Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110,999 (2009)	1-Nov-2008

S(n)=9.33×10^3 *5*; S(p)=1.33×10^3 *7*; Q(α)=7979 *15* 2012Wa38
Note: Current evaluation has used the following Q record 9480 1770 7979 15.
S(n),S(p): From 1997Mo25 (Calculated).
Q(α): From Eα=7528 *15* to E=286 *1* level in ^{183}Pb (2006An11).
Production: ^{144}Sm(^{46}Ti,3n), E=224 *1* MeV; 96.47% ^{144}Sm enriched target; recoils separated in flight by SHIP velocity filter then implanted into 16-strip Si position-sensitive detector; Time-of-flight veto of beam particles; four-fold segmented Clover Ge detector; measured Eα, Iα, Iγ, recoil-γ coin, recoil-α-γ coin (particle-γ $\Delta T_{1/2} \leq 5$ μs) (2006An11; see also 2007An19).
Identification: observed 7528α is in prompt coincidence with 286γ in ^{183}Pb and correlated with both known α decays from the g.s. of the ^{183}Pb daughter and also with the known α decays from ^{179}Hg and ^{175}Pt.

^{187}Po Levels

E(level)	J$^\pi$	$T_{1/2}$[†]	Comments
0.0	(1/2$^-$,5/2$^-$)	1.40 ms *25*	%α≈100 %α: Only α decay has been observed. %α=99.9 is estimated by the evaluator using the partial $T_{1/2}$=0.71 s (β decay) and partial $T_{1/2}$=0.74 ms (α decay) data calculated by 1997Mo25. J$^\pi$: α decay to 286 level in ^{183}Pb is probably unhindered and that level deexcites via an M1 γ to the spherical (3/2$^-$) g.s. of ^{183}Pb. Based on potential energy surface calculations, 2006An11 interpret ^{187}Po g.s. and ^{183}Pb(286 level) as being of prolate origin and particle plus rotor calculations predict two closely-spaced, low-lying π=− orbitals, namely, 5/2$^-$[512] (of mixed $2f_{7/2}$ and $1h_{9/2}$ origin) and 1/2$^-$[521] ($2f_{5/2}$). Assignment supported by systematics of lowest energy states of isotone chains with N=101 and N=103 of the ^{183}Pb and ^{187}Po isotopes.

[†] From α(t) (2006An11).