Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde	NDS 121, 1 (2014)	20-Jun-2014

Q(β^-)=−17480 *SY*; S(n)=1.766×10^4 *6*; S(p)=3.85×10^3 *5*; Q(α)=−7.16×10^3 *8* 2012Wa38
ΔQ(β^-): syst=510.
Additional information 1.

^{54}Ni Levels

Cross Reference (XREF) Flags

A	^{54}Ni IT decay:152 ns	D	Coulomb excitation
B	^{55}Zn εp decay:19.8 ms	E	^{58}Ni(α,^{8}He) E=110 MeV
C	^{24}Mg(^{32}S,2nγ)	F	^{9}Be(^{55}Ni,Xγ)

E(level)†	J$^\pi$‡	T$_{1/2}$	XREF	Comments
0.0#	0$^+$	114.2 ms *3*	ABCDEF	%ε+%β^+=100 T$_{1/2}$: From 2012MoZW. Others: 113 ms *9* (2013Su07), 114 ms *5* (2008Fu04), 103 ms *9* (2002Lo13, 2002Bl17), 106 ms *12* (1997Wo06, 1999Re06), and 143 ms *23* (1995ReZY).
1392.3# *4*	2$^+$	0.89 ps *17*	A CD F	B(E2)↑=0.061 *12* T$_{1/2}$: from B(E2) (Coulomb Excitation).
2000			E	E(level): from ^{58}Ni(α,^{8}He).
2619.7# *6*	4$^+$		A C F	
3070.7# *7*	6$^+$		A C	
6311.3# *9*	8$^+$		A	
6457.4# *9*	10$^+$	152 ns *4*	A	%IT=64 *2*; %p=36 *2* (2012Au07) T$_{1/2}$: From ^{54}Ni IT decay (2008Ru09).

† From least-squares fits to Eγ's, except as noted.
‡ From comparisons with relevant decays of mirror nucleus ^{54}Fe and shell-model calculations.
# Band(A): Yrast sequence.

γ(^{54}Ni)

E$_i$(level)	J$_i^\pi$	E$_\gamma$†	I$_\gamma$†	E$_f$	J$_f^\pi$	Mult.†‡	α#	Comments
1392.3	2$^+$	1392.3 *4*	100	0.0	0$^+$	[E2]		B(E2)(W.u.)=10.0 *20*
2619.7	4$^+$	1227.4 *4*	100	1392.3	2$^+$	[E2]		
3070.7	6$^+$	451.0 *3*	100	2619.7	4$^+$	[E2]		
6311.3	8$^+$	3240.7 *7*	100	3070.7	6$^+$			
6457.4	10$^+$	146.1 *2*	100.0 *12*	6311.3	8$^+$	[E2]	0.135	B(E2)(W.u.)=2.47 *12*
		3386.2 *9*	6.1 *13*	3070.7	6$^+$	[E4]		B(E4)(W.u.)=5.7 *13*

† From ^{54}Ni IT decay: 152 ns.
‡ Based on J$^\pi$'s assignments.
# 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.

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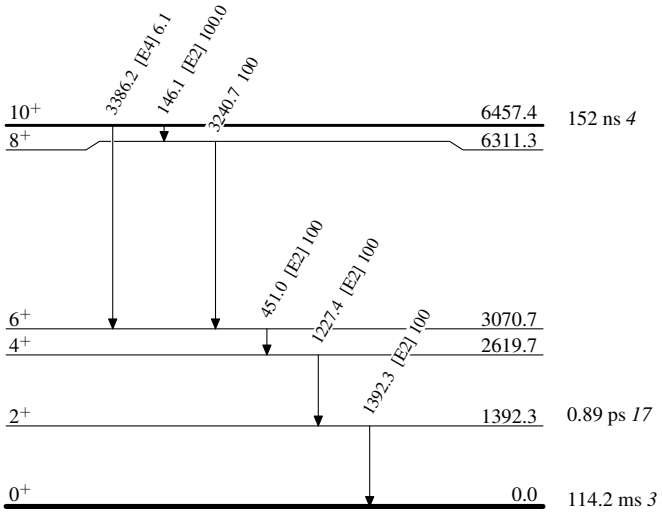
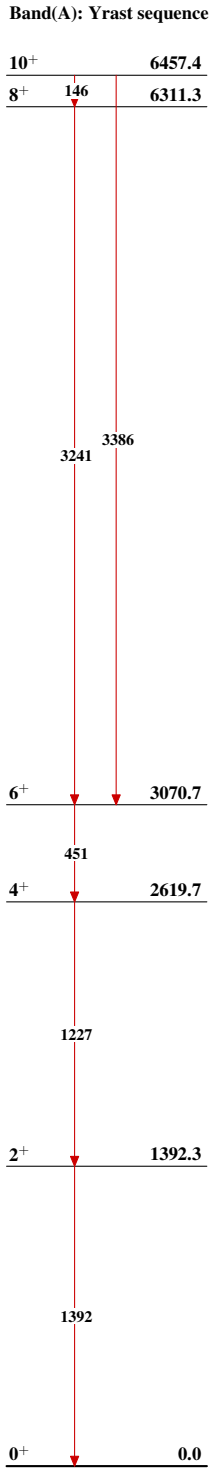
Level Scheme

Intensities: Relative photon branching from each level



$^{54}_{28}Ni_{26}$

Adopted Levels, Gammas



$^{54}_{28}Ni_{26}$