^{263}Hs α decay 2009Dr02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 114, 1041 (2013)	1-Aug-2011

Parent: ^{263}Hs: E=0; $T_{1/2}$=0.74 ms *+48−21*; Q(α)=11058 *61*; %α decay=100.0

^{263}Hs-E: the activity produced in this experiment is assumed to correspond to the g.s. of ^{263}Hs.

^{263}Hs-$T_{1/2}$: from 2009Dr02.

^{263}Hs-Q(α): from Eα=10890 *60* (2009Dr02).

^{263}Hs-%α decay: %$\alpha \approx 100$, %SF≤8.4 (2009Dr02).

The ^{263}Hs isotope formed in the cold fusion reaction ^{208}Pb(^{56}Fe,n) E=280 MeV at the 88 inch cyclotron facility at LBNL.

Evaporation residues were separated by the Berkeley Gas Separator. Six correlated α-decay chains were recorded.

Three α-energy groups were assigned to the decay of ^{263}Hs: 10.57 MeV *6*, 10.72 MeV *6* and 10.89 MeV *6*.

Production σ=21 pb +13-9 at 276.4 MeV center-of-target lab frame energy (2009Dr02) (from six events).

^{259}Sg Levels

E(level)	$T_{1/2}$	Comments
0	0.29 s *5*	$T_{1/2}$: from Adopted Levels. For J^{π} assignment see Adopted Levels.

α radiations

Eα	E(level)	Comments
10570† *60*		
10720† *60*		
10890 *60*	0	Eα: the 10.89-MeV α group is assumed to be a transition from ^{263}Hs g.s. to ^{259}Sg g.s.

† This α group either populates an excited state in ^{259}Sg or is associated with an isomeric activity in ^{263}Hs.