Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen[#]	NDS 147, 1 (2018)	30-Nov-2017

Q(β^-)=−13080 *SY*; S(n)=12300 *SY*; S(p)=171×10[1] *15*; Q(α)=6479 *5* 2017Wa10

Estimated uncertainties (syst,2017Wa10): ΔQ(β^-)=350, ΔS(n)=330.

S(2n)=22120 *340* (syst), S(2p)=1000 *150*, Q(εp)=7200 *160* (2017Wa10).

1981Ho10: ^{164}Os produced and identified in ^{110}Cd(^{58}Ni,xnyp), using velocity filter, and ion implantation in Si (surface-barrier and position-sensitive) detectors, followed by the observation of ^{160}W, ^{156}Hf α-daughter activities at the same positions.

Later studies of ^{164}Os decay: 1996Pa01, 1996Bi07.

For theoretical nuclear structure calculations, consult NSR database, for six references. These are listed in the ENSDF dataset as document records, together with about 12 theory references for α-decay half-life.

Additional information 1.

^{164}Os Levels

Cross Reference (XREF) Flags

- A ^{165}Ir p decay (328 μs)
- B ^{168}Pt α decay (2.02 ms)
- C ^{106}Cd(^{60}Ni,2nγ)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	XREF	Comments
0.0[#]	0$^+$	21 ms *1*	ABC	%α=96 *+4−5*; %ε+%β^+=4 *+5−4* %α: 96 *5* from measurement by 2008Bi15, based on the observation of fraction of ^{168}Pt α-parent nuclei correlated with α-decay of ^{164}Os, γ-ray tagging method was used by placing gate on 575-587-keV γ. Others: %α=98 *2*, deduced from the measured T$_{1/2}$=21 ms *1* and from partial theoretical β half-lives from 1973Ta30 and 1997Mo25; 100% *70* (1981Ho10), ≈95% (1996Bi07, from parent-daughter activities). T$_{1/2}$: from α decay (1996Pa01). Others: 27 ms *4* (1996Bi07), 41 ms *20* (1981Ho10).
548.0[#] *2*	(2$^+$)		C	
1206.3[#] *3*	(4$^+$)		C	
1889.7[#] *4*	(6$^+$)		C	
2281.9[#] *4*	(8$^+$)		C	
2839.3[#] *5*	(10$^+$)		C	

[†] From Eγ data.
[‡] From systematics of even-even nuclei, and yrast sequence.
[#] Band(A): Yrast sequence.

γ(^{164}Os)

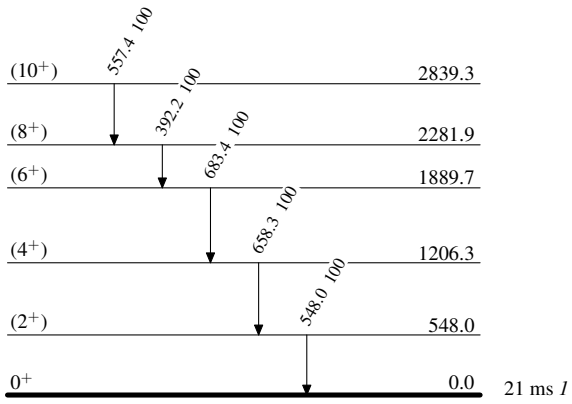
E$_i$(level)	J$_i^\pi$	E$_\gamma$[†]	I$_\gamma$	E$_f$	J$_f^\pi$
548.0	(2$^+$)	548.0 *2*	100	0.0	0$^+$
1206.3	(4$^+$)	658.3 *2*	100	548.0	(2$^+$)
1889.7	(6$^+$)	683.4 *2*	100	1206.3	(4$^+$)
2281.9	(8$^+$)	392.2 *2*	100	1889.7	(6$^+$)
2839.3	(10$^+$)	557.4 *2*	100	2281.9	(8$^+$)

[†] From ^{106}Cd(^{60}Ni,2nγ).

Adopted Levels, Gammas

Level Scheme

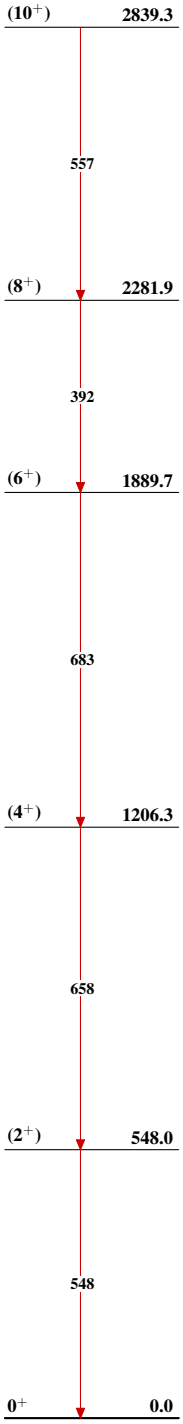
Intensities: Relative photon branching from each level



$^{164}_{76}Os_{88}$

Adopted Levels, Gammas

Band(A): Yrast sequence



$^{164}_{76}Os_{88}$