^{48}Mn εp decay: partial 1991Sz03,1987Se07

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows	NDS 108,923 (2007)	20-Feb-2007

Parent: ^{48}Mn: E=0.0; $J^\pi=4^+$; $T_{1/2}$=158.1 ms *22*; Q(εp)=5.39×10^3 *11*; %εp decay=28.0 *37*

^{48}Mn-E,J^π,$T_{1/2}$: From the Adopted Levels in 2006Bu08.

^{48}Mn-Q(εp): From 2003Au03.

^{48}Mn-%εp decay: From simultaneous measurement of protons and the ^{48}Mn 752γ (1991Sz03).

Measured γ′s, γ(t), and γγ-coincidences; β^+′s, β(t), and βγ-coincidences (scin); βγγ-coincidences (scin, HPGe); and β-delayed charged particles (semi); on-line mass separation, tape transport. Deduced Gamow-Teller quenching factor.

^{47}V Levels

All data are from the Adopted Levels.

E(level)	J^π	$T_{1/2}$	Comments
0.0	$3/2^-$	32.6 min *3*	%ε+%β^+=100
87.525 *9*	$5/2^-$		
145.821 *15*	$7/2^-$		
259.486 *4*	$3/2^+$		
660.358 *9*	$5/2^+$		

γ(^{47}V)

E,M,MR,CC From the Adopted Gammas, except as noted.

E_γ	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	α[#]	Comments
58.2 *1*	67 *12*	145.821	$7/2^-$	87.525	$5/2^-$	(M1(+E2))	≤0.0449	0.100 *6*	α(K)=0.090 *5*; α(L)=0.0086 *5*; α(M)=0.00113 *7*; α(N+..)=5.6×10^{-5} *3* α(N)=5.6×10^{-5} *3*
87.5 *1*	68 *19*	87.525	$5/2^-$	0.0	$3/2^-$	M1+E2	+0.125 *21*	0.041 *4*	α(K)=0.037 *3*; α(L)=0.0035 *3*; α(M)=0.00046 *4*; α(N+..)=2.27×10^{-5} *18* α(N)=2.27×10^{-5} *18*
(145.7)	0.56 *19*	145.821	$7/2^-$	0.0	$3/2^-$	(E2)		0.0870 *16*	α(K)=0.0796; α(L)=0.00765
(172.2 *6*)	≤0.32	259.486	$3/2^+$	87.525	$5/2^-$	(E1(+M2))	≤0.0059	0.00591 *11*	α(K)=0.00535 *10*; α(L)=0.000488 *9*; α(M)=6.37×10^{-5} *12*; α(N+..)=3.26×10^{-6} *6* α(N)=3.26×10^{-6} *6*
(259.4 *5*)	≤2.35	259.486	$3/2^+$	0.0	$3/2^-$	(E1(+M2))	≤0.0057	0.00173 *3*	α(K)=0.001564 *24*; α(L)=0.0001425 *22*; α(M)=1.86×10^{-5} *3*; α(N+..)=9.58×10^{-7} *15* α(N)=9.58×10^{-7} *15*
(400.8 *5*)	≤0.59	660.358	$5/2^+$	259.486	$3/2^+$	M1		0.000732 *11*	α(K)=0.000663 *10*; α(L)=6.08×10^{-5} *9*; α(M)=7.97×10^{-6} *12*; α(N+..)=4.14×10^{-7} *6* α(N)=4.14×10^{-7} *6*
(514.5)	≤0.37	660.358	$5/2^+$	145.821	$7/2^-$	(E1(+M2))	≤0.012	0.000262 *4*	α(K)=0.000238 *4*;

Continued on next page (footnotes at end of table)

^{48}Mn εp decay: partial 1991Sz03,1987Se07 (continued)

γ(^{47}V) (continued)

E_γ	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	α[#]	Comments
									α(L)=2.16×10^{-5} *3*; α(M)=2.83×10^{-6} *4*; α(N+..)=1.470×10^{-7} *21* α(N)=1.470×10^{-7} *21*
(572.5 *5*)	≤0.28	660.358	5/2$^+$	87.525	5/2$^-$	(E1(+M2))	≤0.018	0.000202 *3*	α(K)=0.000183 *3*; α(L)=1.663×10^{-5} *24*; α(M)=2.18×10^{-6} *3*; α(N+..)=1.131×10^{-7} *17* α(N)=1.131×10^{-7} *17*
(660.1 *3*)	≤0.76	660.358	5/2$^+$	0.0	3/2$^-$	(E1(+M2))	≤0.014	0.0001440 *21*	α(K)=0.0001306 *19*; α(L)=1.187×10^{-5} *17*; α(M)=1.554×10^{-6} *22* α(N+..)=8.09×10^{-8} *12* α(N)=8.09×10^{-8} *12*

† From adopted branching ratios and Ip+ΣIγ(1+α) feeding state.
‡ For absolute intensity per 100 decays, multiply by 0.280 *37*.
# Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

Delayed Protons (^{47}V)

Particle normalization: From simultaneous measurement of protons and the ^{48}Mn 752γ (1991Sz03).

E(^{47}V)	I(p)[†‡]	Comments
0.0	28 *18*	I(p): from 100−ΣIp (evaluator). ≥26 (1991Sz03).
87.525	2 *13*	
145.821	68 *12*	
259.486	≤2	
660.358	≤2	

† From 1991Sz03, except as noted.
‡ For absolute intensity per 100 decays, multiply by 0.280 *37*.

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