

$^{63}\text{Cu}(n,\gamma)$ E=0.579 keV 1970St12

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

1970St12: natural Cu target. Measured γ in coin with neutrons.

^{64}Cu Levels

E(level) [†]	J π [‡]	E(level) [†]	J π [‡]	E(level) [†]	J π [‡]	E(level) [†]	J π [‡]
0	1 ⁺	928	1 ⁺	1780	(1 ⁺ ,2 ⁺)	3072	(2 ⁻)
160	2 ⁺	1242		1854	(1 ⁺ ,2 ⁺)	3190	1 ⁺
279	2 ⁺	1288	(1 ⁺ ,2,3 ⁻)	1918	(\leq 4 ⁻)	3346	(0 ⁻ ,1,2,3 ⁺)
609	2 ⁺	1299	(1) ⁺	2020	(2 ⁺ ,3 ⁺)	3512	(1,2)
664	1 ⁺	1440?	(1) ⁺	2050	(1 ⁺ ,2,3 ⁻)	7916.438 [#] 24	2 ⁻ @
740	2 ⁺	1498?	(2) ⁻	2065	(\leq 4 ⁻)		
748	(3) ⁺	1522	(2) ⁺	2776	(1 ⁺ ,2 ⁺)		
880	(0) ⁺	1683?	(1 ⁺ ,2 ⁺)	2869	(3 ⁺)		

[†] From primary transitions, uncertainty \approx 1 keV.

[‡] From Adopted Levels, unless otherwise stated.

[#] S(n)+E(n), where E(n)(lab)=0.579 keV / (2018MuZY), S(n)=7916.868 24 (2021Wa16).

@ From 2018MuZY.

$\gamma(^{64}\text{Cu})$

E_γ [†]	I_γ [‡]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ [†]	I_γ [‡]	$E_i(\text{level})$	J_i^π	E_f	J_f^π
4404	1.8 6	7916.438	2 ⁻	3512 (1,2)		6418 [#]	<0.8	7916.438	2 ⁻	1498? (2) ⁻	
4570	1.8 6	7916.438	2 ⁻	3346 (0 ⁻ ,1,2,3 ⁺)		6476 [#]	<0.8	7916.438	2 ⁻	1440? (1) ⁺	
4726	2.8 6	7916.438	2 ⁻	3190 1 ⁺		6617	2.0 5	7916.438	2 ⁻	1299 (1) ⁺	
4844	1.5 6	7916.438	2 ⁻	3072 (2 ⁻)		6628	5.1 5	7916.438	2 ⁻	1288 (1 ⁺ ,2,3 ⁻)	
5047	1.8 6	7916.438	2 ⁻	2869 (3 ⁺)		6674	0.9 4	7916.438	2 ⁻	1242	
5140	3.2 6	7916.438	2 ⁻	2776 (1 ⁺ ,2 ⁺)		6988	2.3 5	7916.438	2 ⁻	928 1 ⁺	
5851	3.4 6	7916.438	2 ⁻	2065 (\leq 4 ⁻)		7036	0.4 3	7916.438	2 ⁻	880 (0) ⁺	
5866	2.3 6	7916.438	2 ⁻	2050 (1 ⁺ ,2,3 ⁻)		7168	2.3 5	7916.438	2 ⁻	748 (3) ⁺	
5896	1.0 4	7916.438	2 ⁻	2020 (2 ⁺ ,3 ⁺)		7176	6.9 5	7916.438	2 ⁻	740 2 ⁺	
5998	3.1 4	7916.438	2 ⁻	1918 (\leq 4 ⁻)		7252	1.2 4	7916.438	2 ⁻	664 1 ⁺	
6062	2.0 4	7916.438	2 ⁻	1854 (1 ⁺ ,2 ⁺)		7307	1.5 4	7916.438	2 ⁻	609 2 ⁺	
6136	0.6 4	7916.438	2 ⁻	1780 (1 ⁺ ,2 ⁺)		7637	6.3 5	7916.438	2 ⁻	279 2 ⁺	
6233 [#]	<0.8	7916.438	2 ⁻	1683? (1 ⁺ ,2 ⁺)		7756	16.9 6	7916.438	2 ⁻	160 2 ⁺	
6394	0.6 4	7916.438	2 ⁻	1522 (2) ⁺							

[†] Based on E_γ of 1968Sh01.

[‡] Intensity per 100 neutron captures.

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

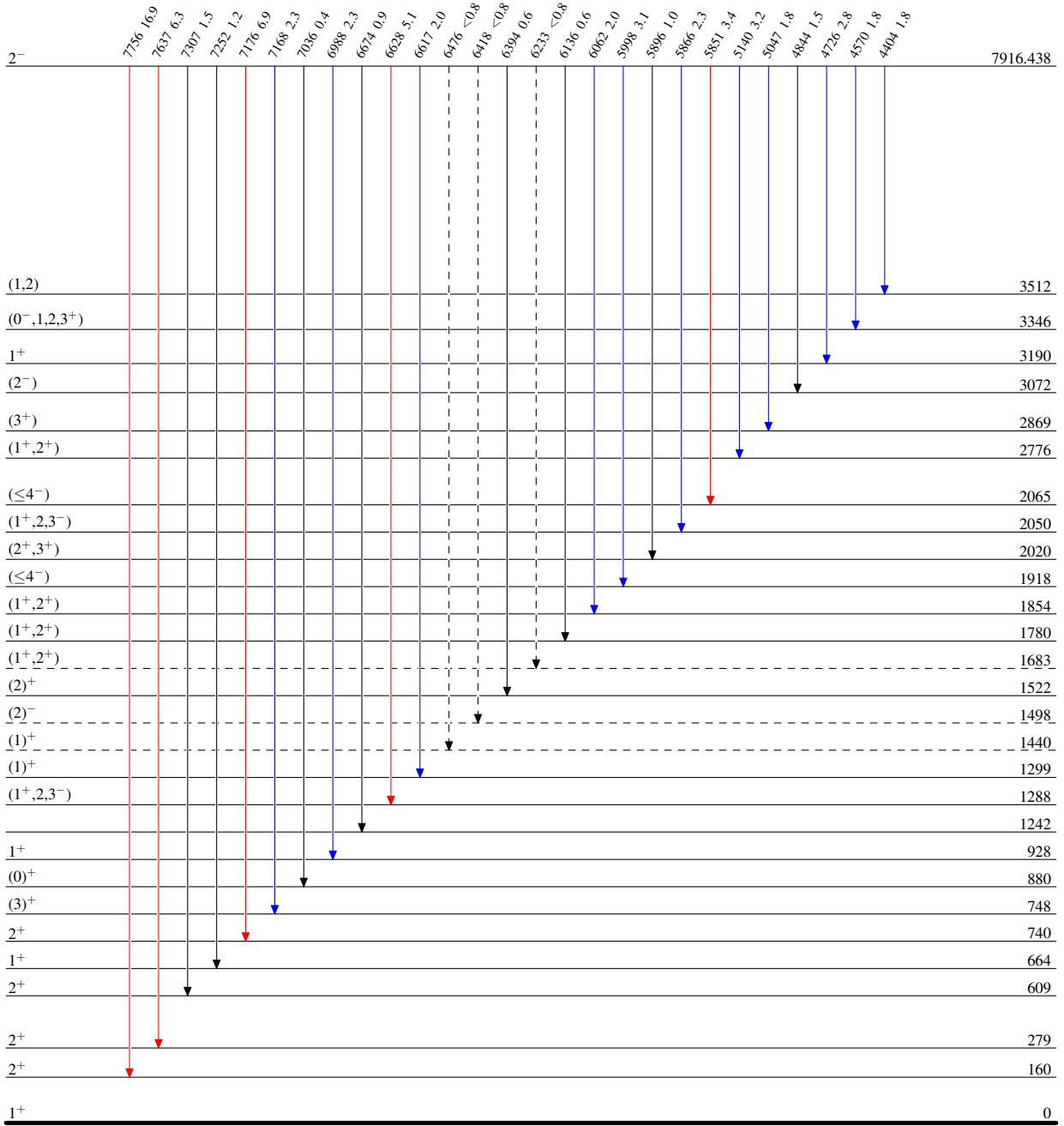
$^{63}\text{Cu}(n,\gamma) E=0.579 \text{ keV}$ 1970St12

Legend

Level Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures

- ▶ $I_{\gamma} < 2\% \times I_{\gamma}^{max}$
- ▶ $I_{\gamma} < 10\% \times I_{\gamma}^{max}$
- ▶ $I_{\gamma} > 10\% \times I_{\gamma}^{max}$
- - -▶ γ Decay (Uncertain)



$^{64}_{29}\text{Cu}_{35}$