Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 154, 1 (2018)	20-Nov-2018

S(p)=−1094 *10*; Q(α)=4450 *SY* 2017Wa10
ΔQ(α)=710 based on syst.
Experimental works:
1999Ry04: Observed in ^{92}Mo(^{54}Fe,p5n), E=315 MeV, $\sigma\approx$13 nb, recoil mass separator with PSAC/DDSD detectors at focal plane (ORNL). Supersedes 1999BaZR, 1999RyZZ, 1998BaZU.
Theoretical works:
J^{π} calculations: 2005Fe06, 2002Ma62, 2002Ma75, 2001Fe05, 1999La10 and 2000Ka19.
2005Ba04: Q(α)=4165 keV, $T_{1/2}(\alpha)$=95060 s.
2001Go20: β_2=0.34, β_4=−0.05, S(p)=−1.0 MeV.
1999La10: S(p)=−1.10 MeV, β_2=0.31, theoretical spectroscopic factor S^{th}=0.61 for [523]7/2$^-$ odd proton orbital.
1997Mo25: S(p)=−0.81 MeV, S(2p)=0.62 MeV, Q(α)=4.16 MeV, $T_{1/2}(\beta)$=0.1813 s, $T_{1/2}(\alpha)$=11220 s.
1995Mo29: β_2=0.297, β_4=−0.070, β_6=0.005.
1995Ab38: β_2=0.36, β_4=−0.05, S(p)=−0.8 MeV.

^{140}Ho Levels

E(level)	J^{π}	$T_{1/2}$	Comments
0.0	(6$^-$,0$^-$,8$^+$)	6 ms *3*	%p=100 Since measured $T_{1/2}$ is far shorter than expected for other decay modes, we adopt %p=100. E(level): assuming that the proton connects the ground state of ^{140}Ho and ^{139}Dy. $T_{1/2}$: from 1999Ry04. J^{π}: from 2001Fe05, from coupling between a proton at [523]7/2$^-$ orbital and a neutron at [402]5/2$^+$, [404]7/2$^+$ and [514]9/2$^-$ orbitals; 8$^+$ based on syst (2017Au03).