Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 111,275 (2010)	1-Oct-2009

Q(β^-)=−1.224×10^4 *8*; S(n)=1.155×10^4 *3*; S(p)=1753 *16*; Q(α)=6774 *4* 2012Wa38
Note: Current evaluation has used the following Q record −12090 syst 11550 *30* 1747 17 *6774* 4 2003Au03,2009AuZZ.
Uncertainty in Q(β^-) is 130 (2003Au03, 2009AuZZ).
Production: ^{147,148}Sm(^{40}Ca,xn), E(^{40}Ca)≈260 MeV (1980Du02).
For isotope shift data see, e.g., 2007De09.

^{184}Pb Levels

Cross Reference (XREF) Flags

A ^{148}Sm(^{40}Ca,4nγ)
B ^{188}Po α decay
C ^{185}Bi p decay

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0	0$^+$	490 ms *25*	ABC	%α=80 *15* (2004An07); %ε+%β^+=20 *15* Δ<r^2>(^{184}Pb,^{208}Pb)=−1.150 *5* (2007De09). See also 2006Se18. %α: From 2004An07. This value is very different from %α=23 *14* reported by 2001Po05; however, it does fit smoothly into the systematics of reduced widths for even-mass Pb isotopes. $T_{1/2}$: weighted average of 550 ms *60* (1980Sc09) and 480 ms *25* (1999To11). Other values: 315 ms *+170−80*, 530 ms *+700−200* (1999An52); 530 ms *+80−60* (1982HeZM). From α(t). J$^\pi$: g.s. of even-even nucleus.
570# *30*	(0$^+$)		B	E(level): from ^{188}Po α decay. J$^\pi$: (E0) transition to 0$^+$ g.s.; E(level) consistent with systematics for excited 0$^+$ states in nearby even-A Pb isotopes. Very tentatively associated with 0$^+$ prolate structures known in ^{186}Pb and ^{188}Pb (1999An52); however, a 0$^+$ oblate state is also expected (based on systematics) at comparable energy, and the proximity of these states may result in highly mixed configurations.
701.5#	(2$^+$)		A	
938.9#	(4$^+$)		A	
1261.6#	(6$^+$)		A	
1663.4#	(8$^+$)		A	

† From adopted Eγ, except as noted.
‡ E(702 level) fits J^π=2$^+$ level-energy systematics for Pb isotopes; the 402γ-323γ-237γ cascade appears to form a rotational band similar to bands built on 2$^+$ states in ^{186}Pb and ^{188}Pb (1998Co27).
# Band(A): K$^\pi$=0$^+$ prolate band?. Band parameters: A=18.6, B=−36 (J=2,4,6 band members).

Adopted Levels, Gammas (continued)

$\gamma(^{184}Pb)$

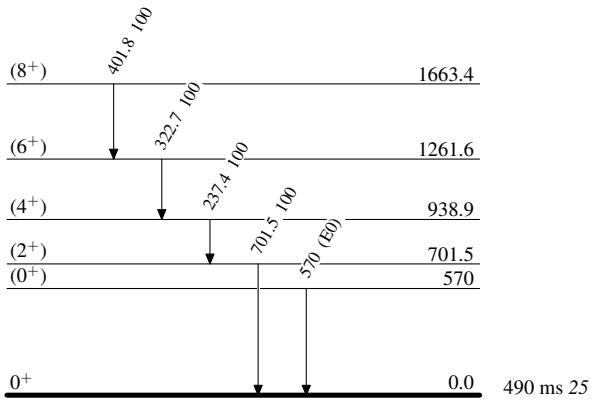
E_i(level)	J_i^π	E_γ †	I_γ	E_f	J_f^π	Mult.	Comments
570	(0^+)	570		0.0	0^+	(E0)	E_γ: from level energy difference; ce only were observed, E(ce) unstated by authors. Mult.: from ^{188}Po α decay, based on observation of ce-α coin but absence of γ-α coin in ^{188}Po α decay.
701.5	(2^+)	701.5	100	0.0	0^+		
938.9	(4^+)	237.4	100	701.5	(2^+)		
1261.6	(6^+)	322.7	100	938.9	(4^+)		
1663.4	(8^+)	401.8	100	1261.6	(6^+)		

† From ^{148}Sm(^{40}Ca,4nγ), except as noted; uncertainties unstated by authors.

Adopted Levels, Gammas

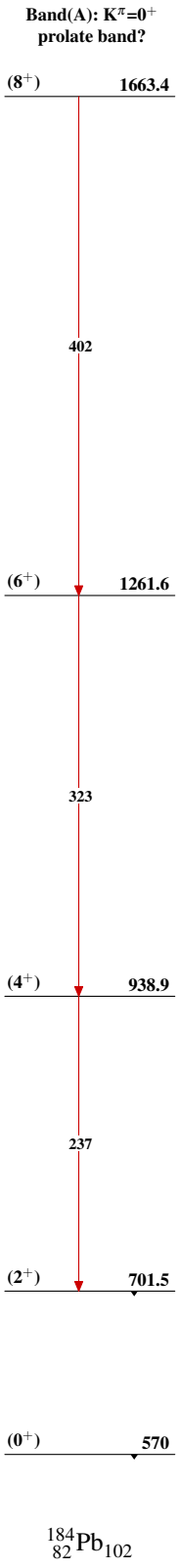
Level Scheme

Intensities: Relative photon branching from each level



$^{184}_{82}Pb_{102}$

Adopted Levels, Gammas



$^{184}_{82}Pb_{102}$