

$^{186}\text{Os}(n,\gamma)$ **1974Pr15,1974NeZY**

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

1974Pr15: Target: 37.9% enriched ^{186}Os ; E = thermal; Detector: a Ge(Li) detector of 3 keV resolution at 600 keV; Measured: E_γ , γ spectra for $100 \text{ keV} \leq E_\gamma \leq 1100 \text{ keV}$ were investigated.

1974NeZY: Target: 37.9% enriched ^{186}Os ; E = thermal; Detector: a Ge(Li) detector of 3 keV resolution; Provides E_γ and I_γ for E_γ range of 146.4- to 1013.3-keV.

^{187}Os Levels

$E(\text{level})^\dagger$	$J^\pi\#$	$E(\text{level})^\dagger$	$J^\pi\#$	$E(\text{level})^\dagger$	$J^\pi\#$	$E(\text{level})^\dagger$	$J^\pi\#$
0.0	1/2 ⁻	187.0 9	5/2 ⁻	585.5 10	5/2 ⁻	725.5 9	3/2 ⁻
9.3 9	3/2 ⁻	190.1 13	7/2 ⁻	595.1 9	1/2 ⁻ ,3/2 ⁻	933.8 10	5/2 ⁻ ,7/2 ⁻
73.7 8	3/2 ⁻	333.0 10	(7/2 ⁻)	641.5 12		1111.3 11	1/2 ⁻ ,3/2 ⁻
74.7 10	5/2 ⁻	501.4 8	3/2 ⁻	663.7 10	(3/2 ⁻ ,5/2 ⁻)	(6291.6 [‡] 8)	1/2 ⁺ @
100.6 11	7/2 ⁻	536.3 8		711.0 15	5/2 ⁻		

[†] From a least-squares adjustment to the γ -ray energies assuming $\Delta E=1 \text{ keV}$ for all γ -rays. Primary γ -rays from **1974Pr15**.

[‡] $S(n) (^{187}\text{Os}) = 6290.0 6$.

[#] From Adopted Levels.

@ s-wave neutron capture.

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

E_γ^\dagger	I_γ^\dagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π
146.4	5.7	333.0	(7/2 ⁻)	187.0	5/2 ⁻
162.5	8.9	663.7	(3/2 ⁻ ,5/2 ⁻)	501.4	3/2 ⁻
177.4	92	187.0	5/2 ⁻	9.3	3/2 ⁻
180.8	43	190.1	7/2 ⁻	9.3	3/2 ⁻
^x 203.7	4.7				
^x 208.2	3.1				
^x 221.3	5.2				
223.9	15	725.5	3/2 ⁻	501.4	3/2 ⁻
^x 225.8	5.8				
^x 241.4	10.3				
252.8	3.8	585.5	5/2 ⁻	333.0	(7/2 ⁻)
^x 255.2	10.6				
258.3	47	333.0	(7/2 ⁻)	74.7	5/2 ⁻
^x 262.6	5.0				
^x 277.8	10.6				
^x 298.5	14.5				
^x 299.8	31				
^x 306.1	6.4				
313.8	20	501.4	3/2 ⁻	187.0	5/2 ⁻
^x 315.9	12				
^x 344.5	15				
348.7	11	933.8	5/2 ⁻ ,7/2 ⁻	585.5	5/2 ⁻
^x 355.4	8.4				
^x 384.9 [‡]	20 [#]				
400.8 [‡]	100 [#]	501.4	3/2 ⁻	100.6	7/2 ⁻
^x 412.4	25				
^x 421.4 [‡]	16 [#]				

Continued on next page (footnotes at end of table)

$^{186}\text{Os}(n,\gamma)$ **1974Pr15,1974NeZY (continued)** $\gamma(^{187}\text{Os})$ (continued)

E_γ †	I_γ †	$E_i(\text{level})$	J_i^π	E_f	J_f^π
427.1 ‡	102 #	501.4	3/2 ⁻	74.7	5/2 ⁻
^x 439.2	6.0				
^x 442.6	7.8				
448.3	23	1111.3	1/2 ⁻ , 3/2 ⁻	663.7	(3/2 ⁻ , 5/2 ⁻)
454.8 ‡	15 #	641.5		187.0	5/2 ⁻
462.5	9.9	536.3		73.7	3/2 ⁻
485.0	51	585.5	5/2 ⁻	100.6	7/2 ⁻
^x 491.5	31				
501.9 ‡	36 #	501.4	3/2 ⁻	0.0	1/2 ⁻
515.6	30	1111.3	1/2 ⁻ , 3/2 ⁻	595.1	1/2 ⁻ , 3/2 ⁻
522.0	68	595.1	1/2 ⁻ , 3/2 ⁻	73.7	3/2 ⁻
536.3	15	536.3		0.0	1/2 ⁻
^x 563.2	13				
566.5	15	641.5		74.7	5/2 ⁻
576.2	21	585.5	5/2 ⁻	9.3	3/2 ⁻
587.0 ‡	53 #	595.1	1/2 ⁻ , 3/2 ⁻	9.3	3/2 ⁻
590.5	17	663.7	(3/2 ⁻ , 5/2 ⁻)	73.7	3/2 ⁻
610.4 ‡	39 #	711.0	5/2 ⁻	100.6	7/2 ⁻
^x 622.8 ‡	22 #				
651.6 ‡	85 #	725.5	3/2 ⁻	73.7	3/2 ⁻
^x 665.9	30				
^x 671.6	12				
^x 713.0	43				
716.6	19	725.5	3/2 ⁻	9.3	3/2 ⁻
^x 732.3	13				
746.5	16	933.8	5/2 ⁻ , 7/2 ⁻	187.0	5/2 ⁻
^x 776.5	28				
^x 785.8	34				
^x 801.5	16				
^x 822.2	22				
^x 835.7 ‡	30 #				
860.0	19	933.8	5/2 ⁻ , 7/2 ⁻	73.7	3/2 ⁻
^x 977.6	15				
^x 981.9	27				
^x 1013.3	54				
5699	3.5	(6291.6)	1/2 ⁺	595.1	1/2 ⁻ , 3/2 ⁻
6217	6.5	(6291.6)	1/2 ⁺	73.7	3/2 ⁻
6281	1.5	(6291.6)	1/2 ⁺	9.3	3/2 ⁻
6291	1.5	(6291.6)	1/2 ⁺	0.0	1/2 ⁻

† From 1974NeZY.

‡ Multiplet in 1974NeZY.

Total intensity for the multiplet.




^x γ ray not placed in level scheme.

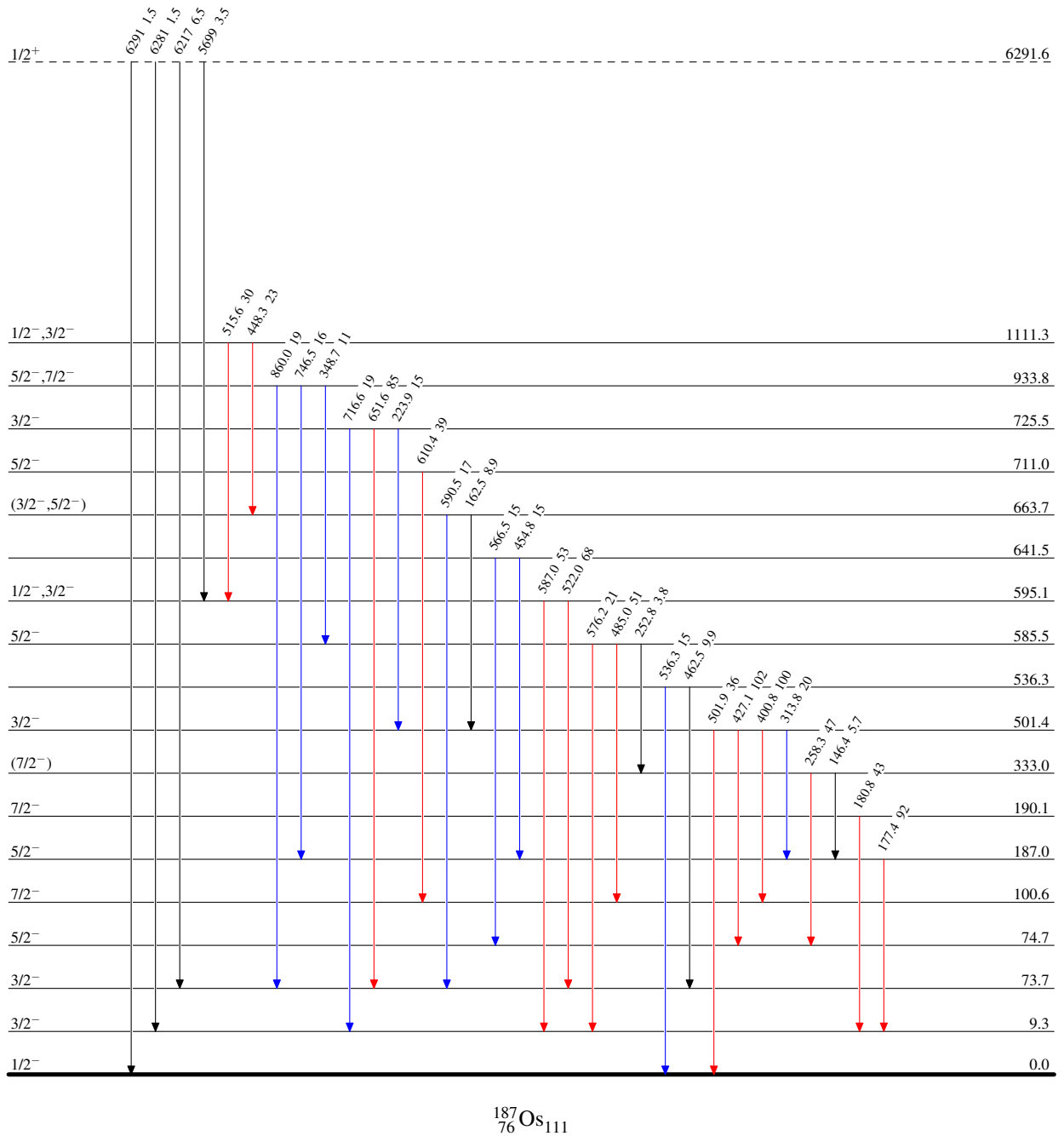
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Level Scheme

Intensities: Relative I_γ

Legend

-  $I_\gamma < 2\% \times I_\gamma^{\max}$
 $I_\gamma < 10\% \times I_\gamma^{\max}$
 $I_\gamma > 10\% \times I_\gamma^{\max}$

 $^{187}_{76}\text{Os}_{111}$