

$^{69}\text{Cu}$        $Z = 29$        $N = 40$       adopted link      ENSDF link

Based on ensdf\_240402 (Apr 2024), and mass evaluation from 2020

BE = 599.969 ( 0.001) MeV

Qbeta- = 2.682 ( 0.002) MeV

	Energy T	J+	J-	J-other	T1/2
69CU 1			0.000	3/2-	1 2.85 M 15
69CU 2			1.096	1/2-	2 2.0 PS 2
69CU 3			1.110	1/2-	3
69CU 4				1.214 (5/2,7/2)	4 4.3 PS 4
69CU 5				1.298 (1/2-,3/2)	5
69CU 6				1.430	6
69CU 7				1.560	7
69CU 8			1.711	7/2-	8
69CU 9			1.871	7/2-	9 0.30 PS 5
69CU 10			2.182	9/2-	10
69CU 11	2.552	(9/2+)			11
69CU 12			2.603	(9/2-)	12
69CU 13			2.668	11/2-	13
69CU 14				2.697 (7/2+,9/2)	14
69CU 15	2.742	(13/2+)			15 357 NS 2
69CU 16				2.757 (7/2+,9/2)	16
69CU 17				2.801 (7/2+,9/2)	17
69CU 18			2.868	11/2-	18
69CU 19				3.064	19
69CU 20			3.214	13/2(-)	20
69CU 21			3.483	15/2-	21
69CU 22			3.692	(19/2-)	22 22 NS 1
69CU 23	3.828	(17/2+)			23 39 NS 6

S-p = 9.561 ( 0.003) -----  
 S-n = 8.240 ( 0.002) -----  
 S-2p = 24.992 ( 0.007) -----  
 S-2n = 14.559 ( 0.002) -----  
 S-alpha= 8.976 ( 0.003) -----

S+p = -11.118 ( 0.002)  
 S+n = -5.312 ( 0.002)  
 S+2p = -18.981 ( 0.002)  
 S+2n = -13.118 ( 0.002)  
 S+alpha = -6.388 ( 0.002)

gap p = -1.556 ( 0.004)  
gap n = 2.929 ( 0.003)  
gap 2p = 6.011 ( 0.007)  
gap 2n = 1.442 ( 0.003)  
gap alpha = 2.588 ( 0.003)