^{86}**Kr(n,γ) E=th**   **1977Je03**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson and W. D. Kulp(a)	NDS 129, 1 (2015)	27-Jul-2015

This scheme is from 1977Je03 and is a tentative one with an intensity imbalance. γ-detection with Ge pair and
Compton-suppressed spectrometers.

^{87}Kr Levels

E(level)	J$^{\pi\dagger}$	Comments
0.0	5/2$^+$	
531.89 *12*	1/2$^+$	
1475.96 *15*	1/2,3/2	
2005.2 *5*		
2122.46? *22*	1/2,3/2	
2371.8‡ *3*	1/2,3/2	
(5515.17 *25*)	1/2$^+$	E(level): neutron-capture state.
		J$^\pi$: from L=0 neutron capture on 0$^+$ target.

† From primary γ's, except for the ground state and first-excited level which are from ^{87}Kr Adopted Levels and capture state.
  Primary γ's are assumed to be dipole transitions.

‡ The authors consider this level as uncertain because of intensity imbalance. Not identical to 2372.36 level observed in β- decay,
  because the 952 and 2372 γ's with I$_\gamma$/I$_\gamma$(1840.10)=2.0 and 2.6, respectively, should otherwise have been seen here.

γ(^{87}Kr)

E$_\gamma$	I$_\gamma^\dagger$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
^{x}181.59‡ *21*	7 *2*				
^{x}341.30‡ *11*	15 *3*				
531.91 *13*	71 *11*	531.89	1/2$^+$	0.0	5/2$^+$
^{x}773.1 *3*	9 *3*				
^{x}866.15 *23*	33 *6*				
^{x}892.15 *21*	23 *5*				
944.2 *3*	12 *5*	1475.96	1/2,3/2	531.89	1/2$^+$
^{x}1055.4‡ *3*	10 *3*				
^{x}1064.8$^{\ddagger@}$ *4*	6 *3*				
^{x}1304.9‡ *3*	15 *4*				
1475.94 *17*	89 *12*	1475.96	1/2,3/2	0.0	5/2$^+$
1839.8 *4*	19 *5*	2371.8	1/2,3/2	531.89	1/2$^+$
2005.2$^{\&}$ *5*	9 *5*	2005.2		0.0	5/2$^+$
^{x}2062.9‡ *4*	22 *9*				
2122.4$^\#$ *3*	26 *7*	2122.46?	1/2,3/2	0.0	5/2$^+$
^{x}2295.2‡ *3*	29 *8*				
^{x}2331.5‡ *5*	10 *5*				
^{x}2348.2‡ *4*	28 *12*				
^{x}2887.8 *4*	23 *8*				
3143.3 *4*	40 *11*	(5515.17)	1/2$^+$	2371.8	1/2,3/2
3392.6$^\#$ *3*	75 *18*	(5515.17)	1/2$^+$	2122.46?	1/2,3/2
4039.6 *6*	38 *15*	(5515.17)	1/2$^+$	1475.96	1/2,3/2
4983.1 *4*	25 *7*	(5515.17)	1/2$^+$	531.89	1/2$^+$

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γ(^{87}Kr) (continued)

† Relative values.

‡ Assignment to ^{87}Kr is uncertain.

The 3393-keV γ ray to the 2122-keV level is 3 times as intense as the 2122-keV γ ray from this level. This imbalance suggests that part of the intensity could be placed elsewhere.

@ There is also an uplaced 1064.75 *15* γ transition reported in ^{87}Br β$^-$ decay.

& The authors state that the assignment to ^{87}Kr is uncertain; however, a transition with this energy from the 2005 keV level is established in β$^-$ decay.

^{x} γ ray not placed in level scheme.

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Level Scheme

Intensities: Relative I$_γ$

$^{87}_{36}$Kr$_{51}$