^{65}Cu(^{36}S,αp2nγ) 1998Kh04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni	NDS 107, 2423 (2006)	1-Jan-2006

E= 142 MeV, measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$(DCO) using GAMMASPHERE array with 36 Compton-suppressed Ge detectors. DCO values are E2-gated, quadrupole transitions are expected to have DCO≈1.9 while dipole should have DCO≈1.5.

^{94}Mo Levels

E(level)[#]	J$^\pi$	E(level)[#]	J$^\pi$	E(level)[#]	J$^\pi$	E(level)[#]	J$^\pi$
0.0[†]	0$^+$	4192.7[†] *9*	(12$^+$)	7022.4[‡] *11*	(15$^-$)	9031.5 *14*	(17$^+$)
871.6[†] *4*	2$^+$	4265.7 *9*		7068.8 *13*	(13$^+$)	9164.1 *13*	(16$^+$)
1574.3[†] *6*	4$^+$	4500.5 *9*		7519.2 *12*	(16$^-$)	9211.1[‡] *15*	(16$^-$)
2424.6[†] *7*	6$^+$	4751.1[‡] *8*	(11$^-$)	7555.8 *12*	(14$^+$)	9957.2 *13*	(16$^+$)
2611.8[‡] *7*	5$^-$	5735.4[‡] *9*	(13$^-$)	7796.9 *13*	(15$^+$)	9980.4 *17*	(17$^+$)
2956.0[†] *8*	8$^+$	5805.3 *12*	(13$^+$)	7901.1 *13*	(14$^+$)	10053.5 *15*	
3369.3[‡] *7*	(7$^-$)	6398.5[‡] *10*	(14$^-$)	8240.2 *13*	(16$^+$)	10273.6[‡] *15*	(17$^-$)
3898.3[†] *8*	10$^+$	6581.5 *12*	(13$^+$)	8453.8 *12*		10276.5 *15*	(18$^+$)
4098.0[‡] *8*	(9$^-$)	6963.9 *11*	(15$^-$)	8615.8 *12*	(15$^+$)	11589.5 *20*	(18$^+$)

[†] Band(A): yrast band.
[‡] Band(B): 5$^-$ band.
[#] From least-squares fit to Eγ.

γ(^{94}Mo)

E$_\gamma$	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[‡]	Comments
241.1 *4*	15 *3*	7796.9	(15$^+$)	7555.8	(14$^+$)		DCO= 1.6 *2*.
250.6 *4*	4.0 *20*	4751.1	(11$^-$)	4500.5			
294.4 *4*	25.7	4192.7	(12$^+$)	3898.3	10$^+$		DCO= 2.1 *2*.
307.8 *4*	4 *3*	4500.5		4192.7	(12$^+$)		
367.4 *4*	6.0 *20*	4265.7		3898.3	10$^+$		
443.3 *4*	5.0 *10*	8240.2	(16$^+$)	7796.9	(15$^+$)		DCO= 1.5 *3*.
485.4 *4*	6 *3*	4751.1	(11$^-$)	4265.7			
487.0 *4*	8.0 *20*	7555.8	(14$^+$)	7068.8	(13$^+$)		DCO= 1.6 *2*.
531.4 *4*	35.0	2956.0	8$^+$	2424.6	6$^+$	E2	DCO= 1.9 *1*.
555.3 *4*	1.0 *3*	7519.2	(16$^-$)	6963.9	(15$^-$)		
565.4 *4*	1.0 *3*	6963.9	(15$^-$)	6398.5	(14$^-$)		
623.9 *4*	24.1	7022.4	(15$^-$)	6398.5	(14$^-$)		DCO= 1.5 *2*.
653.1 *4*	20.4	4751.1	(11$^-$)	4098.0	(9$^-$)		DCO= 1.9 *2*.
663.1 *4*	27.6	6398.5	(14$^-$)	5735.4	(13$^-$)		DCO= 1.5 *2*.
702.7 *4*	90.1	1574.3	4$^+$	871.6	2$^+$	E2	DCO= 2.0 *3*.
714.7 *4*	3.0 *15*	8615.8	(15$^+$)	7901.1	(14$^+$)		
728.7 *4*	23.7	4098.0	(9$^-$)	3369.3	(7$^-$)		DCO= 1.9 *3*.
757.5 *4*	13.5	3369.3	(7$^-$)	2611.8	5$^-$		DCO= 2.2 *3*.
791.2 *4*	3.0 *6*	9031.5	(17$^+$)	8240.2	(16$^+$)		
850.3 *4*	72.0	2424.6	6$^+$	1574.3	4$^+$	E2	DCO= 1.9 *2*.
871.6 *4*	100.0	871.6	2$^+$	0.0	0$^+$	E2	DCO= 2.0 *2*.
942.3 *4*	32.4	3898.3	10$^+$	2956.0	8$^+$	E2	DCO= 1.9 *3*.
944.7 *4*	6.7 *4*	3369.3	(7$^-$)	2424.6	6$^+$		DCO= 1.3 *2*.
974.4 *4*	2.0 *5*	7555.8	(14$^+$)	6581.5	(13$^+$)		
984.3 *4*	27.5	5735.4	(13$^-$)	4751.1	(11$^-$)		DCO= 1.9 *2*.

Continued on next page (footnotes at end of table)

^{65}Cu(^{36}S,αp2nγ) 1998Kh04 (continued)

$\gamma(^{94}Mo)$ (continued)

E_γ	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Comments
1037.5 *4*	13.0	2611.8	5^-	1574.3	4^+	DCO= 1.3 *2*.
1060.0 *4*	3.0 *7*	8615.8	(15^+)	7555.8	(14^+)	DCO= 1.6 *3*.
1062.5 *4*	11.0	10273.6	(17^-)	9211.1	(16^-)	DCO= 1.5 *2*.
1245.0 *4*	≤1	10276.5	(18^+)	9031.5	(17^+)	
1341.4 *4*	6.0 *15*	9957.2	(16^+)	8615.8	(15^+)	DCO= 1.5 *3*.
1367.1 *4*	9.2 *20*	9164.1	(16^+)	7796.9	(15^+)	DCO= 1.6 *3*.
1431.3 *4*		8453.8		7022.4	(15^-)	
1542.7 *10*	2.0 *10*	5735.4	(13^-)	4192.7	(12^+)	
1599.7 *10*	1.0	10053.5		8453.8		
1609.1 *10*	3.0 *10*	11589.5	(18^+)	9980.4	(17^+)	
1612.3 *10*	13.5	5805.3	(13^+)	4192.7	(12^+)	DCO= 1.6 *2*.
1740.1 *10*	3.0 *10*	9980.4	(17^+)	8240.2	(16^+)	
1750.3 *10*	8.7 *20*	7555.8	(14^+)	5805.3	(13^+)	DCO= 1.6 *3*.
2095.6 *10*	4.0 *10*	7901.1	(14^+)	5805.3	(13^+)	
2188.6 *10*	4.0 *10*	9211.1	(16^-)	7022.4	(15^-)	
2389.0 *10*	4.0 *10*	6581.5	(13^+)	4192.7	(12^+)	

[†] $\Delta(I\gamma)<10\%$ when not stated.
[‡] From DCO values, intensity pattern.

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Level Scheme

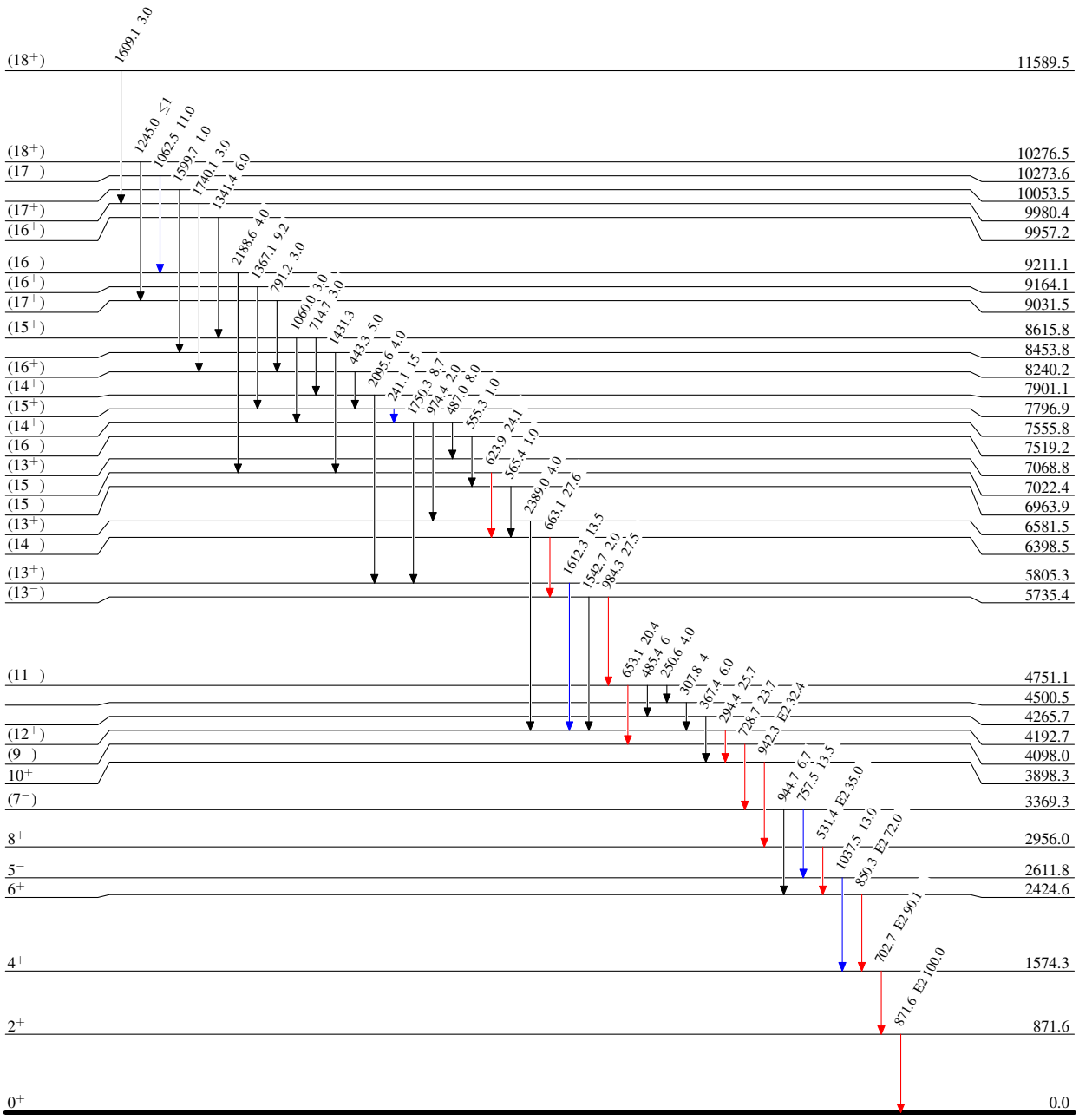
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{94}_{42}Mo_{52}$

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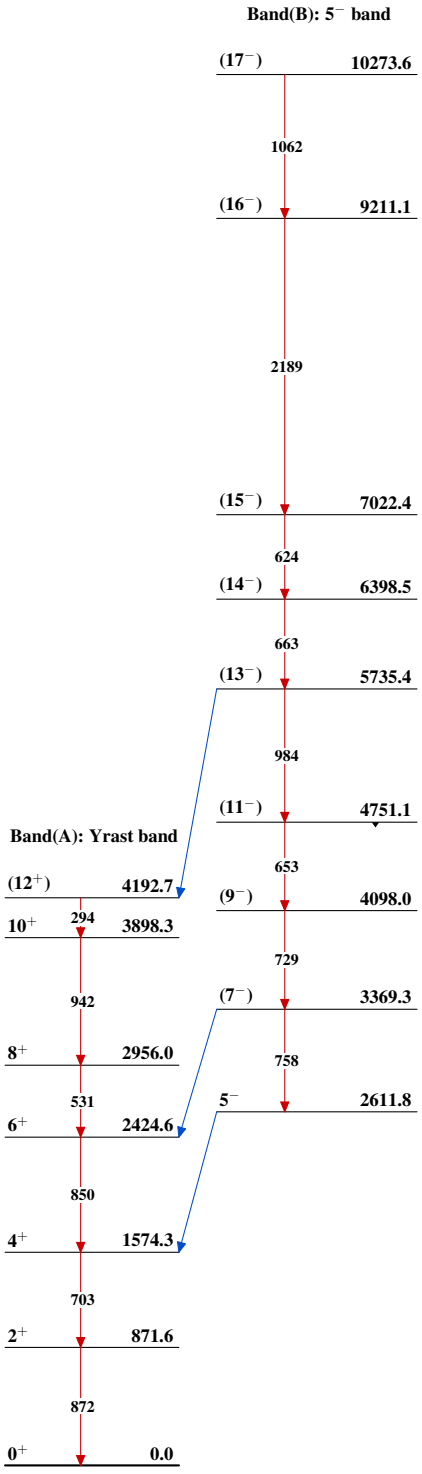

$^{94}_{42}Mo_{52}$