^{203}Rn α decay (44 s) 1993Wa04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	01-Dec-2015

Parent: ^{203}Rn: E=0; $J^{\pi}=(3/2^-)$; $T_{1/2}$=44 s *2*; Q(α)=6629.8 *21*; %α decay=66 *9*
^{203}Rn-$T_{1/2}$: From ^{203}Rn Adopted Levels in ENSDF database.
^{203}Rn-Q(α): From 2012Wa38.
^{203}Rn-%α decay: %α=66 *9* for ^{203}Rn α decay taken from ^{203}Rn Adopted Levels in ENSDF database.
Others: 1996Ta18, 1995Uu01, 1978HoZZ, 1971Ho01, 1967Va17.

^{199}Po Levels

E(level)	J^{π}[†]
0	$(3/2^-)$
72	$(5/2^-)$

[†] From Adopted Levels.

α radiations

Eα	E(level)	Iα[#]	HF[‡]	Comments
(6428.6[†] *25*)	72	2.6[†] *CA*	30 *SY*	Eα: from 1993Wa04.
6499 *2*	0	97[†]	1.6 *2*	Eα: weighted average of 6499 *2* (1996Ta18), 6499 *10* (1995Uu01), 6499.3 *25* (1993Wa04), 6497 *5* (1967Va17).

[†] If ^{203}Rn g.s. is $3/2^-$ (as expected from systematics), the main α branch would go to ^{199}Po g.s. and an ≈2.6% branch is expected (from HF syst of 1980Sc26) to populate the 72-keV $5/2^-$ state. If, however, the ^{203}Rn g.s. has J=5/2, then the 6499.2α (Iα≈97%) is expected to feed the 72-keV level and an ≈3% 6568.8α is expected to populate the ^{199}Po g.s.
[‡] $r_0(^{199}Po)$=1.508 *10*.
[#] For absolute intensity per 100 decays, multiply by 0.66 *9*.