^{65}Cu(p,γ) 1980Er08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 111, 1093 (2010)	3-Mar-2009

1980Er08: E(p)≈2.05 MeV; Eγ and Iγ.
1980Er05: E(p)=1.7-2.2 MeV; Eγ, Iγ; Hauser-Feshbach analysis.
Other: 1978Sw03.

^{66}Zn Levels

E(level)†	J$^{\pi}$‡	Comments
0	0^+	
1039.25 *15*	2^+	
1872.6 *4*	2^+	
2372.4 *2*	0^+	
2450.8 *2*	4^+	
2703.3 *4*	(3)	J$^{\pi}$: (1^-,3^-) from average p-capture yield (1980Er05).
2765.4 *2*	4^+	
2780.8 *2*	2^+	
2826.8 *2*	3^-	
2938.3 *2*	2^+	
3078.2 *3*	4^+	
3104.9 *4*	0^+	
3212.9 *2*	2^+	
3229.2 *2*	1^+	
3331.5 *2*	2^+	
3381.5 *10*	$1^{(-)}$	
3426.8? *5*	$1,2^-$	
3433.9 *5*	$1^{(-)}$	
3507.8 *3*	2^+	
3523.0 *3*		
3532.2 *4*	0^+	
3576.4 *3*	4^+	
3670.9 *3*	2^+	
3688.0?	1^+,2^+,3^+	E(level): uncertainty not given (1980Er08).
3709.1 *3*	(5)	
3731.4 *3*		
3739.7 *6*	1	
3747.5 *3*	5^-	
3753.05 *4*	4^+	E(level): from Adopted Levels.
3791.5 *3*	1^+	
3882.4 *5*	(2)	
3898.8 *3*	5^-	
3925.4 *4*		
4018.7 *3*	2^+	
4088.0 *10*	1	
4118.9 *5*	(1^-)	

† From weighted average of γ-cascade sums (1980Er08), except as noted.
‡ From Adopted Levels. Supporting argument from this data set is indicated for the 2703-keV level.

^{65}Cu(p,γ) 1980Er08 (continued)

$\gamma(^{66}Zn)$

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π
312.8	0.2 *1*	3078.2	4^+	2765.4	4^+	1664.1	0.7 *1*	2703.3	(3)	1039.25	2^+
314.6	0.6 *1*	2765.4	4^+	2450.8	4^+	1703.8	0.6 *1*	3576.4	4^+	1872.6	2^+
330.0	0.2 *1*	2780.8	2^+	2450.8	4^+	1726.2	2.2 *2*	2765.4	4^+	1039.25	2^+
627.4	2.7 *2*	3078.2	4^+	2450.8	4^+	1741.6	1.1 *1*	2780.8	2^+	1039.25	2^+
669.3	0.2 *1*	3747.5	5^-	3078.2	4^+	1787.6	5.0 *4*	2826.8	3^-	1039.25	2^+
757.6	0.8 *1*	3523.0		2765.4	4^+	1798.3	0.5 *1*	3670.9	2^+	1872.6	2^+
795.6	0.3 *1*	3576.4	4^+	2780.8	2^+	1815.4[&]	1.1 *1*	3688.0?	$1^+,2^+,3^+$	1872.6	2^+
830.7	9.9 *11*	2703.3	(3)	1872.6	2^+	1899.1	4.2 *3*	2938.3	2^+	1039.25	2^+
833.4	37 *3*	1872.6	2^+	1039.25	2^+	2009.8	0.5 *1*	3882.4	(2)	1872.6	2^+
892.8	2.8 *2*	2765.4	4^+	1872.6	2^+	2065.6	0.2 *1*	3104.9	0^+	1039.25	2^+
908.2	0.7 *1*	2780.8	2^+	1872.6	2^+	2173.6	3.2 *2*	3212.9	2^+	1039.25	2^+
943.7	0.4 *1*	3709.1	(5)	2765.4	4^+	2190.0	1.7 *1*	3229.2	1^+	1039.25	2^+
954.2	0.6 *1*	2826.8	3^-	1872.6	2^+	2292.2	0.4 *1*	3331.5	2^+	1039.25	2^+
966.0	0.6 *1*	3731.4		2765.4	4^+	2394.6	1.2 *1*	3433.9	$1^{(-)}$	1039.25	2^+
1039.25	100 *8*	1039.25	2^+	0	0^+	2468.6	1.5 *1*	3507.8	2^+	1039.25	2^+
1072.0	0.2 *1*	3898.8	5^-	2826.8	3^-	2493.0	0.5 *1*	3532.2	0^+	1039.25	2^+
1205.6	0.8 *1*	3078.2	4^+	1872.6	2^+	2537.2	0.7 *1*	3576.4	4^+	1039.25	2^+
1220.1	0.5 *1*	3670.9	2^+	2450.8	4^+	2631.6	0.9 *1*	3670.9	2^+	1039.25	2^+
1232.3	0.9 *1*	3104.9	0^+	1872.6	2^+	2713.2	[#]	3753.05	4^+	1039.25	2^+
1237.9	0.4 *1*	4018.7	2^+	2780.8	2^+	2752.2	1.1 *1*	3791.5	1^+	1039.25	2^+
1296.7	0.6 *1*	3747.5	5^-	2450.8	4^+	2780.8	3.9 *3*	2780.8	2^+	0	0^+
1333.2	1.8 *1*	2372.4	0^+	1039.25	2^+	2886.2	0.8 *1*	3925.4		1039.25	2^+
1356.6	0.2 *1*	3229.2	1^+	1872.6	2^+	3079.7	0.5 *1*	4118.9	(1^-)	1039.25	2^+
1411.6	11.8 *9*	2450.8	4^+	1039.25	2^+	3229.2	[#]	3229.2	1^+	0	0^+
1458.9	2.4 *2*	3331.5	2^+	1872.6	2^+	3381.5	1.8 *2*	3381.5	$1^{(-)}$	0	0^+
1508.9	0.8 *1*	3381.5	$1^{(-)}$	1872.6	2^+	3433.9	1.2 *1*	3433.9	$1^{(-)}$	0	0^+
1553.0[&]	[@]	3925.4		2372.4	0^+	3739.7	1.4 *1*	3739.7	1	0	0^+
1554.2[&]	[@]	3426.8?	$1,2^-$	1872.6	2^+	4088.0	1.0 *1*	4088.0	1	0	0^+

[†] From level energy differences (not corrected for nuclear recoil). Evaluators estimated uncertainty on measured Eγ to be ≈0.1-0.5 keV.

[‡] Relative intensity at E(p)=2.05 MeV and θ=55° (1980Er08).

[#] Unresolved γ peak (1980Er08).

[@] Iγ(1553.0)+Iγ(1554.2)=0.5.

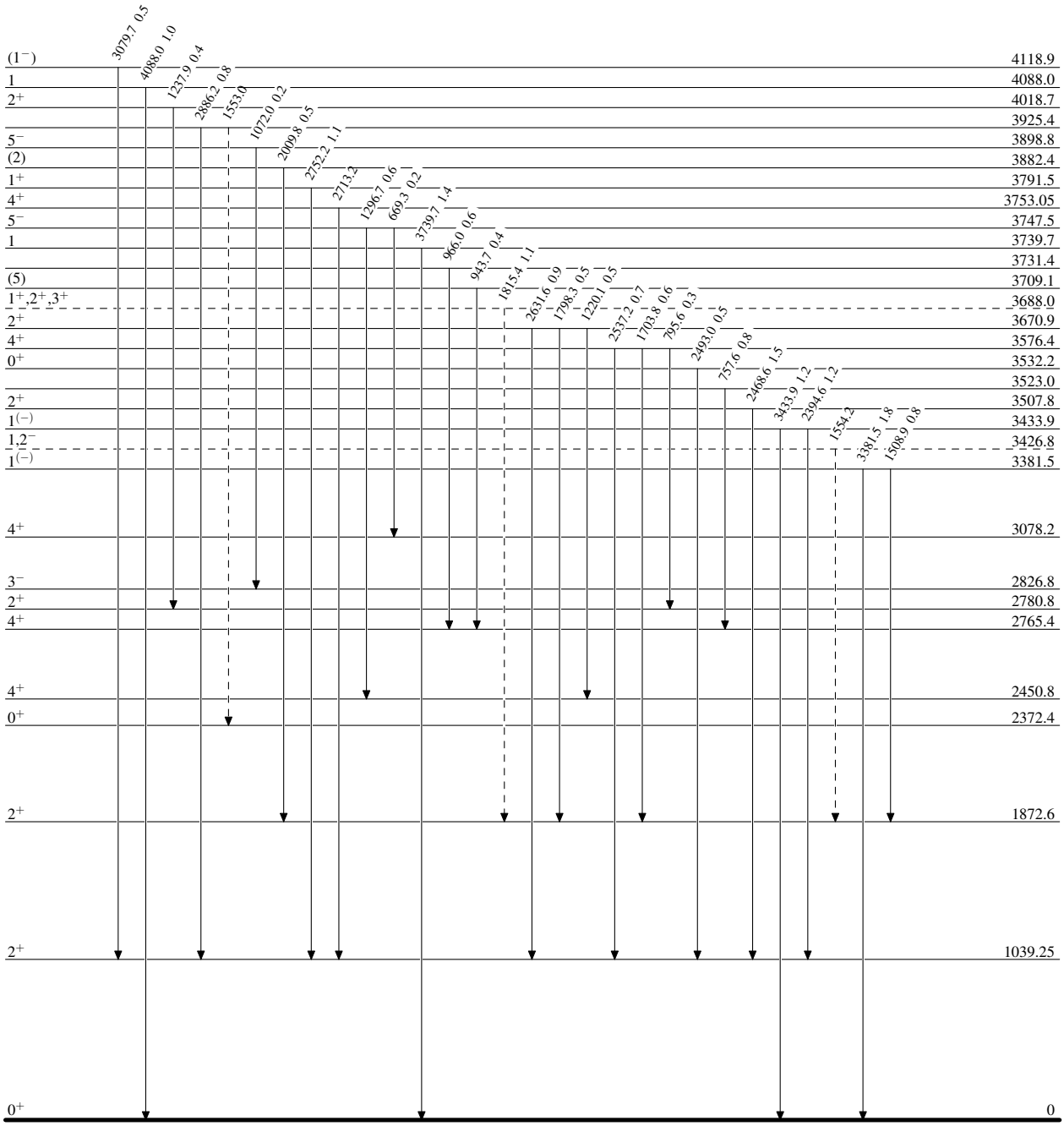
[&] Placement of transition in the level scheme is uncertain.

^{65}Cu(p,γ) 1980Er08

Level Scheme

Intensities: Relative intensity At E(p)=2.05 MeV and θ=55° (1980Er08)

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)



$^{66}_{30}Zn_{36}$

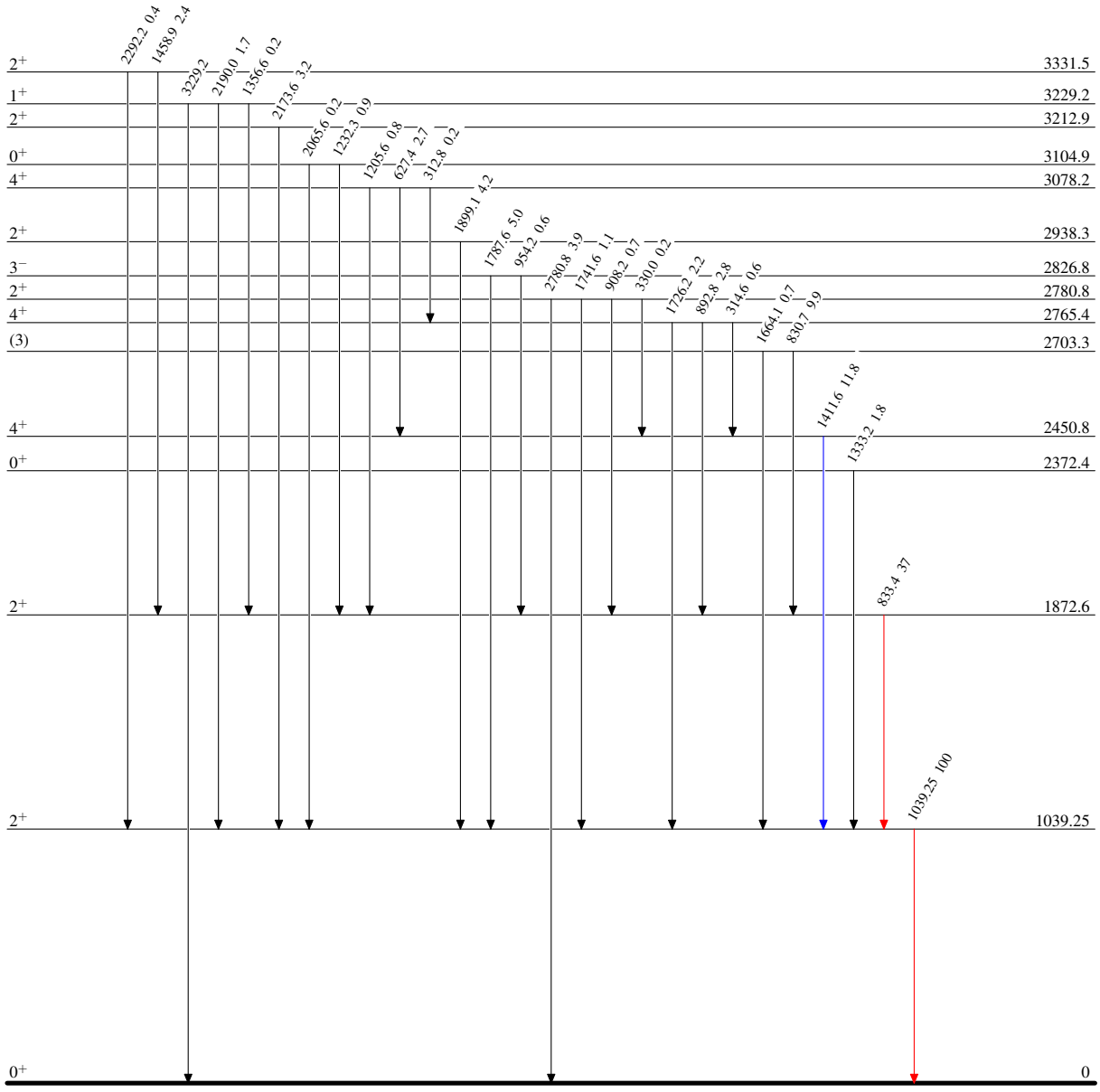
^{65}Cu(p,γ) 1980Er08

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

Level Scheme (continued)

Intensities: Relative intensity At E(p)=2.05 MeV and θ=55° (1980Er08)



$^{66}_{30}Zn_{36}$