^{167}W α decay (19.9 s) 1989Me02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	31-Dec-2014

Parent: ^{167}W: E=0.0; $T_{1/2}$=19.9 s *5*; Q(α)=4740 *28*; %α decay=0.04 *1*

^{167}W-J$^{\pi}$: From systematics, a low-lying 5/2$^-$ with 5/2[523] configuration is expected, but the energy of such a level is not established. It may belong to the g.s. of ^{167}W. 2012Au07 proposed 3/2$^-$ from syst. In 2000Ba65 evaluation, the g.s. of ^{167}W was suggested to be of positive parity based on possible β decay feeding.

^{167}W-Q(α): From 2012Wa38. From Eα=4559 *13*, Q(α) is computed to be 4671, assuming that the α transition feeds the ^{163}Hf g.s.

^{167}W-$T_{1/2}$: From ^{167}W Adopted Levels in ENSDF database or in 2000Ba65 evaluation.

^{167}W-%α decay: %α=0.04 *1* from 1989Me02, assuming no ground-state $\varepsilon+\beta^+$ branch.

1989Me02 (also 1991Me05): ^{167}W produced by bombardment of ^{136}Ba and ^{138}Ba by ^{36}Ar and ^{40}Ar. He-jet. Measured α's (Si), γ. Assignment by cross bombardment and coin counting with x-rays.

^{163}Hf Levels

E(level)	J$^{\pi}$	Comments
0.0	(5/2$^-$)	J$^{\pi}$: from Adopted Levels.

α radiations

Eα	E(level)	Comments
4559[†] *13*	0.0	Eα: from 1991Me05. Other: 4550 *20* (1989Me02). It is assumed that this α transition feeds ^{163}Hf g.s. However, the difference between Eα and the implied Q(α) value suggests that this may not be the case.

[†] Existence of this branch is questionable.