Ni(^{86}Kr,Xγ),Be(^{76}Ge,X) 1998Gr14,2003Ma50

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Khalifeh Abusaleem, Balraj Singh	NDS 112, 133 (2011)	30-Nov-2010

1998Gr14: Ni(^{86}Kr,Xγ) E=60.3 MeV/nucleon. Measured Eγ, $\gamma\gamma$, γ(t) fragment-γ coin. using Alpha and LISE3 spectrometers.
2003Ma50: ^{9}Be(^{76}Ge,X) E=60 MeV/nucleon. Measured prompt and delayed Eγ, level lifetime.
The γ-ray data are from 1998Gr14. Half-life of 2622.7 level was measured by 2003Ma50 and that of the 2755.7 level by 1998Gr14.

^{71}Cu Levels

E(level)[†]	J$^\pi$	$T_{1/2}$	Comments
0.0[‡]	3/2$^{(-)}$		
534.3 *3*			
981.0? *3*			
1189.5[‡] *3*	(7/2$^-$)		
1633.0? *11*			
1786.5 *4*			
2128.6[‡] *4*	(11/2$^-$)		
2151.6? *5*			
2622.7[‡] *4*	(15/2$^-$)	0.328 ns *17*	$T_{1/2}$: from γ(t) (2003Ma50) in ^{9}Be(^{76}Ge,X) reaction. Value taken from table 1 of 2003Ma50. Listed as 320 ps *17* in figures 1 and 2 of 2003Ma50. B(E2)(W.u.)=2.94 listed in authors' table gives 376 ps.
2755.7 *5*	(19/2$^-$)	0.275 μs *14*	$T_{1/2}$: from γ(t) in Ni(^{86}Kr,Xγ) (1998Gr14).

[†] From least-squares fit to Eγ's, assuming 0.3 keV uncertainty for Eγ's, except 1 keV for 652γ and 2151.0γ. The 495γ was omitted from the fitting procedure.
[‡] Band(A): Band based on 3/2$^{(-)}$.

γ(^{71}Cu)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
133.0	2755.7	(19/2$^-$)	2622.7	(15/2$^-$)	652[†]	1633.0?		981.0?	
342.2	2128.6	(11/2$^-$)	1786.5		939.0	2128.6	(11/2$^-$)	1189.5	(7/2$^-$)
471.0	2622.7	(15/2$^-$)	2151.6?		981.0[†]	981.0?		0.0	3/2$^{(-)}$
494.2	2622.7	(15/2$^-$)	2128.6	(11/2$^-$)	1189.4	1189.5	(7/2$^-$)	0.0	3/2$^{(-)}$
495[†]	2128.6	(11/2$^-$)	1633.0?		1252.3	1786.5		534.3	
534.4	534.3		0.0	3/2$^{(-)}$	2151.0[†]	2151.6?		0.0	3/2$^{(-)}$

[†] Placement of transition in the level scheme is uncertain.

Legend

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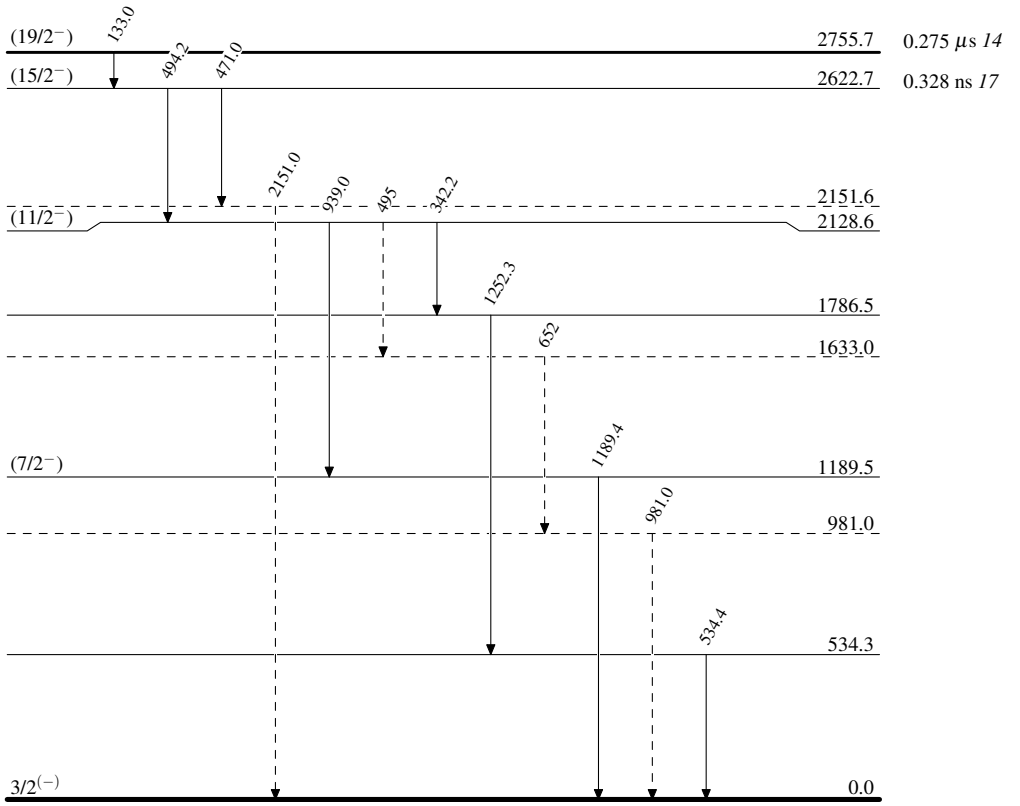
Level Scheme

γ Decay (Uncertain)



$^{71}_{29}Cu_{42}$

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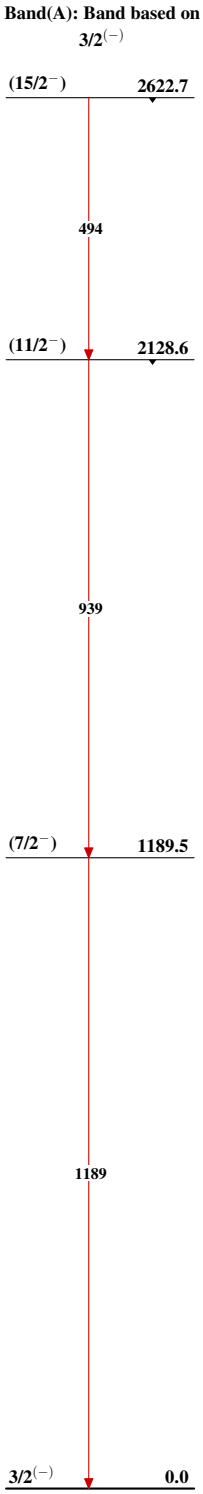

$^{71}_{29}Cu_{42}$