

⁶³Cu(n,γ) E=24 keV 1983De28

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 178, 41 (2021).	12-Nov-2021

1983De28: Measured primary γ.

⁶⁴Cu Levels

E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]
0	1 ⁺	1242		1902	(1 ⁺)	2892	(1 ⁺)
160	2 ⁺	1288	(1 ⁺ ,2,3 ⁻)	2050	(1 ⁺ ,2,3 ⁻)	3083	(2 ⁻ ,3 ⁻)
279	2 ⁺	1320	(1 ⁺ ,2 ⁺ ,3 ⁺)	2145	(2 ⁺)	3258	(1 ⁺ ,2 ⁺)
344	1 ⁺	1354	(3) ⁺	2280	1 ⁺	3313	(0,1,2)
363	3 ⁺	1439	(1) ⁺	2301	1 ⁺	3412	(1 ⁻ ,2 ⁻)
575	(4) ⁺	1499	(2) ⁻	2317	(1 ⁻ ,2 ⁻)	3475	(0 ⁺ ,1,2)
609	2 ⁺	1521	(2) ⁺	2362	(≤3)	3493	(0 ⁺ ,1,2,3)
663	1 ⁺	1551	(1 ⁺ ,2 ⁺ ,3 ⁺)	2510	(≤3)	3525	0 ⁺ ,1 ⁺
740	2 ⁺	1594	(1 ⁺ ,2)	2529	(2 ⁻)	3785	(1,2 ⁺)
878	(0) ⁺	1683	(1 ⁺ ,2 ⁺)	2595	(1 ⁺)	7939.5 [#]	(2 ⁺) [@]
895	(3) ⁺	1780	(1 ⁺ ,2 ⁺)	2648	(1 ⁺)		
927	1 ⁺	1853	(1 ⁺ ,2 ⁺)	2831	(1 ⁺ ,2,3 ⁺)		

[†] From primary transitions, uncertainty ≈1 keV.

[‡] From Adopted Levels, unless otherwise stated.

[#] S(n)+E(n), where E(n)(lab)=24 keV, S(n)=7916.868 24 (2021Wa16).

[@] s- and/or p-wave capture in ⁶³Cu (g.s. J^π=3/2⁻); primary γ to (0)⁺ and (4)⁺.

γ(⁶⁴Cu)

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
4153.3 6	0.7 2	7939.5	(2 ⁺)	3785 (1,2 ⁺)		6254.8 3	2.3 2	7939.5	(2 ⁺)	1683 (1 ⁺ ,2 ⁺)	
4415.6 5	0.79 18	7939.5	(2 ⁺)	3525 0 ⁺ ,1 ⁺		6344.5 2	3.0 2	7939.5	(2 ⁺)	1594 (1 ⁺ ,2)	
4445.2 7	0.50 18	7939.5	(2 ⁺)	3493 (0 ⁺ ,1,2,3)		6389.6 5	2.8 4	7939.5	(2 ⁺)	1551 (1 ⁺ ,2 ⁺ ,3 ⁺)	
4464.8 10	0.36 18	7939.5	(2 ⁺)	3475 (0 ⁺ ,1,2)		6416.9 2	5.2 4	7939.5	(2 ⁺)	1521 (2) ⁺	
4524.7 14	0.4 3	7939.5	(2 ⁺)	3412 (1 ⁻ ,2 ⁻)		6439.0 4	2.5 3	7939.5	(2 ⁺)	1499 (2) ⁻	
4625.6 8	0.46 16	7939.5	(2 ⁺)	3313 (0,1,2)		6501.6 6	2.2 4	7939.5	(2 ⁺)	1439 (1) ⁺	
4682.6 7	0.8 3	7939.5	(2 ⁺)	3258 (1 ⁺ ,2 ⁺)		6584.0 4	1.5 2	7939.5	(2 ⁺)	1354 (3) ⁺	
4855.6 8	0.44 16	7939.5	(2 ⁺)	3083 (2 ⁻ ,3 ⁻)		6618.3 8	0.9 3	7939.5	(2 ⁺)	1320 (1 ⁺ ,2 ⁺ ,3 ⁺)	
5043.1 9	0.7 3	7939.5	(2 ⁺)	2892 (1 ⁺)		6650.2 4	1.5 2	7939.5	(2 ⁺)	1288 (1 ⁺ ,2,3 ⁻)	
5111.0 13	0.4 2	7939.5	(2 ⁺)	2831 (1 ⁺ ,2,3 ⁺)		6695.8 5	3.3 4	7939.5	(2 ⁺)	1242	
5292.1 14	0.4 2	7939.5	(2 ⁺)	2648 (1 ⁺)		7010.85 15	5.1 3	7939.5	(2 ⁺)	927 1 ⁺	
5344.8 5	1.00 18	7939.5	(2 ⁺)	2595 (1 ⁺)		7042.87 16	8.8 5	7939.5	(2 ⁺)	895 (3) ⁺	
5409.8 8	0.61 19	7939.5	(2 ⁺)	2529 (2 ⁻)		7060.8 12	0.7 2	7939.5	(2 ⁺)	878 (0) ⁺	
5427.8 15	0.30 18	7939.5	(2 ⁺)	2510 (≤3)		7198.6 6	4.3 8	7939.5	(2 ⁺)	740 2 ⁺	
5576.5 6	0.9 2	7939.5	(2 ⁺)	2362 (≤3)		7275.7 2	3.7 2	7939.5	(2 ⁺)	663 1 ⁺	
5620.9 8	0.9 3	7939.5	(2 ⁺)	2317 (1 ⁻ ,2 ⁻)		7329.7 3	3.4 3	7939.5	(2 ⁺)	609 2 ⁺	
5637.6 3	2.2 2	7939.5	(2 ⁺)	2301 1 ⁺		7360.8 15	0.4 2	7939.5	(2 ⁺)	575 (4) ⁺	
5659.3 3	1.7 2	7939.5	(2 ⁺)	2280 1 ⁺		7575.0 4	2.4 3	7939.5	(2 ⁺)	363 3 ⁺	
5793.7 3	1.87 19	7939.5	(2 ⁺)	2145 (2 ⁺)		7595.6 5	4.8 10	7939.5	(2 ⁺)	344 1 ⁺	
5889.1 7	0.69 18	7939.5	(2 ⁺)	2050 (1 ⁺ ,2,3 ⁻)		7659.27 16	5.0 3	7939.5	(2 ⁺)	279 2 ⁺	
6036.4 8	0.9 3	7939.5	(2 ⁺)	1902 (1 ⁺)		7778.44 17	6.4 3	7939.5	(2 ⁺)	160 2 ⁺	
6085.9 4	1.8 2	7939.5	(2 ⁺)	1853 (1 ⁺ ,2 ⁺)		7938.3 2	8.9 5	7939.5	(2 ⁺)	0 1 ⁺	
6160.3 10	0.7 2	7939.5	(2 ⁺)	1780 (1 ⁺ ,2 ⁺)							

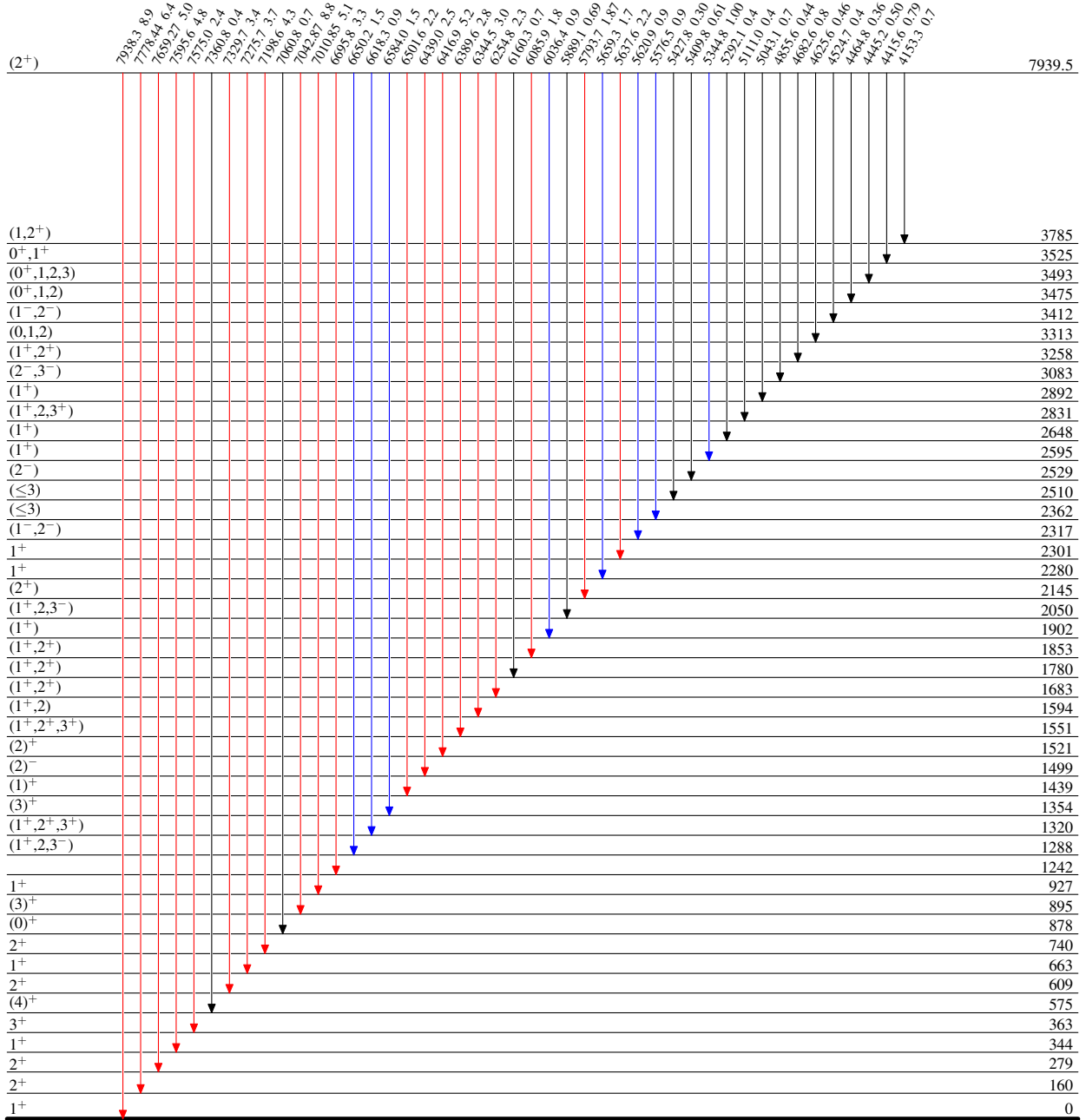
[†] Normalized such that ΣI_γ=100 (1983De28).

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Legend

Level Scheme
Intensities: Relative I_γ

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}



⁶⁴Cu₃₅