Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, G. C. Sheu	ENSDF	1-Jan-2014

S(n)=18.68×10^3 *11*; S(p)=0.50×10^3 *12* 2012Wa38

^{19}Mg decays by 2p emission; while the ground state appears to decay by "true 2p emission" the excited states decay sequentially via states in ^{18}Na. Theoretical analysis of the systematics for 2p emission in nuclear decay using the T- and Y- Jacobi coordinate systems is given in (2000Gr16,2001Gr16,2001Gr29,2003Gr24,2010Gr06). See also (2003Gr01,2003Gr04) and (2013Ol02).

Rigorous shell-model predictions are presented for the ^{19}Mg ground state (2010Fo07,2011Fo05,2012Fo10,2012Fo05) and excited state (2013Fo05) structures.

^{19}Mg Levels

Cross Reference (XREF) Flags

A ^{9}Be(^{36}Ar,^{19}Mg)
B ^{9}Be(^{20}Mg,2p17ne)

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0	1/2$^-$	1.14×10^{-4} eV	B	%2p≈100 Decays to ^{17}Ne+2p.
1.38×10^3 *24*	(3/2$^-$)	0.4 MeV *2*	B	%p≈100 Decays to ^{18}Na*(0,320).
2.14×10^3 *21*	(5/2$^-$)	0.6 MeV *6*	B	%p≈100 T$_{1/2}$: 0.6 MeV *+6−4*. Decays to ^{18}Na*(320,854).
2.84×10^3 *21*	(3/2$^-$)	<0.2 MeV	B	%p≈100 Decays to states in ^{18}Na.
4.74×10^3 *21*	(3/2$^-$)	2.0 MeV *8*	B	%p≈100 Decays to ^{18}Na*(320).