^{167}Re α decay (5.9 s) 1992Me10

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich, Balraj Singh	NDS 111, 1211 (2010)	12-Apr-2010

Parent: ^{167}Re: E=130 *SY*; $J^{\pi}=(1/2^{+})$; $T_{1/2}$=5.9 s *3*; Q(α)=5280 *SY*; %α decay≈1.0

^{167}Re-Q(α): From 2003Au03, 2009AuZZ. The uncertainty associated with this estimate is 40 (2003Au03,2009AuZZ).

^{167}Re-E: The energy of the ^{167}Re isomeric state is from systematics (2003Au02). The uncertainty of this estimate is 40. Note that the evaluation of 2000Ba65 identifies this activity As the ^{167}Re g.s..

^{167}Re-$T_{1/2}$: As reported by 2000Ba65 In the Adopted Values for ^{167}Re. IT represents a weighted average of: 6.2 s *5* (α(t), 1992Me10); 6.6 s *15* (1984Sc06, originally assigned to the ^{168}Re isomer); 5.5 s *5* (1978Ca11, originally assigned to the ^{168}Re g.s.).

^{167}Re-J^{π}: From systematics (2003Au02). Tentative configuration is π1/2[411].

^{167}Re-%α decay: %$\alpha \approx 1$, if 136.6 and 221.3 are the only γ's from the ε decay of ^{167}Re (5.9 s).

Additional information 1.

1992Me10: ^{167}Re produced by ^{141}Pr(^{32}S,X) and identified through several cross-bombardment reactions. Measured Eα, γ, estimated %α. Two weak γ rays possibly from the ε decay of ^{167}Re are reported at 136.6 and 221.3 with $T_{1/2}$= 5.7 s *14*.

^{163}Ta Levels

E(level)
0.0

α radiations

Eα	E(level)	Comments
5263 *12*	0.0	Eα: from 1992Me10. Others: 5250 *10* (1984Sc06) and 5279 *3* (1982De11) were assigned to ^{168}Re α decay. It is assumed that this transition feeds the ^{163}Ta g.s.