

Adopted Levels

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, G. C. Sheu	ENSDF	29-July-2015

Q(β^-)=-1.890×10⁴ 5; S(n)=2.018×10⁴ 11; S(p)=-322 11; Q(α)=-6.31×10³ 6 [2012Wa38](#)

For discussion on energy shifts and the Isobaric Multiplet Mass Equation (IMME) for the A=19 T_z=3/2 isobars see (Cerney, Ann Rev Nucl Sci 18 (1968) 27, [1969Ce01](#), [1969Mu09](#), [1975Be38](#), [1988Co15](#), [2013Ho01](#), [2014Yu02](#)).

For other general theoretical predictions see ([1975Ca27](#), [1977Sh13](#), [1978Gu10](#), [1987Po01](#), [2003Jh01](#), [2004Ge02](#), [2005Ma98](#), [2008Qi04](#), [2010Pe15](#)).

¹⁹Na Levels

Cross Reference (XREF) Flags

- A P(¹⁸Ne,P):resonances
- B ⁹Be(²⁰Mg, ¹⁹Na)
- C ²⁴Mg(p, ⁹He)
- D ²⁴Mg(³He, ⁸Li)

E(level)	J ^{π}	T _{1/2}	L	S	XREF	Comments
0	(5/2 ⁺)	<40 keV			BCD	%p≈100 (2010Mu12) state that Γ <40 keV reflects the experimental resolution of the detector system. The actual Γ is expected to be <1 eV.
120 10	(3/2 ⁺)				D	Decays to ¹⁸ Ne _{g.s.} %p≈100
745 12	1/2 ⁺	101 keV 3	0		A	Decays to ¹⁸ Ne _{g.s.} %p≈100 E(level),J ^{π} ,T _{1/2} ,L: from (2003An02). Others: (2005De15 , 2006Sk09). E _{res} (cm)=1066 keV 3 (2003An02). E(level): the corresponding level is at 1471.7 keV in the mirror nucleus ¹⁹ O.
2459 † 32	(5/2,3/2) ⁺ †	105 † keV 10		0.43 † 5	A	%p≈100 Decays mainly to ¹⁸ Ne*(1887).
2769 † 61	(3/2,5/2) ⁺ †	250 † keV 50		0.12 † 4	A	%p≈100 Decays mainly to ¹⁸ Ne*(1887).
4371 † 10	3/2 ⁻ †	30 † keV 10			A	%p≈100 Decays to ¹⁸ Ne _{g.s.}
4903 † 10	3/2 ⁻ †	50 † keV 10			A	%p≈100 Decays to ¹⁸ Ne _{g.s.}
5585 † 32		695 † keV 72			A	%p≈100 Sequential decay via ¹⁸ Ne*(4520,4523) to ¹⁷ F _{g.s.} is suggested.
5809 † 76		0.46 † MeV 22			A	%p≈100 Sequential decay via ¹⁸ Ne*(4589) to ¹⁷ F*(495) is suggested. E(level): 5809 and 5815 probably correspond to different decay modes of the same state.
5815 † 17		141 † keV 18			A	%p≈100 Sequential decay via ¹⁸ Ne*(5106,5153) to ¹⁷ F _{g.s.} is suggested.

Continued on next page (footnotes at end of table)

Adopted Levels (continued) **${}^{19}\text{Na}$ Levels (continued)**

† From [\(2008Pe02\)](#).

‡ From [\(2005De15\)](#).