

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Agda Artna-cohen	NDS 88,155 (1999)	31-Jul-1999

Q( $\beta^-$ )=-5.8×10<sup>3</sup> syst; S(n)=6.73×10<sup>3</sup> 4; S(p)=2.45×10<sup>3</sup> syst; Q( $\alpha$ )=10470 16 2012Wa38  
 Note: Current evaluation has used the following Q record -6100 syst 6600 syst 2400 syst 10586 15 1995Au04.  
 Estimated  $\Delta Q(\beta^-)$ =600,  $\Delta S(n)$ =300,  $\Delta S(p)$ =400 (1995Au04).  
 Q( $\alpha$ ): From E $\alpha$  (1999He11); Q( $\alpha$ )=10430 120 (systematics, 1995Au04).

Calculations, compilations:  
 Favored  $\alpha$  decay: 1993Bu09.  
 g.s. properties: 1997Mo25, 1995Mo29.  
 Pion emission: 1991Io03.  
 Single-particle Nilsson levels: 1994Cw02.

1994Cw02 calculate the following single-particle level sequence: g.s. 7/2[613], 0.00 MeV 3/2[622], 0.01 MeV 11/2[725], 0.02 MeV 1/2[620], 0.09 MeV 9/2[615], 0.90 MeV 9/2[734].

Assignment:  
<sup>208</sup>Pb(<sup>58</sup>Fe,n) excit. Parent of <sup>261</sup>Sg, grandparent of <sup>257</sup>Rf; correlated  $\alpha$  chains were measured (1995Ho03,1984Mu17,1987Mu15).  
<sup>208</sup>Pb(<sup>58</sup>Fe,n) 5.5 MeV/nucleon. Decay product <sup>253</sup>Es was detected by radiochemical methods (1984DeZO,1984Og03).

<sup>265</sup>Hs Levels

Cross Reference (XREF) Flags

A <sup>269</sup>110  $\alpha$  decay

E(level)	T <sub>1/2</sub>	XREF	Comments
0.0	2.0 ms +3-2		% $\alpha$ ≈100; %SF≤1 T <sub>1/2</sub> : from 1999He11; others: 1.55 ms 20 (1995Ho03), 1.8 ms +22-7 (1987Mu15). No SF observed, no evidence for $\beta$ decay found (1987Mu15). No SF observed (1984Og03,1984Og02). %SF: from 1999He11. Calculated: T <sub>1/2</sub> ( $\alpha$ )≈8.5×10 <sup>-2</sup> , T <sub>1/2</sub> ( $\epsilon$ + $\beta^+$ )≈3 s (1997Mo25); T <sub>1/2</sub> ( $\alpha$ )≈3×10 <sup>-3</sup> s (1990Ha26); T <sub>1/2</sub> ( $\alpha$ )≈1 s, T <sub>1/2</sub> (SF)≈1×10 <sup>4</sup> s (1988Lo03).
≥300	0.75 ms +17-12		% $\alpha$ ≈100; %SF≤1 (1999He11) E(level)=303 22 (from E $\alpha$ of 1999He11) if the highest energy $\alpha$ groups of both <sup>265</sup> Hs isomers feed the g.s. of <sup>261</sup> Sg. T <sub>1/2</sub> : from 1999He11.
0.0+x		A	E(level): x=400 100 from Q( $\alpha$ )=11680 100 (systematics, 1995Au04) and E $\alpha$ .