

$^9\text{Be}(^{208}\text{Pb},\text{X}\gamma)$  2011St21

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 166, 1 (2020)	20-Apr-2020

**2011St21:**  $^{205}\text{Hg}$  nuclide populated in fragmentation of  $^{208}\text{Pb}$  beam at 1 GeV/nucleon from the GSI UNILAC accelerator on a  $^9\text{Be}$  target. The target thickness was 2.526 g/cm<sup>2</sup>, backed by  $^{93}\text{Nb}$  foil of 0.223 g/cm<sup>2</sup> thickness. Fragments were identified in flight by the Fragment Separator (FRS), based on time of flight,  $B\rho$  and energy loss. Transmitted ions were slowed in Al degraders and stopped in a catcher that was surrounded by the RISING  $\gamma$ -ray spectrometer (15 HPGe detectors). Measured:  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma(t)$ . Others (the same collaboration): [2008StZY](#), [2009St16](#).

 $^{205}\text{Hg}$  Levels

E(level) <sup>†</sup>	$J\pi^{\ddagger}$	$T_{1/2}^{\#}$	Comments
0.0	1/2 <sup>-</sup>	5.14 min 9	configuration: $\nu(p_{1/2}^{-1})$ .
378.9 5	5/2 <sup>-</sup>		configuration: $\nu(f_{5/2}^{-1})$ .
1345.4 7	7/2 <sup>-</sup>		configuration: $\nu(f_{5/2}^{-1})\otimes\pi(s_{1/2}^{-1},d_{3/2}^{-1})_{1+}$ .
1394.1 7	9/2 <sup>-</sup>		configuration: $\nu(f_{5/2}^{-1})\otimes\pi(s_{1/2}^{-1},d_{3/2}^{-1})_{2+}$ .
1555.6 7	13/2 <sup>+</sup>	1.09 ms 4	Experimental isomeric state population ratio=20.5% +25-40. configuration: $\nu(i_{13/2}^{-1})$ .
2365.6 8	(17/2 <sup>+</sup> )		configuration: $\nu(i_{13/2}^{-1})\otimes 2^+$ .
2593.2 9	(19/2 <sup>+</sup> )		configuration: $\nu(f_{5/2}^{-1})\otimes\pi(d_{3/2}^{-1},h_{11/2}^{-1})_{7-}$ .
3315.8 9	(23/2 <sup>-</sup> )	5.89 $\mu\text{s}$ 18	$T_{1/2}$ : From (810.0 $\gamma$ +950.2 $\gamma$ )(t) in <a href="#">2011St21</a> . Experimental isomeric state population ratio=3.3% +2-4. configuration: $\nu(i_{13/2}^{-1})\otimes\pi(s_{1/2}^{-1},h_{11/2}^{-1})_{5-}$ .

<sup>†</sup> From a least-squares fit to  $E\gamma$ .

<sup>‡</sup> From [2011St21](#).

<sup>#</sup> From Adopted Levels, unless otherwise stated.

 $\gamma(^{205}\text{Hg})$ 

$E\gamma^{\ddagger}$	$I\gamma^{\ddagger}$	$E_i(\text{level})$	$J_i^{\pi}$	$E_f$	$J_f^{\pi}$
161.4 <sup>‡</sup> 5		1555.6	13/2 <sup>+</sup>	1394.1	9/2 <sup>-</sup>
210.3 <sup>‡</sup> 5		1555.6	13/2 <sup>+</sup>	1345.4	7/2 <sup>-</sup>
227.6 5	8 1	2593.2	(19/2 <sup>+</sup> )	2365.6	(17/2 <sup>+</sup> )
378.9 5	37 2	378.9	5/2 <sup>-</sup>	0.0	1/2 <sup>-</sup>
722.6 5	11 1	3315.8	(23/2 <sup>-</sup> )	2593.2	(19/2 <sup>+</sup> )
810.0 5	100 3	2365.6	(17/2 <sup>+</sup> )	1555.6	13/2 <sup>+</sup>
950.2 5	87 3	3315.8	(23/2 <sup>-</sup> )	2365.6	(17/2 <sup>+</sup> )
967.0 5	10 2	1345.4	7/2 <sup>-</sup>	378.9	5/2 <sup>-</sup>
1014.7 5	33 2	1394.1	9/2 <sup>-</sup>	378.9	5/2 <sup>-</sup>

<sup>†</sup> From [2011St21](#), unless otherwise stated.  $\Delta E\gamma$  were assigned by the evaluator.

<sup>‡</sup> From adopted gammas.

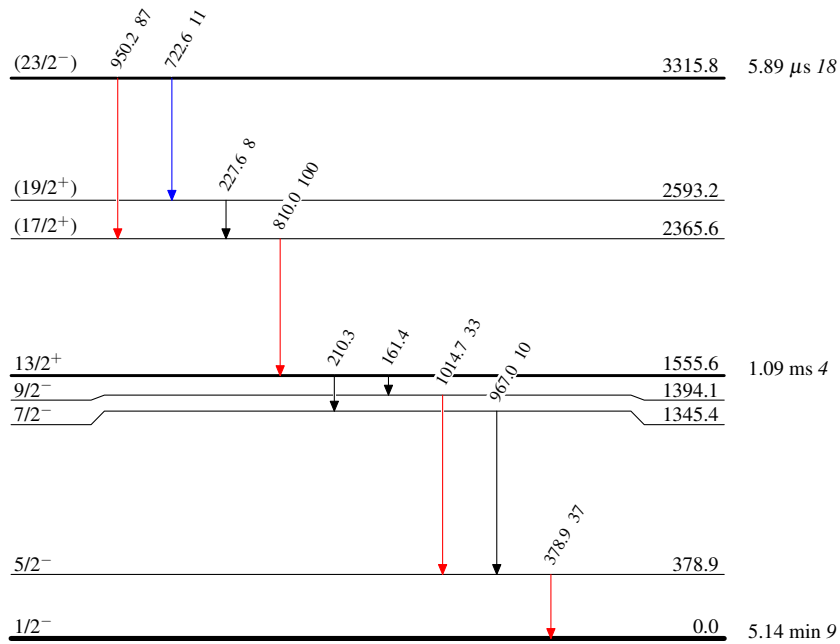
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## Level Scheme

Intensities: Relative  $I_\gamma$ 

## Legend

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

 $^{205}_{80}\text{Hg}_{125}$