

$^{204}\text{Hg}(\text{d},\text{p}\gamma)$ 1986Ze03

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

1986Ze03: Enriched target, E=14, 18 MeV; Detectors: Ge(Li), iron-free orange-spectrometer, plastic scintillators, photomultiplier; Measured: $E\gamma$, $I\gamma$, $\gamma\gamma$ coin, ce- γ coin, γ -p coin and ce-p coin, $\gamma(\text{t})$; Deduced: levels, J^π , $T_{1/2}$, transition multiplicities.

 ^{205}Hg Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0.0	1/2 ⁻	5.14 min 9	$T_{1/2}$: From Adopted Levels.
379.65 18	5/2 ⁻		
467.36 18	3/2 ⁻		
1346.31 20	7/2 ⁻		
1395.13 24	9/2 ⁻		
1556.7 3	13/2 ⁺	1.04 ms 10	$T_{1/2}$: From $\gamma(\text{t})$ using gates on 379.5 γ and 1015.4 γ (1986Ze03).
1847.63 25	9/2 ⁺		
2011.8 3			

[†] From a least-squares fit to $E\gamma$.

[‡] From 1986Ze03.

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

E_γ [†]	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	Comments
161.4 5		1556.7	13/2 ⁺	1395.13	9/2 ⁻	M2	E_γ : From adopted gammas. 161.5 γ from ce data in 1986Ze03. Mult.: From comparison between the relative intensities for the K and L subshell conversion electrons for 161.5 γ and the corresponding hindrance factor.
164.1 2	≈ 3	2011.8		1847.63	9/2 ⁺		
290.8 2	3.8 8	1847.63	9/2 ⁺	1556.7	13/2 ⁺		
379.5 2	100 20	379.65	5/2 ⁻	0.0	1/2 ⁻		
455.1 2	1.5 3	2011.8		1556.7	13/2 ⁺		
467.5 2	47 9	467.36	3/2 ⁻	0.0	1/2 ⁻		
501.4 2	30 6	1847.63	9/2 ⁺	1346.31	7/2 ⁻		
^x 567.4 2	5.2 10						E_γ : In coincidence with 379.5 γ , 501.4 γ and 966.6 γ .
^x 621.1 2	1.9 4						E_γ : In coincidence with 379.5 γ , 467.5 γ and 1043.5 γ .
^x 735.8 2	2.6 5						E_γ : In coincidence with 467.5 γ .
^x 813.2 2	4.0 8						E_γ : In coincidence with 467.5 γ .
879.1 2	2.5 5	1346.31	7/2 ⁻	467.36	3/2 ⁻		
^x 946.2 2	4.6 9						E_γ : In coincidence with 379.5 γ .
966.6 2	39 8	1346.31	7/2 ⁻	379.65	5/2 ⁻		
1015.4 2		1395.13	9/2 ⁻	379.65	5/2 ⁻		
^x 1043.5 2	2.0 4						E_γ : In coincidence with 467.5 γ and (621.1 γ).
^x 1066.0 2	2.5 5						E_γ : In coincidence with 379.5 γ .

[†] From 1986Ze03, unless otherwise stated. The I_γ values are from the p- γ coincidence measurement at $E_d=14$ MeV.




^x γ ray not placed in level scheme.

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Level Scheme

Intensities: Relative I_γ

Legend

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

