$^{197}\text{Au}(^{209}\text{Bi,X}\gamma)$ **2020Wa24**

		History		
Type	Author	Citation		Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 177, 509, 2021		4-Jul-2021

2020Wa24: E(^{209}Bi)=1450 MeV from ATLAS accelerator at Argonne National Laboratory. The target was $\approx$ 50 mg/cm^2 thickness. Measured Eγ, Iγ, $\gamma\gamma$(t), $\gamma\gamma(\theta)$ using the Gammasphere array consisting of 100 Compton-suppressed HPGe detectors.

^{203}Pb Levels

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$	Comments
2949.12[#] *24*	29/2$^-$	480 ms *7*	Additional information 1.
			E(level),J$^{\pi}$,T$_{1/2}$: From Adopted Levels.
3689.5 *4*	(31/2$^-$)		
3910.3 *4*	(33/2$^-$)		
4054.6 *4*	(31/2$^-$)		
4457.2 *4*	(33/2$^+$)		
5025.3[@] *7*	(37/2$^+$)	2.5 ns *3*	T$_{1/2}$: From 568γ-1529γ(Δt) and centroid-shift method in 2020Wa24.
6081.0 *9*	(39/2)		
6554.0 *9*	(41/2)		
6625.2 *10*			
6700.4 *10*			

[†] From a least-squares fit to Eγ.
[‡] From 2020Wa24.
[#] Configuration=$\nu(\text{f}_{5/2}^{-1},\text{i}_{13/2}^{-2})$.
[@] Probably admixture of $\nu(\text{p}_{1/2}^{-1},\text{f}_{5/2}^{-1},\text{i}_{13/2}^{-3})$ and $\nu(\text{p}_{1/2}^{-1},\text{p}_{3/2}^{-1},\text{i}_{13/2}^{-3})$ configurations.

$\gamma(^{203}\text{Pb})$

E$_{\gamma}$[†]	I$_{\gamma}$[†]	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Mult.	Comments
402.6 *5*	41 *2*	4457.2	(33/2$^+$)	4054.6	(31/2$^-$)	D	Mult.: DCO=0.62 *4* (2020Wa24).
544.2 *5*	14 *1*	6625.2		6081.0	(39/2)		
546.7 *5*	40 *2*	4457.2	(33/2$^+$)	3910.3	(33/2$^-$)		
568.1 *5*	100 *3*	5025.3	(37/2$^+$)	4457.2	(33/2$^+$)		
619.4 *5*	32 *2*	6700.4		6081.0	(39/2)		
740.5 *5*	26 *1*	3689.5	(31/2$^-$)	2949.12	29/2$^-$	D	Mult.: DCO=0.64 *6* (2020Wa24).
767.8 *5*	20 *1*	4457.2	(33/2$^+$)	3689.5	(31/2$^-$)		
961.0 *5*	29 *2*	3910.3	(33/2$^-$)	2949.12	29/2$^-$	Q	Mult.: DCO=1.05 *9* (2020Wa24).
1055.7 *5*	26 *1*	6081.0	(39/2)	5025.3	(37/2$^+$)		
1105.6 *5*	33 *2*	4054.6	(31/2$^-$)	2949.12	29/2$^-$		
1528.7 *5*	29 *2*	6554.0	(41/2)	5025.3	(37/2$^+$)	(Q)	Mult.: DCO=0.86 *8* (2020Wa24).

[†] From 2020Wa24.

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Level Scheme

Intensities: Relative I_γ

Legend

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

$^{203}_{82}\text{Pb}_{121}$