^{63}Cu(α,2nγ), ^{64}Zn(d,nγ) 1974Ha09

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 111, 2425 (2010)	1-Aug-2009

All data are from 1974Ha09.
^{63}Cu(α,2nγ): Eα=24,31 MeV; measured Eγ, Iγ, $\gamma\gamma$ coincidences and γ yields; natural Cu target; Ge(Li)′s.
^{64}Zn(d,nγ): ED=7.1 MeV; measured Eγ and $\gamma\gamma$ coincidences; enriched target; Ge(Li)′s.

^{65}Ga Levels

E(level)[†]	J$^\pi$[‡]	Comments
0	3/2$^-$	
190.7	5/2$^-$	
649.7	1/2$^-$,3/2$^-$	J$^\pi$: (3/2$^-$).
816.7	3/2$^-$	J$^\pi$: (3/2$^-$).
1074.6	7/2	J$^\pi$: (7/2$^-$).
1286.2	(9/2)$^-$	J$^\pi$: (9/2$^-$).
1325.7		J$^\pi$: (7/2$^-$).
1371.7		
2036.9	9/2$^+$	J$^\pi$: (9/2$^+$).
3075.9		J=(11/2).
3093.7		J=(13/2).

[†] From a least-squares fit to Eγ data.
[‡] From Adopted Levels; highly tentative assignments based on systematics and γ yields from this data set are given in comments.

γ(^{65}Ga)

E$_\gamma$[†]	I$_\gamma$[‡]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	E$_\gamma$[†]	I$_\gamma$[‡]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
190.7	100	190.7	5/2$^-$	0	3/2$^-$	1039	≈20	3075.9		2036.9	9/2$^+$
459	≤5	649.7	1/2$^-$,3/2$^-$	190.7	5/2$^-$	1056.8	≈6	3093.7		2036.9	9/2$^+$
626	≤5	816.7	3/2$^-$	190.7	5/2$^-$	1075.6[#]	≤5	1074.6	7/2	0	3/2$^-$
653.4[#]	≤5	649.7	1/2$^-$,3/2$^-$	0	3/2$^-$	1095.5	≈45	1286.2	(9/2)$^-$	190.7	5/2$^-$
750.7	≈35	2036.9	9/2$^+$	1286.2	(9/2)$^-$	1135	≤5	1325.7		190.7	5/2$^-$
883.9	≤5	1074.6	7/2	190.7	5/2$^-$	1181	≤5	1371.7		190.7	5/2$^-$
962.1[#]	≤5	2036.9	9/2$^+$	1074.6	7/2						

[†] From ^{63}Cu(α,2nγ) and ^{64}Zn(d,nγ) data at $\theta(\gamma)$=90°. Uncertainties not specifically given but are stated, in 1974Ha09, as mostly 0.3 keV.
[‡] Relative intensities where given are approximate values inferred by the evaluators from the level scheme (author′s fig. 11) in which γ intensities (measured in ^{63}Cu(α,2nγ) at Eα=31 MeV) are indicated by the line thickness. Iγ≤5 for all other γ′s.
[#] Placement of transition in the level scheme is uncertain.

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Level Scheme

Intensities: Relative I_γ

Legend

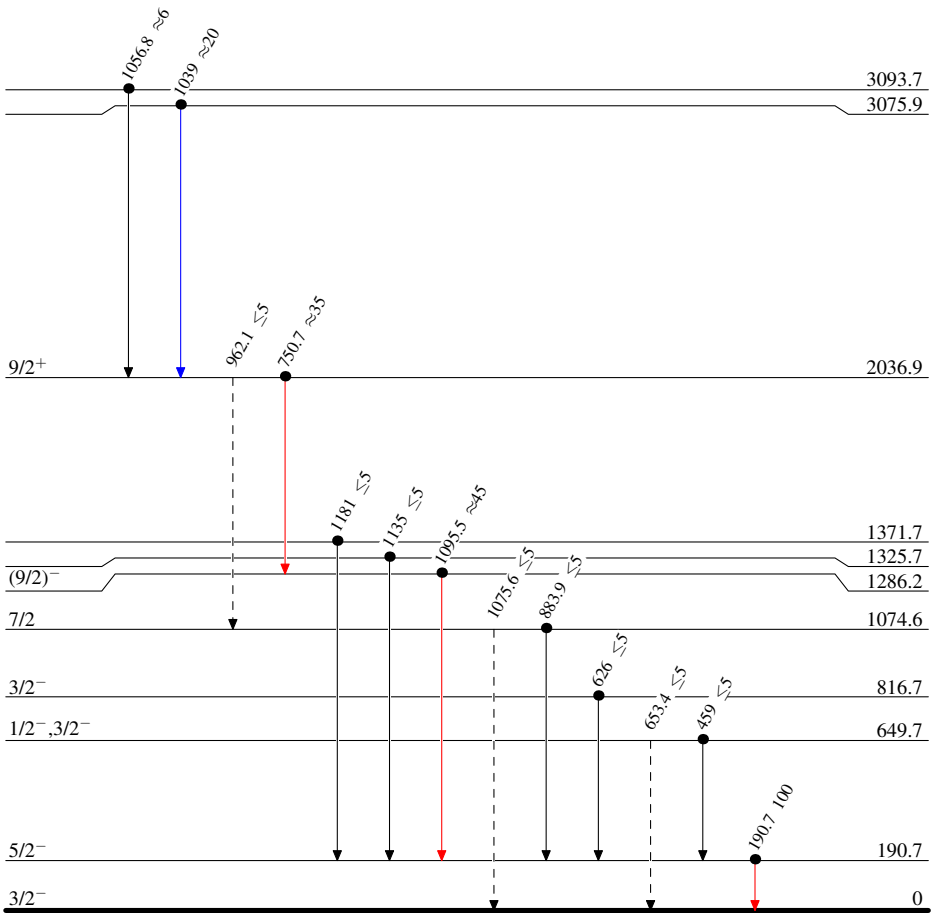
$I_\gamma < 2\% \times I_\gamma^{max}$

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

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

γ Decay (Uncertain)

Coincidence



$^{65}_{31}Ga_{34}$