^{9}Be(^{208}Pb,Xγ) 2011St21

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 201,346 (2025)	21-Jan-2025

2011St21: ^{208}Pb beam at 1 GeV/A energy was provided by the SIS-18 accelerator at GSI, Darmstadt. Target consisting of 2.526 g/cm^2 ^{9}Be backed by ^{93}Nb foil of thickness=0.223 g/cm^2. Fragments were identified in flight by the Fragment Separator (FRS) operated in achromatic mode based on time of flight, Bρ and energy loss. They were slowed in Al degraders and stopped in a plastic catcher. The stopper was surrounded by the RISING γ-ray spectrometer. Measured delayed Eγ, Iγ, γ(t). Others (same collaboration): 2001Ca13, 2008StZY, 2009Si35, 2015Al09, 2018La03.

^{206}Hg Levels

E(level)†	J$^\pi$‡	T$_{1/2}$	Comments
0.0	0$^+$	8.32‡ min *13*	
1068.0 *5*	2$^+$	1.27‡ ps *17*	Configuration=$\pi(s^{-1}_{1/2},d^{-1}_{3/2})$.
2101.7 *7*	5$^-$	2.09 μs *2*	T$_{1/2}$: From sum of 1034γ(t) and 1068γ(t) in 2011St21. Other: 2.08 μs *4* in 2018La03 and 2.19 μs *7* (2015Al09). Experimental isomeric state population ratio=21.9% *+12−29* (2011St21). Configuration=$\pi(s^{-1}_{1/2}\otimes h^{-1}_{11/2})$.
2465.1 *9*	(7$^-$)		Configuration=$\pi(d^{-1}_{3/2}\otimes h^{-1}_{11/2})$.
3621.4 *10*	(8$^+$)		
3722.3 *10*	(10$^+$)	112 ns *4*	T$_{1/2}$: From sum of 1156γ(t) and 1257γ(t) in 2011St21. Other: 106 ns *15* in 2018La03. Experimental isomeric state population ratio=2.2% *+7−8* (2011St21). Configuration=$\pi(h^{-2}_{11/2})$.

† From least-squares fit to Eγ.
‡ From Adopted Levels.

γ(^{206}Hg)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
100.9 *5*	3 *3*	3722.3	(10$^+$)	3621.4	(8$^+$)
363.4 *5*	21 *1*	2465.1	(7$^-$)	2101.7	5$^-$
1033.7 *5*	100 *2*	2101.7	5$^-$	1068.0	2$^+$
1068.0 *5*	99 *2*	1068.0	2$^+$	0.0	0$^+$
1156.3 *5*	28 *1*	3621.4	(8$^+$)	2465.1	(7$^-$)
1257.2 *5*	8 *1*	3722.3	(10$^+$)	2465.1	(7$^-$)

† From 2011St21. ΔEγ=0.5 keV assigned in consultation with Zs. Podolyak (U. Surrey).

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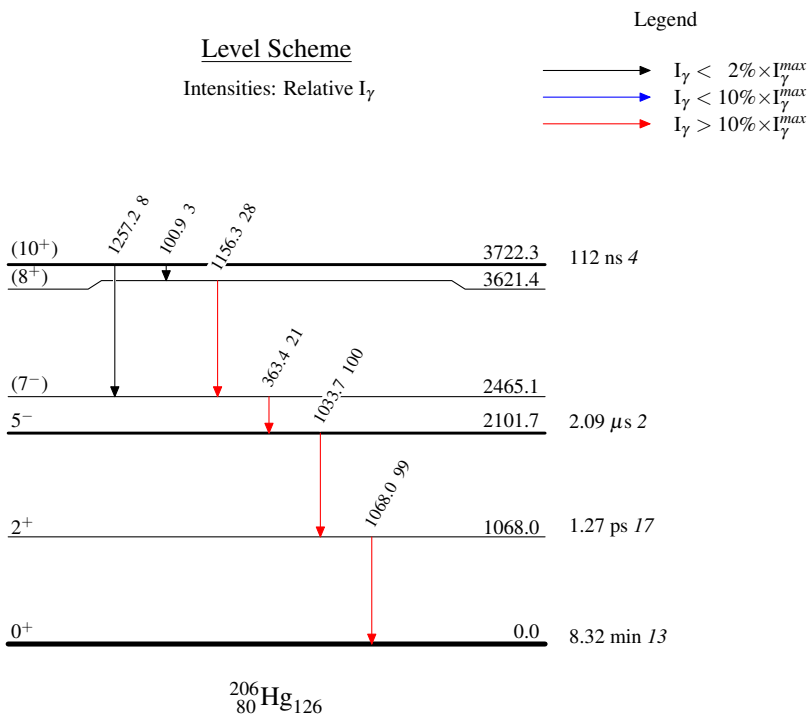
Level Scheme

Intensities: Relative I_γ



$^{206}_{80}Hg_{126}$