

$^{204}\text{Hg}(\alpha, \text{p}2\text{n}\gamma)$ **1976BeXF**

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

$E(\alpha)=51$ MeV, pulsed beam; Detectors:Ge(Li); Measured: $E\gamma$, $I\gamma$, $\gamma\gamma$ coin.

 ^{205}Tl Levels

$E(\text{level})^\dagger$	$J^\pi^\ddagger$	$T_{1/2}^\dagger$	Comments
0	$1/2^+$		
203.7 5	$3/2^+$		
923.7 7	$7/2^+$		
1429.9 9	$9/2^+$		
1484.1 10	$11/2^-$		configuration: $\pi(\text{h}_{11/2}^{-1})$.
2053.7 12	$15/2^-$		configuration: $\pi(\text{s}_{1/2}^{-1}) \otimes \nu(\text{p}_{1/2}^{-1}, \text{i}_{13/2}^{-1})$.
2393.2 13	$17/2^-$		
2550.6 13	$19/2^-$		configuration: $\pi(\text{s}_{1/2}^{-1}) \otimes \nu(\text{f}_{5/2}^{-1}, \text{i}_{13/2}^{-1})$.
3290.9 14	$25/2^+$	$\geq 3 \mu\text{s}$	configuration: $\pi(\text{h}_{11/2}^{-1}) \otimes \nu(\text{p}_{1/2}^{-1}, \text{i}_{13/2}^{-1})$.

† From **1976BeXF**. The level scheme is that of **1976BeXF**, except that the ordering of the 569.6 γ and 740.3 γ is reversed and the 157.38 γ , depopulating the 2550.6-keV level, is included in accordance with the adopted level scheme.

‡ From Adopted Levels.

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

$E_\gamma^\dagger$	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	I_γ delayed †	Comments
54.2 5		1484.1	$11/2^-$	1429.9	$9/2^+$		
157.38 10		2550.6	$19/2^-$	2393.2	$17/2^-$		E_γ : From adopted gammas. 158 γ in figure 2 in 1976BeXF in coincidence with 203.7 γ .
203.7 5	100	203.7	$3/2^+$	0	$1/2^+$	100	
339.5 5	43	2393.2	$17/2^-$	2053.7	$15/2^-$	88	
506.2 5	102	1429.9	$9/2^+$	923.7	$7/2^+$	126	
569.6 5	41	2053.7	$15/2^-$	1484.1	$11/2^-$	120	
720.0 5	123	923.7	$7/2^+$	203.7	$3/2^+$	81	
740.3 5	85	3290.9	$25/2^+$	2550.6	$19/2^-$	95	

† From **1976BeXF**. Uncertainties in E_γ were estimated by the evaluator.

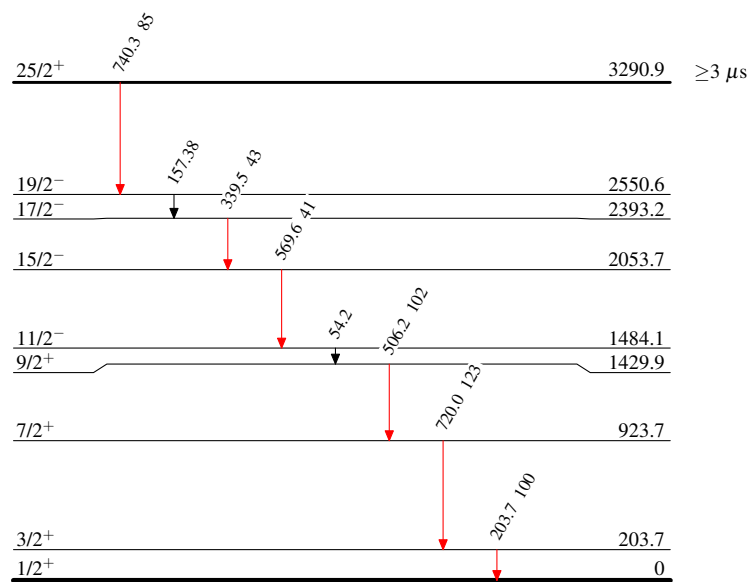
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Level Scheme

Intensities: Relative I_γ

Legend

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

 $^{205}_{81}\text{Tl}_{124}$