^{198}Hg(^{3}He,4nγ) 1985St16,1981He07,1978SaZE

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong, Zhou Chunmei	NDS 104, 283 (2005)	1-Jan-2002

Other: 1977He06.
1985St16: E=60 MeV, measured Eγ, Iγ(t), $\gamma(\theta)$.
1981He07: E=38 MeV, measured Eγ, $\gamma(\theta)$, $\gamma\gamma$-coin, γ(t).
Analyzed γ singles, $\gamma\gamma$-coin, $\gamma(\theta)$, γ excit (semi); Eγ, Iγ, A_2 coef values not given.

^{197}Pb Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
0.0	3/2$^-$[#]	8.1[#] min *17*	
319.3	13/2$^+$[#]	42.9[#] min *9*	
1324.5	17/2$^+$		
1401.6	15/2$^+$		
1856.1	19/2$^+$		
1881.3	21/2$^+$		
1913.6	21/2$^-$	1.15 μs *20*	g=−0.0506 *6* (1985St16) $T_{1/2}$: from $\gamma\gamma$(t) (1985St16). Others: 1.5 μs *1* (1977He06), ≈0.7 μs (1981He07), 1.5 μs (1978SaZE).
2062.9	21/2$^+$		
2300.6	(23/2$^-$)[&]		J$^\pi$: other: (25/2$^-$) (1985St16).
2472.7[#]	(27/2$^-$)[#]		J$^\pi$: other: (29/2$^-$) (1985St16).
3080[@]	(29/2$^+$)[&]		
3164[#]	(33/2$^+$)[#]	75 ns *25*	g=−0.152 *6* (1985St16) $T_{1/2}$: from γ(t) (1985St16).

[†] From 1981He07, except as noted.
[‡] From $\gamma(\theta)$ measurements (1981He07), except 3/2$^-$ for g.s., 13/2$^+$ for 319.3-keV and (33/2$^+$) for 3167.9-keV from Adopted Levels, $\gamma(\theta)$ does not give π, (29/2$^-$) for 2468-keV and (29/2$^+$) for 3075-keV from $\gamma(\theta)$ (1985St16).
[#] From Adopted Levels.
[@] From 1985St16.
[&] Based on $\gamma(\theta)$ measurements (1985St16).

γ(^{197}Pb)

E$_\gamma$[†]	I$_\gamma$[†‡]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[&]	δ	α[b]	Comments
57.3 *5*	121 *30*	1913.6	21/2$^-$	1856.1	19/2$^+$	(E1)[a]		0.417	α(L)=0.318; α(M)=0.0754; α(N+..)=0.0234
(88.7[@])		3164	(33/2$^+$)	3080	(29/2$^+$)				
(172.5[@])		2472.7	(27/2$^-$)	2300.6	(23/2$^-$)				
387.0 *6*		2300.6	(23/2$^-$)	1913.6	21/2$^-$				I$_\gamma$: not resolved from the 387.6-keV transition in ^{197}Tl.
454.6 *3*	128 *10*	1856.1	19/2$^+$	1401.6	15/2$^+$	(E2)		0.0375	α(K)=0.0256 *8*; α(L)=0.0089 *3*; α(M)=0.00222 *7*; α(N+..)=0.00072 *2* $\gamma(\theta)$: A_2=+0.23 *19*, A_4=−0.06 *22* (1981He07); A_2=+0.121 *12* (1985St16).
531.5 *2*	260 *18*	1856.1	19/2$^+$	1324.5	17/2$^+$	(M1+E2)	−1.00 *43*	0.061 *18*	α(K)=0.049 *16*; α(L)=0.0093 *20* δ: from −1.43≤δ≤−0.57

Continued on next page (footnotes at end of table)

^{198}Hg(^{3}He,4nγ) 1985St16,1981He07,1978SaZE (continued)

$\gamma(^{197}Pb)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	α[b]	Comments
								(1985St16). $\gamma(\theta)$: A_2=−0.01 *4*, A_4=−0.04 *11* (1981He07); A_2=−0.633 *10* (1985St16). There is a serious discrepancy in A_2.
556.8 *4*	215 *20*	1881.3	21/2$^+$	1324.5	17/2$^+$	(E2)	0.0230	α(K)=0.0167 *5*; α(L)=0.00476 *15* $\gamma(\theta)$: A_2=+0.41 *11*, A_4=−0.09 *11* (1981He07).
589.3 *4*	42 *10*	1913.6	21/2$^-$	1324.5	17/2$^+$			
607[#]		3080	(29/2$^+$)	2472.7	(27/2$^-$)			
738.4 *2*	114 *10*	2062.9	21/2$^+$	1324.5	17/2$^+$	(E2)	0.0124	α(K)=0.0095 *3*; α(L)=0.00218 *7* $\gamma(\theta)$: A_2=+0.38 *4*, A_4=−0.11 *6* (1981He07).
1005.2 *2*	1000	1324.5	17/2$^+$	319.3	13/2$^+$	(E2)	0.00667	α=0.00667; α(K)=0.00529 *16*; α(L)=0.00103 *3* $\gamma(\theta)$: A_2=+0.34 *5*, A_4=+0.03 *7* (1981He07); A_2=+0.216 *8* (1985St16).
1082.3 *2*	284 *28*	1401.6	15/2$^+$	319.3	13/2$^+$	(M1+E2)	0.011 *5*	α(K)=0.009 *4*; α(L)=0.0015 *6* $\gamma(\theta)$: A_2=−0.05 *7*, A_4=+0.09 *10* (1981He07).

[†] From 1981He07.
[‡] Relative intensity normalized to Iγ(1005.2γ)=1000 (1981He07) in-beam (θ=125°).
[#] From 1985St16.
[@] From adopted γ radiations.
[&] From $\gamma(\theta)$ and known J^π,except as noted.
[a] From intensity balance considerations.
[b] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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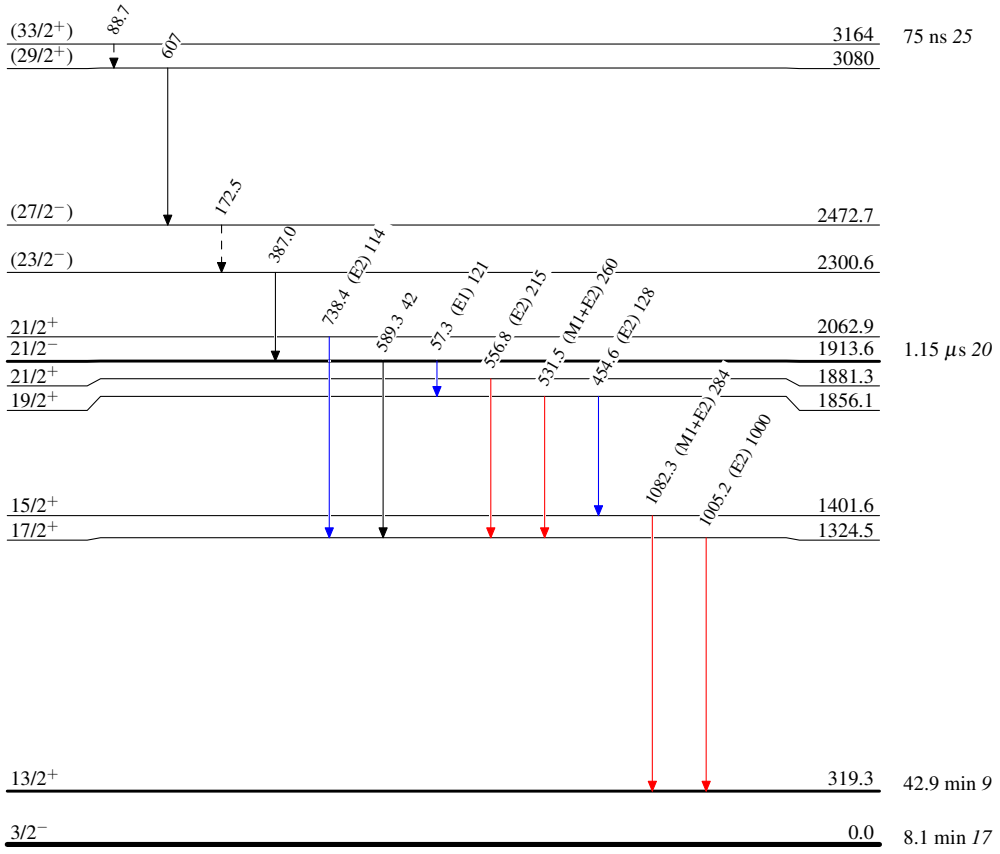
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

Level Scheme

Intensities: Relative I_γ



$^{197}_{82}Pb_{115}$