Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. K. Tuli, E. Browne	NDS 157, 260 (2019)	1-Mar-2019

Q(β^-)=−11720 *SY*; S(n)=13801 *SY*; S(p)=1919 *SY*; Q(α)=−2342 *SY* 2017Wa10
S(n),S(p),Q(α): systematic uncertainties are 500 keV, 500 keV, 423 keV, respectively (2017Wa10).
Q(εp)=6334 *300* (syst,2017Wa10).
2001Ga24 (also 1999Lo07,1998Lo17): ionized ^{92}Mo on Ni, E=60 MeV/nucleon. Measured fragments, separated and identified by energy loss, kinetic energy and tof, as function of time, β^+(t) Si detector.
2001Ki13, 2002Fa13: ^{112}Sn on Be target, E=1 GeV/nucleon; identified isotopically separated fragments using ionization chambers and scin detectors. Measured half-life and fragment decay stopped in a 4π microcalorimeter. 2002Fa13 give half-life in a plot of half-lives vs. mass number, where the value appears the same as in 2001Ki13.
Additional information 1.
1992Ye04: ^{58}Ni(^{92}Mo,X), E=70 MeV/nucleon; measured fragment mass, charge.
Calculations (superallowed Fermi β+ decay): 2012Sa50. G-T strength (2008Pe31).

^{82}Nb Levels

Cross Reference (XREF) Flags

A ^{9}Be(^{107}Ag,Xγ)

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	XREF	Comments
0.0	(0$^+$)	50 ms *6*	A	%ε+%β^+=100; %εp=? T=1 $T_{1/2}$: weighted average of 48 ms *+8−6* (2001Ki13) and 52 ms *6* (2001Ga24). Earlier result from 2001Ga24: 50 ms *4* (1998Lo17,1999Lo07). J$^\pi$: possible superallowed Fermi decay to 0$^+$ (log *ft*=3.52 *14*) (2002Fa13).
418	(2$^+$)		A	T=1
1056	(4$^+$)		A	T=1
1180	(5$^+$)	92 ns *17*	A	%IT=100 T=0 $T_{1/2}$: from γ(t) in ^{9}Be(^{107}Ag,xγ) (2008Ga04). J$^\pi$: from comparison with shell-model calculations (2008Ga04), a 5$^+$ T=0 state lies just above the T=1, 4$^+$ state, whereas T=0, 6$^+$ state lies much higher. Possible configuration=ν5/2[422]⊗π5/2[422], K^π=5$^+$.

[†] Excited states and associated γ rays are from in-beam study and search for isomer by 2008Ga04.
[‡] As assigned in 2009Ga40, based on shell-model predictions and systematics of odd-odd nuclei in this mass region.

γ(^{82}Nb)

E$_i$(level)	J$_i^\pi$	E$_\gamma$	E$_f$	J$_f^\pi$	Mult.	Comments
418	(2$^+$)	418	0.0	(0$^+$)		
1056	(4$^+$)	638	418	(2$^+$)		
1180	(5$^+$)	124	1056	(4$^+$)	(M1+E2)	Mult.: from α(exp) (2008Ga04) and J^π.

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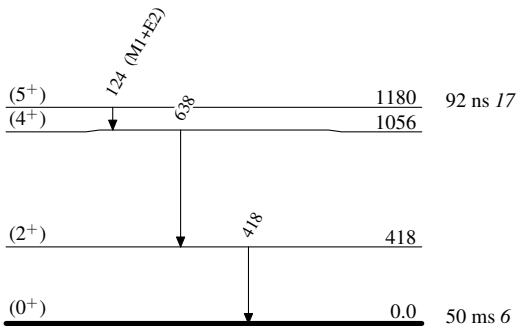
Level Scheme



$^{82}_{41}Nb_{41}$