^{204}Hg(^{9}Be,2$\alpha\gamma$)   1994Po21

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

1994Po21: E=62 MeV; Detectors: CAESAR array consisting of six Compton-suppressed Ge(Li) detectors and one LEPS detector. A single movable Ge(Li) detector was used during the angular-distribution measurements. Measured: Eγ, Iγ, $\gamma\gamma$ coin, $\gamma\gamma$(t), $\gamma(\theta)$; Deduced: levels, J$^\pi$. Empirical shell-model calculations.

^{205}Hg Levels

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]	Comments
0.0	1/2$^-$	5.14 min 9	configuration: $\nu(p^{-1}_{1/2})$.
379.5 5	(5/2)$^-$		configuration: $\nu(f^{-1}_{5/2})$.
467.5 5	(3/2)$^-$		configuration: $\nu(p^{-1}_{3/2})$.
1325.2 7			
1346.1 5	(7/2$^-$)		configuration: $\nu(f^{-1}_{5/2})\otimes\pi(s^{-1}_{1/2},d^{-1}_{3/2})_{1^+}$.
1395.0 6	(9/2$^-$)		configuration: $\nu(f^{-1}_{5/2})\otimes\pi(s^{-1}_{1/2},d^{-1}_{3/2})_{2^+}$.
1556.4 6	(13/2$^+$)	1.09 ms 4	configuration: $\nu(i^{-1}_{13/2})$.
1818.2 7			
1847.2 6	9/2$^+$		configuration: $\nu(g^{+1}_{9/2})$.
2011.3 6	(11/2$^+$)		J$^\pi$,configuration: Suggested in 1994Po21 (based on a shell-model predictions) as the $\nu(i^{+1}_{11/2})$ single-particle state.
2205.8 8			
2350.7 7			
2368.9 7			
2579.4 8			

† From least-squares fit to Eγ.
‡ From 1994Po21.
# From Adopted Levels.

$\gamma(^{205}$Hg)

E$_\gamma$[†]	I$_\gamma$[†]	E$_i$(level)	J$^{\pi}_i$	E$_f$	J$^{\pi}_f$	Mult.[†]	α[‡]	Comments
161.4 5	11	1556.4	(13/2$^+$)	1395.0	(9/2$^-$)	M2	11.63 21	α(K)=8.30 15; α(L)=2.51 5; α(M)=0.628 12 α(N)=0.1593 30; α(O)=0.0296 6; α(P)=0.00198 4 Mult.: From intensity balance considerations (1994Po21).
164.0 5	22	2011.3	(11/2$^+$)	1847.2	9/2$^+$	(M1)	1.930 32	α(K)=1.582 26; α(L)=0.267 4; α(M)=0.0621 10 α(N)=0.01559 26; α(O)=0.00295 5; α(P)=0.000226 4 Mult.: From α_T(exp)=4.3 10 (1994Po21), deduced from intensity balance considerations.
210.3 5	8	1556.4	(13/2$^+$)	1346.1	(7/2$^-$)	E3	2.73 5	α(K)=0.407 6; α(L)=1.723 32; α(M)=0.466 9 α(N)=0.1167 22; α(O)=0.0196 4; α(P)=0.0001193 19 Mult.: From intensity balance considerations (1994Po21).
290.8 5	17	1847.2	9/2$^+$	1556.4	(13/2$^+$)			
358.6 5	12	2205.8		1847.2	9/2$^+$			
379.5 5	1000	379.5	(5/2)$^-$	0.0	1/2$^-$			
455.1 5		2011.3	(11/2$^+$)	1556.4	(13/2$^+$)			E$_\gamma$: From 1986Ze03.
467.5 5	104	467.5	(3/2)$^-$	0.0	1/2$^-$			
501.2 5	226	1847.2	9/2$^+$	1346.1	(7/2$^-$)			

^{204}Hg(^{9}Be,2$\alpha\gamma$)   **1994Po21** (continued)

γ(^{205}Hg) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π
568.1 *5*	14	2579.4		2011.3	$(11/2^+)$	1438.7 *5*	7	1818.2		379.5	$(5/2)^-$
878.6 *5*	44	1346.1	$(7/2^-)$	467.5	$(3/2)^-$	1467.6 *5*	6	1847.2	$9/2^+$	379.5	$(5/2)^-$
945.7 *5*	28	1325.2		379.5	$(5/2)^-$	1971.2 *5*	17	2350.7		379.5	$(5/2)^-$
966.6 *5*	334	1346.1	$(7/2^-)$	379.5	$(5/2)^-$	1989.4 *5*	18	2368.9		379.5	$(5/2)^-$
1015.5 *5*	154	1395.0	$(9/2^-)$	379.5	$(5/2)^-$						

[†] From 1994Po21. $\Delta E\gamma$'s were assigned by the evaluator.
[‡] Additional information 1.

^{204}Hg(^{9}Be,2$\alpha\gamma$)   **1994Po21** (continued)

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Level Scheme

Intensities: Relative I$_\gamma$

Legend

→	I$_\gamma$ < 2%×I$_\gamma^{max}$
→	I$_\gamma$ < 10%×I$_\gamma^{max}$
→	I$_\gamma$ > 10%×I$_\gamma^{max}$

568.1 14

1989.4 18

1971.2 17

358.6 12

455.1

164.0 (M1) 22

1467.6 6

501.2 226

290.8 17

1438.7 7

210.3 E3 8

161.4 M2 11

1015.5 154

966.6 334

878.6 44

945.7 28

467.5 104

379.5 1000

2579.4

2368.9

2350.7

2205.8

(11/2$^+$)　　　　2011.3

9/2$^+$　　　　1847.2

1818.2

(13/2$^+$)　　　　1556.4　　1.09 ms *4*

(9/2$^-$)　　　　1395.0

(7/2$^-$)　　　　1346.1

1325.2

(3/2)$^-$　　　　467.5

(5/2)$^-$　　　　379.5

1/2$^-$　　　　0.0　　5.14 min *9*

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