

$^{203}\text{Tl}(\mu^-, n\gamma)$ **1972Ba53**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 196,342 (2024)	1-Sep-2023

1972Ba53: μ -capture γ -rays were measured in natural muonic thallium with Ge(Li) detectors. A 46% contribution from $^{205}\text{Tl}(\mu^-, 3n\gamma)$ is also expected.

Others: **1978Du01**, **1974Ba77**.

 ^{202}Hg Levels

E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]
0.0	0 ⁺	1119.6 3	4 ⁺	1347.99 25	(1 ⁺ , 2 ⁺)	2134.1 5
439.511 8	2 ⁺	1182.15 19	2 ⁺	1644.1 4	0 ⁺	2162.3 7
959.84 16	2 ⁺	1311.70 25	4 ⁺	1966.3 5	5 ⁻	

[†] From a least-squares fit to E_γ .

[‡] From Adopted Levels.

 $\gamma(^{202}\text{Hg})$

E_γ [†]	I_γ [#]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
222.37 [‡] 15	1.7 8	1182.15	2 ⁺	959.84	2 ⁺	E_γ : From 1978Du01 . Others: 439.68 keV 19 (1972Ba53) and 439.27 keV 17 (1974Ba77).
351.86 [‡] 19	1.70 38	1311.70	4 ⁺	959.84	2 ⁺	
388.17 [‡] 23	0.76 19	1347.99	(1 ⁺ , 2 ⁺)	959.84	2 ⁺	
439.510 8	17.0 28	439.511	2 ⁺	0.0	0 ⁺	
520.36 22	7.2 14	959.84	2 ⁺	439.511	2 ⁺	I_γ : Possible doublet.
654.6 [‡] 4	1.16 31	1966.3	5 ⁻	1311.70	4 ⁺	
680.1 [‡] 3	2.37 56	1119.6	4 ⁺	439.511	2 ⁺	
742.4 [‡] 3	0.80 23	1182.15	2 ⁺	439.511	2 ⁺	
908.4 [‡] 5	0.67 18	1347.99	(1 ⁺ , 2 ⁺)	439.511	2 ⁺	
960.2 4	0.55 14	959.84	2 ⁺	0.0	0 ⁺	
1014.5 4	0.59 15	2134.1		1119.6	4 ⁺	
1204.6 [‡] 4	0.52 14	1644.1	0 ⁺	439.511	2 ⁺	
1722.8 [‡] 7	0.34 12	2162.3		439.511	2 ⁺	

[†] From **1972Ba53**, unless otherwise stated.

[‡] Assigned to ^{202}Hg based on the adopted level scheme.

[#] Delayed I_γ in % per stopped μ^- (**1972Ba53**).

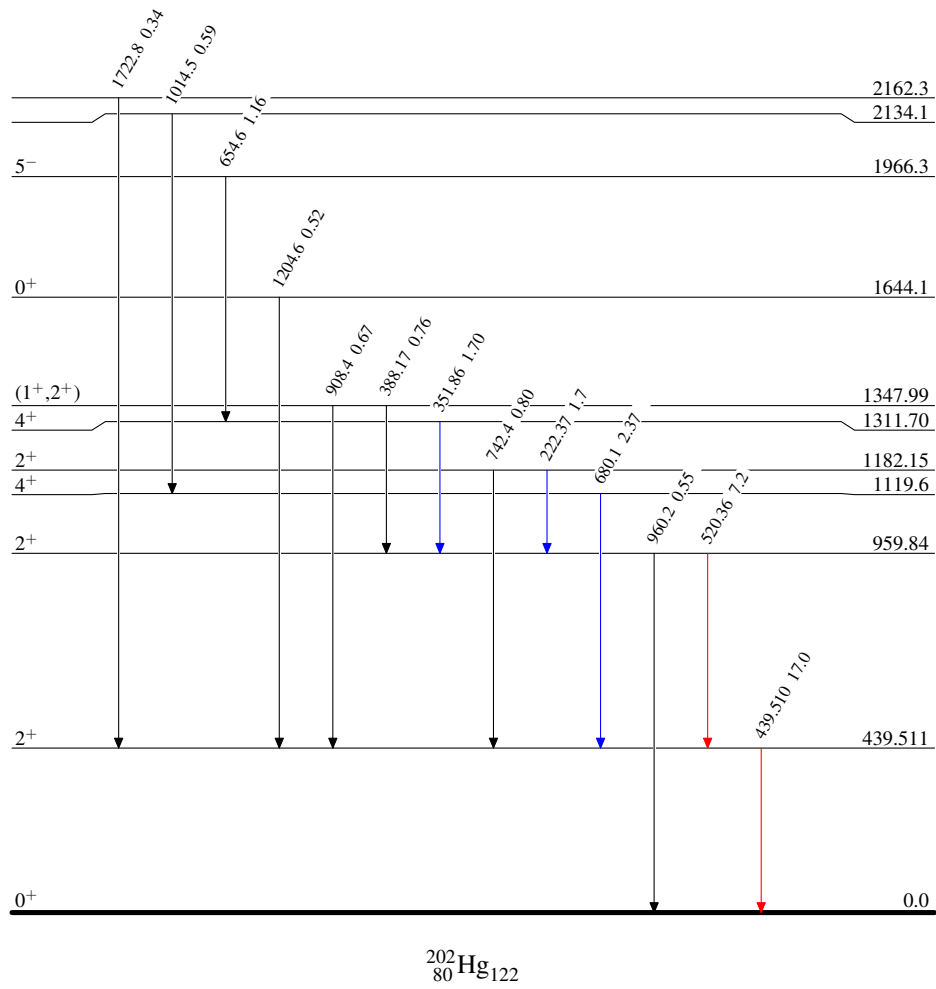
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Level Scheme

Intensities: Relative I_{γ}

Legend

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

 $^{202}_{80}\text{Hg}_{122}$