^{207}Pb(α,2nγ)   1976Ha56

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Chen [#] and F. G. Kondev	NDS 126, 373 (2015)	30-Sep-2013

1976Ha56: E=25 MeV α beam was produced from the Chalk River Nuclear Laboratories. Natural Pb targets. γ-rays were detected with two large coaxial Ge(Li) detectors. Measured I$\gamma(\theta,H,t)$. Deduced g-factor, half-life.

Others: 1983Da01, 1981Da01, 1973Na18, 1970Ya03, 1966AlZZ.

^{209}Po Levels

g-factors are from $\gamma(\theta,H,t)$ in 1976Ha56, H=22.93 kG. Values are not corrected for Knight shift or diamagnetism. Quoted uncertainties do not include an $\approx$0.15% uncertainty in absolute time and magnetic-field calibration (1976Ha56).

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	Comments
0.0	1/2$^-$		
545.00 *10*	5/2$^-$		
1326.90 *15*	9/2$^-$		
1417.70 *18*	13/2$^-$	24.4 ns *15*	g=0.938 *8* (1976Ha56)
			μ=6.13 *9*
			T$_{1/2}$: from 90.8γ(t) (1976Ha56).
			μ: from g-factor obtained using the Time Dependent Perturbed Angular Distribution (TDPAD) in 1976Ha56 with corrections for diamagnetism and Knight shift.
1472.6 *3*	17/2$^-$	88.5 ns *15*	g=0.907 *1* (1976Ha56)
			μ=7.75 *5*; Q=(−)0.39 *8*
			T$_{1/2}$: from 54.9γ(t) (1976Ha56).
			μ: from g-factor in 1976Ha56 using TDPAD method.
			Q: from 1983Da01 using TDPAD method.
			g: Other: 0.897 *15* (1973Na18).

[†] From a least-squares fit to Eγ.

[‡] From Adopted Levels.

$\gamma(^{209}$Po)

Eγ[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.	Comments
54.9 *2*	1472.6	17/2$^-$	1417.70	13/2$^-$	E2	Mult.: A$_2$=+0.27 *2* (1976Ha56), T$_{1/2}$ rules out M2.
90.8 *1*	1417.70	13/2$^-$	1326.90	9/2$^-$	E2	Mult.: A$_2$=+0.27 *3* (1976Ha56), T$_{1/2}$ rules out M2.
545.0 *1*	545.00	5/2$^-$	0.0	1/2$^-$		
781.9 *1*	1326.90	9/2$^-$	545.00	5/2$^-$		

[†] From Adopted Gammas.

^{207}Pb(α,2nγ)   **1976Ha56**

Level Scheme