

^{39}Ca $Z = 20$ $N = 19$ adopted link ENSDF link

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

BE = 326.417 (0.001) MeV

Qbeta+ = 6.525 (0.001) MeV

	Energy T	J+	J-	J-other	T1/2
39CA 1	0.000	3/2+			1 860.3 MS 10
39CA 2	2.467	1/2+			2 162 FS 17
39CA 3			2.796 7/2-		3 62 PS 17
39CA 4			3.025 3/2-		4 21 FS 11
39CA 5				3.640 (9/2-)	5 17 PS 10
39CA 6				3.824 (1/2,3/2,5/2)	6 0.15 PS 6
39CA 7				3.870	7 3.5 PS LT
39CA 8				3.882 (3/2-,5/2,7/2+)	8 1.7 PS GT
39CA 9				3.891 (11/2-)	9 26 PS LT
39CA 10				3.936 (3/2-)	10 62 FS LT
39CA 11				3.952 (3/2-)	11 21 PS 17
39CA 12	4.021	1/2+			12 0.42 PS 12
39CA 13				4.332 (5/2,7/2)-	13
39CA 14				4.439 3/2+,5/2+	14
39CA 15			4.488 7/2-		15
39CA 16				4.610	16
39CA 17				4.710	17
39CA 18				4.929 3/2+,5/2+	18
39CA 19				5.070 3/2+,5/2+	19
39CA 20	5.129	5/2+			20
39CA 21				5.151 (11/2-)	21
39CA 22				5.222 3/2+,5/2+	22
39CA 23			5.317 7/2-		23
39CA 24				5.364	24
39CA 25				5.400	25
39CA 26				5.402 (13/2-)	26
39CA 27	5.486	5/2+			27
39CA 28				5.588 3/2+,5/2+	28
39CA 29				5.673 3/2+,5/2+	29
39CA 30				5.720 (5/2-,7/2-)	30
S-p	5.771 (0.001)				
39CA 31				5.786 1/2,3/2-	31
39CA 32				5.851 1/2-,3/2-	32
39CA 33				6.008	33
39CA 34				6.094 (1/2+)	34
39CA 35	6.157	5/2+			35
39CA 36				6.286 3/2+,5/2+	36

39CA 37						6.405	5/2-,7/2-	37
39CA 38						6.432	(15/2+)	38
39CA 39						6.451	3/2+,5/2+	39
39CA 40						6.514	3/2+,5/2+	40

39CA 41						6.580	5/2-,7/2-	41
39CA 42						6.629		42
S-alpha=	6.660	(0.001)	-----				
39CA 43						6.722	5/2-,7/2-	43
39CA 44						6.794	3/2+,5/2+	44
39CA 45						6.834	3/2+,5/2+	45
39CA 46						6.900	(15/2-)	46
39CA 47		6.906	1/2+					47
39CA 48						6.954	5/2-,7/2-	48
39CA 49						7.025	(5/2-,7/2-)	49
39CA 50						7.060		50

39CA 51						7.132	3/2+,5/2+	51
39CA 52		7.199	5/2+					52
39CA 53						7.248	3/2+,5/2+	53
39CA 54						7.310	(5/2-,7/2-)	54
39CA 55		7.380	5/2+					55
39CA 56						7.427	(3/2,5/2)+	56
39CA 57						7.480	(5/2-,7/2-)	57
39CA 58						7.532	(5/2-,7/2-)	58
39CA 59						7.581	(5/2-,7/2-)	59
39CA 60						7.635	(5/2-,7/2-)	60

39CA 61						7.711	3/2+,5/2+	61
39CA 62						7.750	(19/2-)	62
39CA 63						7.773		63
39CA 64						7.840		64
39CA 65		7.924	5/2+					65
39CA 66		7.972	5/2+					66
39CA 67						8.021	3/2+,5/2+	67
39CA 68						8.082	3/2+,5/2+	68
39CA 69		8.157	5/2+					69
39CA 70						8.219	3/2+,5/2+	70

39CA 71						8.280	3/2+,5/2+	71
39CA 72		8.336	5/2+					72
39CA 73						8.396	3/2+,5/2+	73
39CA 74						8.460	3/2+,5/2+	74
39CA 75						8.509	3/2+,5/2+	75
39CA 76						8.582	3/2+,5/2+	76
39CA 77						8.650	3/2+,5/2+	77
39CA 78		8.692	5/2+					78
39CA 79						8.748	3/2+,5/2+	79
39CA 80						8.806	3/2+,5/2+	80

39CA	81				8.895		81
39CA	82				8.937	3/2+,5/2+	82
39CA	83				8.988	3/2+,5/2+	83
39CA	84				9.039	3/2+,5/2+	84
39CA	85				9.104	3/2+,5/2+	85
39CA	86				9.158	3/2+,5/2+	86
39CA	87				9.213	3/2+,5/2+	87
39CA	88				9.271	(3/2+,5/2+)	88
39CA	89				9.329		89
39CA	90				9.426		90

39CA	91				9.505	(3/2+,5/2+)	91

S-p = 5.771 (0.001)-----
 S-n = 13.296 (0.001)-----
 S-2p = 10.913 (0.001)-----
 S-2n = 30.289 (0.001)-----
 S-alpha= 6.660 (0.001)-----

S+p = -0.530 (0.003)
 S+n = -15.635 (0.001)
 S+2p = -2.993 (0.028)
 S+2n = -23.998 (0.001)
 S+alpha = -4.458 (0.006)

gap p = 5.241 (0.003)
 gap n = -2.340 (0.001)
 gap 2p = 7.920 (0.028)
 gap 2n = 6.291 (0.001)
 gap alpha = 2.202 (0.006)