

^{206}Pb IT decay (125 μs) [1977Dr08,1972Ma24](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 109, 1527 (2008)	31-Jan-2008

Parent: ^{206}Pb : E=2200.14 4; $J^\pi=7^-$; $T_{1/2}=125 \mu\text{s}$ 2; %IT decay=100.0

[Additional information 1.](#)

Others: [1994Po20](#) and [1993Bl02](#).

 ^{206}Pb Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0.0	0 ⁺		
803.06 3	2 ⁺		
1340.54 5	3 ⁺		
1684.04 5	4 ⁺		
1997.73 5	4 ⁺		
2200.19 5	7 ⁻	125 μs 2	$\mu=-0.1519$ 28; $Q=0.5$ 2 $T_{1/2}$: From Adopted Levels. Values from IT decay are 125 μs 19 (1995An36), 126 μs 6 (1966MoZZ), 141 μs 7 (1967Co20), and 119 μs 3 (1973DaZL). μ : From $g=-0.0217$ 4 by 1972Ma24 . Other: -0.24 14 (1970Qu03). Q : From 1973DiZE . Other: ≤ 0.2 (1970Qu03). Configuration= $((\nu p_{1/2})^{-1}(\nu i_{13/2})^{-1})$.

[†] From a least-squares fit to E_γ .

[‡] From ^{206}Pb Adopted Levels.

 $\gamma(^{206}\text{Pb})$

I γ normalization: Computed using branching ratios of 100% for each of the 2⁺, 3⁺, 4⁺, 4⁺ and 7⁻ excited levels. Other: [1995An36](#).

E_γ [†]	I_γ ^{‡a}	E_i (level)	J_i^π	E_f	J_f^π	Mult. [†]	δ [†]	α ^b	Comments
202.44 [#] 3	0.10 [@] 1	2200.19	7 ⁻	1997.73	4 ⁺	[E3]		3.78	$\alpha(K)=0.426$ 6; $\alpha(L)=2.47$ 4; $\alpha(M)=0.678$ 10; $\alpha(N+..)=0.205$ 3 $\alpha(N)=0.1728$ 25; $\alpha(O)=0.0311$ 5; $\alpha(P)=0.001536$ 22
313.66 [#] 4	0.063 ^{&}	1997.73	4 ⁺	1684.04	4 ⁺	M1(+E2)		0.24 14	$\alpha(K)=0.19$ 13; $\alpha(L)=0.043$ 11; $\alpha(M)=0.0103$ 22; $\alpha(N+..)=0.0032$ 7 $\alpha(N)=0.0026$ 6; $\alpha(O)=0.00051$ 13; $\alpha(P)=4.6\times 10^{-5}$ 22
343.51 3	29 3	1684.04	4 ⁺	1340.54	3 ⁺	M1(+E2)	+0.001 3	0.297	$\alpha(K)=0.243$ 4; $\alpha(L)=0.0414$ 6; $\alpha(M)=0.00969$ 14; $\alpha(N+..)=0.00301$ 5 $\alpha(N)=0.00246$ 4; $\alpha(O)=0.000491$ 7; $\alpha(P)=5.26\times 10^{-5}$ 8 Mult.: $\alpha(K)\text{exp}=0.23$ 3, $\alpha(L)\text{exp}=0.033$ 4 and $\alpha(M)\text{exp}=0.0091$ 14 (1977Dr08).
516.18 4	93 5	2200.19	7 ⁻	1684.04	4 ⁺	E3		0.0887	$\alpha(K)=0.0483$ 7; $\alpha(L)=0.0302$ 5; $\alpha(M)=0.00783$ 11; $\alpha(N+..)=0.00239$ 4 $\alpha(N)=0.00199$ 3; $\alpha(O)=0.000371$ 6; $\alpha(P)=2.64\times 10^{-5}$ 4

Continued on next page (footnotes at end of table)

^{206}Pb IT decay (125 μs) [1977Dr08,1972Ma24](#) (continued)

$\gamma(^{206}\text{Pb})$ (continued)									Comments
$E_\gamma^\dagger$	$I_\gamma^{\ddagger a}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]	$\delta^\ddagger$	α^b	
537.47 4	30 3	1340.54	3 ⁺	803.06	2 ⁺	M1(+E2)	0.001 5	0.0900	Mult.: $\alpha(\text{K})\text{exp}=0.0516$ 5, $\alpha(\text{L})\text{exp}=0.031$ 3 and $\alpha(\text{M})\text{exp}=0.0084$ 14 (1977Dr08). $\alpha(\text{K})=0.0738$ 11; $\alpha(\text{L})=0.01240$ 18; $\alpha(\text{M})=0.00290$ 4; $\alpha(\text{N}+..)=0.000899$ 13 $\alpha(\text{N})=0.000737$ 11; $\alpha(\text{O})=0.0001469$ 21; $\alpha(\text{P})=1.575\times 10^{-5}$ 22 Mult.: $\alpha(\text{K})\text{exp}=0.0070$ 8, $\alpha(\text{L})\text{exp}=0.00132$ 21 (1977Dr08). $\alpha(\text{K})=0.041$ 3; $\alpha(\text{L})=0.0069$ 4; $\alpha(\text{M})=0.00162$ 9; $\alpha(\text{N}+..)=0.00050$ 3 $\alpha(\text{N})=0.000412$ 22; $\alpha(\text{O})=8.2\times 10^{-5}$ 5; $\alpha(\text{P})=8.8\times 10^{-6}$ 6
657.18 [#] 4	0.33 ^{&}	1997.73	4 ⁺	1340.54	3 ⁺	M1(+E2)	<0.44	0.050 4	$\alpha(\text{K})=0.00804$ 12; $\alpha(\text{L})=0.001745$ 25; $\alpha(\text{M})=0.000420$ 6; $\alpha(\text{N}+..)=0.0001290$ 18 $\alpha(\text{N})=0.0001065$ 15; $\alpha(\text{O})=2.06\times 10^{-5}$ 3; $\alpha(\text{P})=1.89\times 10^{-6}$ 3
803.06 3	100 6	803.06	2 ⁺	0.0	0 ⁺	E2		0.01033	Mult.: $\alpha(\text{K})\text{exp}=0.00808$ 7, $\alpha(\text{L})\text{exp}=0.00161$ 16 and $\alpha(\text{M})\text{exp}=0.00062$ 15 (1977Dr08). $\alpha(\text{K})=0.00674$ 10; $\alpha(\text{L})=0.001392$ 20; $\alpha(\text{M})=0.000333$ 5; $\alpha(\text{N}+..)=0.0001025$ 15 $\alpha(\text{N})=8.45\times 10^{-5}$ 12; $\alpha(\text{O})=1.643\times 10^{-5}$ 23; $\alpha(\text{P})=1.543\times 10^{-6}$ 22
880.98 4	68 4	1684.04	4 ⁺	803.06	2 ⁺	E2		0.00857	Mult.: $\alpha(\text{K})\text{exp}=0.00713$ 7, $\alpha(\text{L})\text{exp}=0.00127$ 8 (1977Dr08). $\alpha(\text{K})=0.00383$ 6; $\alpha(\text{L})=0.000697$ 10; $\alpha(\text{M})=0.0001646$ 23; $\alpha(\text{N}+..)=5.42\times 10^{-5}$ 8 $\alpha(\text{N})=4.17\times 10^{-5}$ 6; $\alpha(\text{O})=8.20\times 10^{-6}$ 12; $\alpha(\text{P})=8.15\times 10^{-7}$ 12; $\alpha(\text{IPF})=3.43\times 10^{-6}$ 5
1194.68 [#] 8	0.048 ^{&}	1997.73	4 ⁺	803.06	2 ⁺	E2		0.00474	

[†] From ^{206}Pb adopted gammas.[‡] From [1977Dr08](#), unless otherwise noted.[#] Assignment of this γ -ray is based on data of ^{206}Pb adopted gammas.[@] Computed from branching ratio in ^{206}Pb adopted gammas.[&] Computed from branching ratio in ^{206}Pb adopted gammas and intensity of the 202.4 γ .^a For absolute intensity per 100 decays, multiply by 0.98 3.^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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