Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	10-Jun-2015

S(n)=9950 *SY*; S(p)=1170 *SY*; Q(α)=6680 *50* 2012Wa38
Estimated uncertainties (2012Wa38): 590 for S(n), 360 for S(p).
S(2n)=22310 *500*, S(p)=410 *360*, Q(εp)=10330 *300* (syst,2012Wa38).
^{163}Os produced and identified by 1981Ho10, 1996Bi07 and 1996Pa01 in various heavy-ion fusion reactions followed by fragment-mass analysis (1996Bi07), recoil-mass separation (1996Pa01) and α-decay measurements.
Additional information 1.

^{163}Os Levels

Cross Reference (XREF) Flags

A ^{164}Ir p decay (70 μs)
B ^{167}Pt α decay (0.78 ms)
C ^{106}Cd(^{60}Ni,3nγ)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	XREF	Comments
0.0[@]	(7/2$^-$)	5.5 ms *6*	ABC	%α≈100; %ε+%β^+=? T$_{1/2}$: from 1996Bi07. Others: 12 ms *+11−7* (1996Pa01); 7.5 ms *+42−20* (2001Ke05). %α: from parent-daughter intensity correlations (1996Bi07). %ε+%β^+<2% from theoretical (1997Mo25) β-decay T$_{1/2}$=0.226 s and α-decay T$_{1/2}$=4.79 ms. J$^\pi$: l=5 proton decay (involving the πh$_{11/2}$ orbital) from a high-spin (probably 9$^+$) state in ^{164}Ir. Probable configuration=νf$_{7/2}$. Systematics (2012Au07) also support 7/2$^-$.
623.7[@] *5*	(11/2$^-$)		C	
1275.1 *7*			C	
1292.2?[#@] *7*	(15/2$^-$)		C	
1992.2?[#@] *9*	(19/2$^-$)		C	
2230.6[@] *10*	(23/2$^-$)		C	

[†] From Eγ data.
[‡] Possible band members based on (7/2$^-$) ground state.
[#] Since ordering of the 238−>700−>669 γ cascade is not established, location of the 1292 and 1992 levels could be different.
[@] Band(A): Band based on (7/2$^-$).

γ(^{163}Os)

E$_i$(level)	J$_i^\pi$	E$_\gamma$	I$_\gamma$	E$_f$	J$_f^\pi$
623.7	(11/2$^-$)	623.7 *5*	100	0.0	(7/2$^-$)
1275.1		651.4 *5*	100	623.7	(11/2$^-$)
1292.2?	(15/2$^-$)	668.5[†] *5*	100	623.7	(11/2$^-$)
1992.2?	(19/2$^-$)	700.0[†] *5*	100	1292.2?	(15/2$^-$)
2230.6	(23/2$^-$)	238.4[†] *5*	100	1992.2?	(19/2$^-$)

[†] Ordering of the 238−>700−>669 γ cascade is not established.

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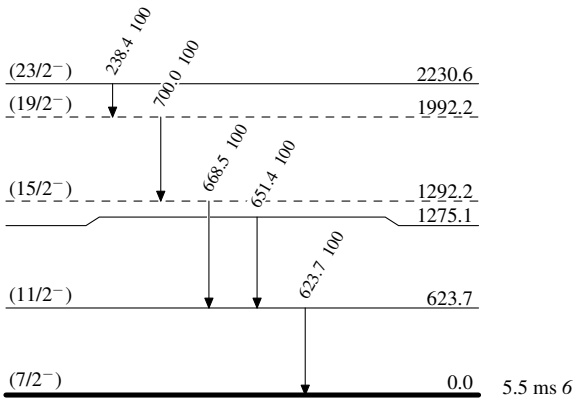
Level Scheme

Intensities: Relative photon branching from each level



$^{163}_{76}Os_{87}$

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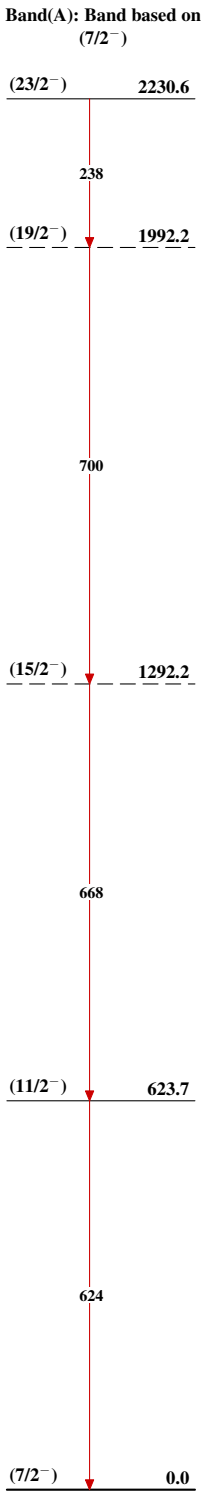

$^{163}_{76}Os_{87}$