^{106}Cd(^{3}He,2p2nγ) 1995Je04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, J. Timar and Z. Elekes	NDS 161, 1 (2019)	1-Apr-2019

1995Je04: Facility: Upsala cyclotron; Beam: E(^{3}He)=30 MeV; Target: 10.5 mg/cm^{2} thick, enriched to 90.5% in ^{106}Cd; Detectors: four Ge(Li), 2π charged particle array ERICIUS, consisting of plastic phoswitch detectors; Measured: γ, γ-γ coinc., Eγ, Iγ; Deduced: ^{105}Cd level scheme.

^{105}Cd Levels

E(level)[†]	J$^{\pi}$[‡]	Comments
0.0[#]	5/2^{+}	
131.3[@] *9*	7/2^{+}	
260.1 *9*	(7/2)$^{+}$	J$^{\pi}$: 5/2^{+} in 1995Je04.
770.3[#] *10*	9/2^{+}	
799.2[@] *12*	11/2^{+}	
1577.6[#] *12*	(13/2)$^{+}$	
1685.5[@] *16*	15/2^{+}	
2390.0[#] *19*	(17/2)$^{+}$	
2516.8 *21*	(21/2^{+})	configuration: $\pi g^{2}_{9/2}\nu g^{1}_{7/2}$.
2587.2[@] *19*	(19/2^{+})	
3621.6[@] *21*	23/2^{+}	
4913.4[@] *23*	(21/2^{+} to 27/2^{+})	J$^{\pi}$: 27/2^{+} in 1995Je04.

[†] From a least-squares fit to Eγ.
[‡] From 1995Je04, unless otherwise noted.
[#] Member of ΔJ=2 band, based on 5/2^{+}.
[@] Member of ΔJ=2 band, based on 7/2^{+}.

γ(^{105}Cd)

E$_{\gamma}$[†]	I$_{\gamma}$[†]	E$_{i}$(level)	J$_{i}^{\pi}$	E$_{f}$	J$_{f}^{\pi}$	Comments
126.8	95.3[#] *20*	2516.8	(21/2^{+})	2390.0	(17/2)$^{+}$	
131.2	100[‡]	131.3	7/2^{+}	0.0	5/2^{+}	
260.2	56.1[#] *25*	260.1	(7/2)$^{+}$	0.0	5/2^{+}	
510.2	96.3[#] *25*	770.3	9/2^{+}	260.1	(7/2)$^{+}$	
639.0	175.7[#] *20*	770.3	9/2^{+}	131.3	7/2^{+}	
667.8		799.2	11/2^{+}	131.3	7/2^{+}	
704.5	16.5[‡] *26*	2390.0	(17/2)$^{+}$	1685.5	15/2^{+}	
778.3	11.3[‡] *16*	1577.6	(13/2)$^{+}$	799.2	11/2^{+}	I$_{\gamma}$: 76.6 *20* with the gate on 812.1γ.
807.4	293.4[#] *15*	1577.6	(13/2)$^{+}$	770.3	9/2^{+}	
886.3	80.6[‡] *22*	1685.5	15/2^{+}	799.2	11/2^{+}	
901.7	16.8[‡] *4*	2587.2	(19/2^{+})	1685.5	15/2^{+}	
[x]904.5	10.5 *20*					E$_{\gamma}$: observed in coinc with 812γ.
1034.4	8.6[‡] *15*	3621.6	23/2^{+}	2587.2	(19/2^{+})	
1291.8	7.4[‡] *18*	4913.4	(21/2^{+} to 27/2^{+})	3621.6	23/2^{+}	

[†] From 1995Je04.

Continued on next page (footnotes at end of table)

^{106}Cd(^{3}He,2p2nγ) 1995Je04 (continued)

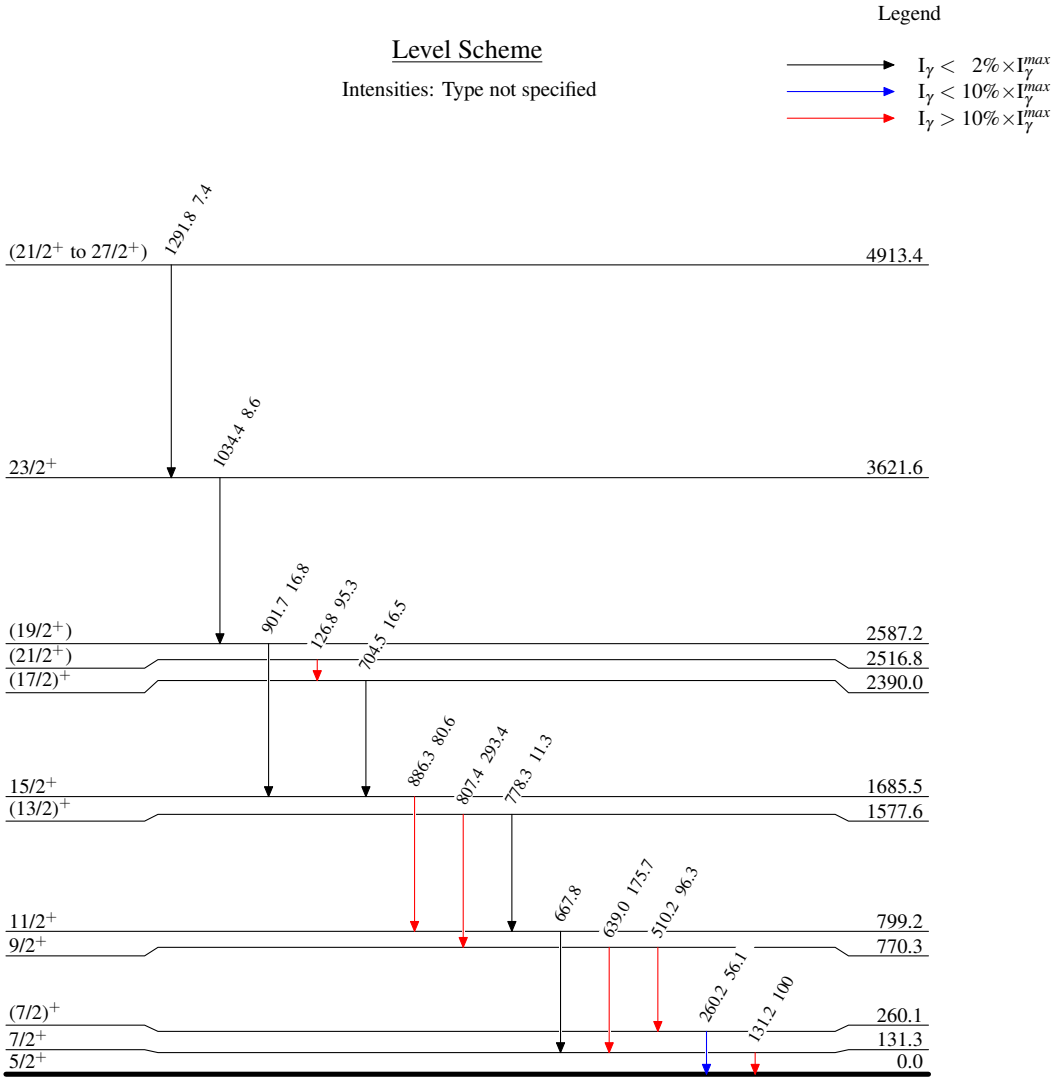
$\gamma(^{105}Cd)$ (continued)

‡ From a spectrum, gated on 667.3γ. Normalized to Iγ(131.3γ)=100.
# From a spectrum, gated on 812.1γ. Normalized to Iγ(131.3γ)=100.
x γ ray not placed in level scheme.

^{106}Cd(^{3}He,2p2nγ) 1995Je04

Level Scheme

Intensities: Type not specified



$^{105}_{48}Cd_{57}$