^{192}Os(^{136}Xe,Xγ)   2013Dr01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 121, 395 (2014)	1-Mar-2014

2013Dr01: ^{136}Xe beam at E≈6.0 MeV/nucleon provided by the ATLAS facility at ANL. Target=^{192}Os with gold mask on front. Measured Eγ, Iγ, $\gamma\gamma$-coin, $\gamma\gamma(\theta)$, $\gamma\gamma$(t) using the Gammasphere consisting of 100 detectors. Deduced levels, J, π, multipolarity, isomers, configurations. Calculated potential energy surfaces. Comparison with semi-empirical shell model calculations.

3-qp configurations are given by 2013Dr01 in their table III.

^{195}Au Levels

E(level)[†]	J$^\pi$	T$_{1/2}$[‡]	Comments
318.58 4	11/2$^-$		Additional information 1.
			E(level): from Adopted Levels.
706.48 10	15/2$^-$		
1365.8 4	17/2$^-$		
1424.59 14	19/2$^-$		
1812.59 18	21/2$^+$	8.04 ns 28	
1979.49 20	25/2$^+$	3.5 ns 8	
2021.0 4	(23/2$^+$)		
2125.8 4	(25/2$^+$)		
2239.93 22	(27/2$^+$)		
2417.68 22	(29/2$^+$)	≈69 ns	
2460.84 22	29/2$^+$		
2460.84+x	31/2$^{(-)}$	12.89 μs 21	Possible configuration=π11/2[505]$^{-1}\otimes\nu$(9/2[624],11/2[615])$^{-2}$.

[†] From a least-squares fit to Eγ.
[‡] From $\gamma\gamma$(t) (2013Dr01).

γ(^{195}Au)

Eγ[†]	Iγ	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.	α[#]	I$_{(\gamma+ce)}$	Comments
x		2460.84+x	31/2$^{(-)}$	2460.84	29/2$^+$				
43.1 1		2460.84	29/2$^+$	2417.68	(29/2$^+$)			43.0 16	
(59.0 5)		1424.59	19/2$^-$	1365.8	17/2$^-$			1.86 29	
104.8 5	3.39 34	2125.8	(25/2$^+$)	2021.0	(23/2$^+$)				
114.1 5	3.84 32	2239.93	(27/2$^+$)	2125.8	(25/2$^+$)				
146.4 5	1.84 25	2125.8	(25/2$^+$)	1979.49	25/2$^+$				
166.9 1	44.8 13	1979.49	25/2$^+$	1812.59	21/2$^+$	E2	0.707		B(E2)(W.u.)=10.8 23
									α(exp)=0.72 6
177.7 1	14.6 6	2417.68	(29/2$^+$)	2239.93	(27/2$^+$)	M1	1.415		α(exp)=1.8 3
208.3 5	8.9 6	2021.0	(23/2$^+$)	1812.59	21/2$^+$				α(exp)=0.06 10
218.9 5	3.77 35	2239.93	(27/2$^+$)	2021.0	(23/2$^+$)				
221.0 5	3.11 32	2460.84	29/2$^+$	2239.93	(27/2$^+$)				
260.4 1	14.3 12	2239.93	(27/2$^+$)	1979.49	25/2$^+$				
291.9 5	2.16 29	2417.68	(29/2$^+$)	2125.8	(25/2$^+$)				
387.9 1	93.2[‡] 18	706.48	15/2$^-$	318.58	11/2$^-$	E2			
388.0 1	96.2[‡] 18	1812.59	21/2$^+$	1424.59	19/2$^-$	E1	0.0149		B(E1)(W.u.)=4.21×10^{-7} 16
438.1 5	5.19 36	2417.68	(29/2$^+$)	1979.49	25/2$^+$				
481.4 1	33.5 9	2460.84	29/2$^+$	1979.49	25/2$^+$	E2	0.028		
659.5 5	1.86 29	1365.8	17/2$^-$	706.48	15/2$^-$				
718.1 1	100.0 20	1424.59	19/2$^-$	706.48	15/2$^-$	E2			

^{192}Os(^{136}Xe,Xγ)   2013Dr01 (continued)

γ(^{195}Au) (continued)

[†] Uncertainty is stated in 2013Dr01 as 0.1 keV for strong γ rays. The evaluator has assigned 0.1 keV for $I\gamma > 10$, 0.5 keV for $I\gamma \leq 10$.

[‡] Unresolved doublet distributed allowing for difference in total conversion.

[#] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
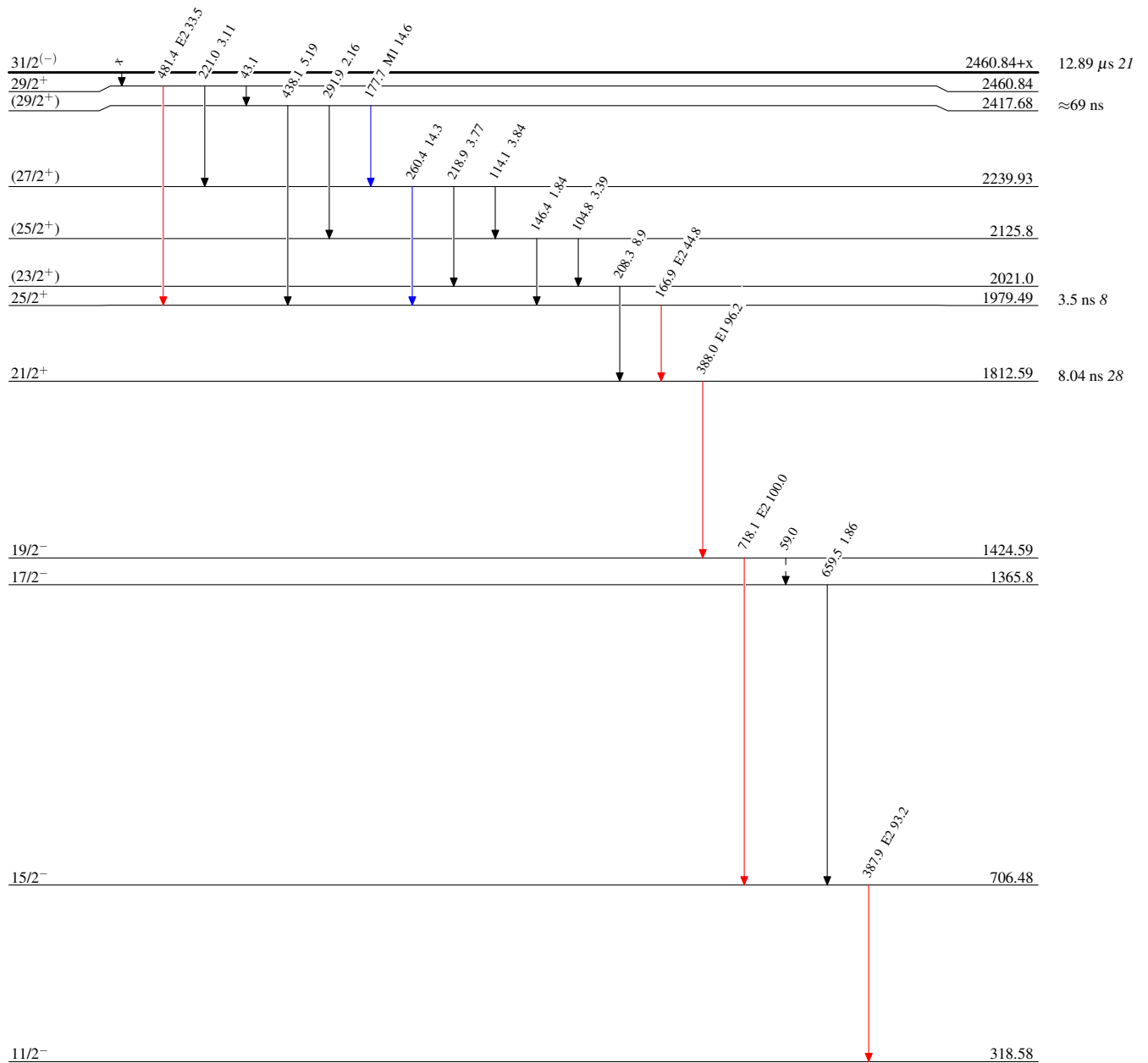
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Legend

Level Scheme

Intensities: Relative I$_\gamma$

────────►	I$_\gamma$ < 2%×I$_\gamma^{max}$
────────►	I$_\gamma$ < 10%×I$_\gamma^{max}$
────────►	I$_\gamma$ > 10%×I$_\gamma^{max}$
- - - - - ►	γ Decay (Uncertain)

$^{195}_{79}$Au$_{116}$