_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	δ	Comments
(29)	203.4	(13/2 ⁺)	174.38	(11/2 ⁺)			
40 [‡] @	505.5	(17/2 ⁺)	465.4	(15/2 ⁺)			
117.3	174.38	(11/2 ⁺)	57.11	(7/2 ⁻)	M2+E3	0.47 19	E_γ : from 1976Pi03. Mult.: $\alpha(K)\text{exp}=18.4$ from I(117 γ) and I(delayed K x rays), assuming that all delayed platinum K x rays were due to conversion of the 117.3 γ (1976Pi03).
182	1840.5	(23/2 ⁻)	1658.5	(21/2 ⁻)			
262 [‡]	465.4	(15/2 ⁺)	203.4	(13/2 ⁺)			
291 [‡]	465.4	(15/2 ⁺)	174.38	(11/2 ⁺)			
302	505.5	(17/2 ⁺)	203.4	(13/2 ⁺)			
335	2175.5	(27/2 ⁻)	1840.5	(23/2 ⁻)			
398 [‡]	903.3	(19/2 ⁺)	505.5	(17/2 ⁺)			
438 [‡]	903.3	(19/2 ⁺)	465.4	(15/2 ⁺)			

Continued on next page (footnotes at end of table)

$^{186}\text{Os}(\alpha, 3n\gamma)$ [1975Pi02](#), [1976Pi03](#), [1978DaZC](#) (continued) $\gamma(^{187}\text{Pt})$ (continued)

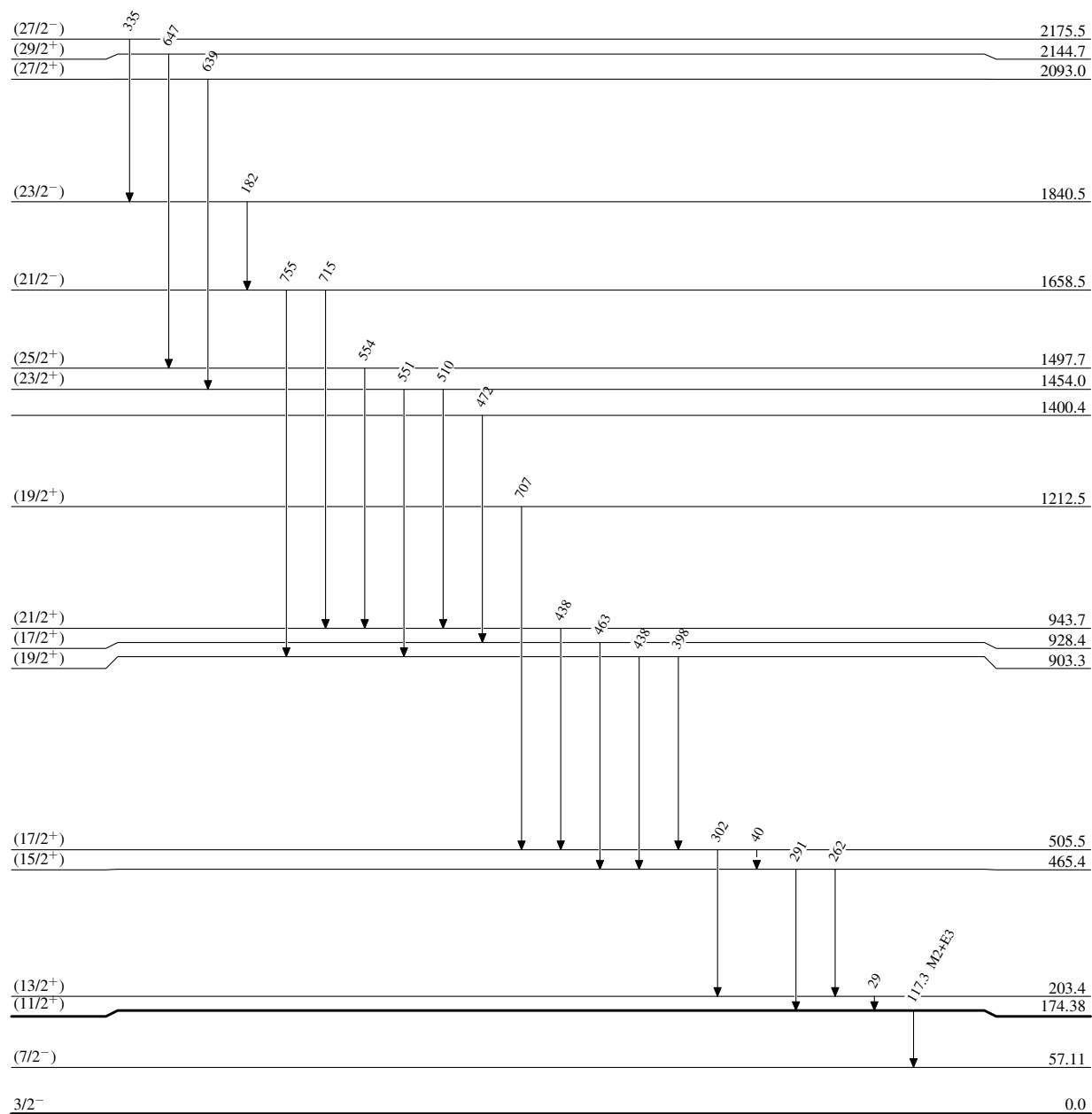
E_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π
438	943.7	(21/2 ⁺)	505.5	(17/2 ⁺)	639 [‡]	2093.0	(27/2 ⁺)	1454.0	(23/2 ⁺)
463 [‡]	928.4	(17/2 ⁺)	465.4	(15/2 ⁺)	647	2144.7	(29/2 ⁺)	1497.7	(25/2 ⁺)
472 [‡]	1400.4		928.4	(17/2 ⁺)	707 [#]	1212.5	(19/2 ⁺)	505.5	(17/2 ⁺)
510 [‡]	1454.0	(23/2 ⁺)	943.7	(21/2 ⁺)	715	1658.5	(21/2 ⁻)	943.7	(21/2 ⁺)
551 [‡]	1454.0	(23/2 ⁺)	903.3	(19/2 ⁺)	755 [‡]	1658.5	(21/2 ⁻)	903.3	(19/2 ⁺)
554	1497.7	(25/2 ⁺)	943.7	(21/2 ⁺)					

[†] From [1975Pi02](#), except otherwise noted.[‡] From [1978DaZC](#).[#] Placement of the 707 γ is from (33/2⁺) state at 2851 keV, considering 13/2⁺ state to be at 203 keV ([1975Pi02](#)). This γ -ray is placed from (19/2⁺) state in [1978DaZC](#) consistent with the $^{173}\text{Yb}(^{18}\text{O}, 4n\gamma)$ and $^{181}\text{Ta}(^{11}\text{B}, 5n\gamma)$ datasets.[@] Placement of transition in the level scheme is uncertain.

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Legend

Level Scheme

-----► γ Decay (Uncertain)

311 μ s 15

 $^{187}_{78}\text{Pt}_{109}$