

$^{39}\text{Cl}$        $Z = 17$        $N = 22$       adopted link      ENSDF link

Based on ENSDF from Oct 2022, and mass evaluation from 2020

BE = 331.282 ( 0.002) MeV

Qbeta- = 3.442 ( 0.005) MeV

	Energy T	J+	J-	J-other	T1/2
39CL 1	0.000	3/2+			1 56.2 M 6
39CL 2	0.396	1/2+			2 1.4 PS GT
39CL 3				1.301 (5/2+)	3 2.1 PS GT
39CL 4			1.698 5/2-		4 0.8 PS +10-3
39CL 5	1.722	5/2+			5 0.30 PS 6
39CL 6				1.745 (7/2+)	6 0.90 PS 28
39CL 7				1.786 (7/2-)	7 1.4 PS GT
39CL 8	2.060	5/2+			8 35 FS LT
39CL 9	2.237	1/2+			9 55 FS 28
39CL 10				2.424 (9/2+)	10 1.2 PS GT
39CL 11	2.489	5/2+			11 70 FS 35
39CL 12				2.572 (9/2-)	12
39CL 13				2.586	13 0.21 PS LT
39CL 14				2.834 (11/2+)	14 1.2 PS GT
39CL 15				2.962 (11/2-)	15
39CL 16				3.116	16 0.15 PS 4
39CL 17				3.171 5/2+,1/2+	17
39CL 18				3.340	18
39CL 19	3.475	5/2+			19
39CL 20				3.517 (15/2+)	20
39CL 21				3.534 (5/2+,7/2,9/2+)	21 0.14 PS LT
39CL 22				3.907	22
39CL 23	4.013	5/2+			23
39CL 24				4.050	24
39CL 25				4.350 (5/2+)	25
39CL 26				4.354	26
39CL 27				4.630 (5/2+)	27
39CL 28				5.180 (5/2+)	28
39CL 29				5.450 (5/2+)	29
39CL 30				5.700 (5/2+)	30
39CL 31				5.980 (5/2+)	31
S-alpha=	7.367 ( 0.003)				
39CL 32				7.600 (5/2+)	32

S-p = 10.228 ( 0.007)

S-n = 8.073 ( 0.002)

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S-2p = 25.382 ( 0.038)-----  
S-2n = 14.181 ( 0.002)-----  
S-alpha= 7.367 ( 0.003)-----  
  
S+p = -12.529 ( 0.002)  
S+n = -5.829 ( 0.032)  
S+2p = -20.337 ( 0.002)  
S+2n = -13.650 ( 0.069)  
S+alpha = -9.200 ( 0.002)  
  
gap p = -2.301 ( 0.008)  
gap n = 2.245 ( 0.032)  
gap 2p = 5.045 ( 0.038)  
gap 2n = 0.532 ( 0.069)  
gap alpha = -1.833 ( 0.003)
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