

^{45}Ca $Z = 20$ $N = 25$ [link to full NNDC output](#)

Based on ENSDF from Dec 2018, and mass evaluation from 2016

BE = 388.375 (0.000) MeV

Qbeta- = 0.260 (0.001) MeV

	Energy T	J+	J-	J-other	T1/2
45CA 1			0.000	7/2-	1 162.61 D 9
45CA 2			0.174	5/2-	2 0.40 NS 4
45CA 3			1.435	3/2-	3 1.10 PS +22-16
45CA 4				1.554 (11/2-)	4 2.1 PS GT
45CA 5				1.558	5
45CA 6				1.584	6
45CA 7	1.880	3/2+			7 0.05 PS 3
45CA 8				1.884	8
45CA 9			1.900	3/2-	9 1.12 PS +11-9
45CA 10				1.940	10
45CA 11				1.973 5/2-, 7/2-	11
45CA 12			2.249	1/2-	12 0.43 PS +7-6
45CA 13				2.354 1/2+, 3/2+, 5/2+	13 4.7 NS 11
45CA 14	2.392	1/2+			14 0.19 PS 4
45CA 15				2.523 (3/2, 5/2, 7/2)	15
45CA 16				2.599	16
45CA 17				2.675 (3/2, 5/2)	17
45CA 18				2.771 1/2+, 3/2+, 5/2+	18
45CA 19				2.786	19
45CA 20			2.842	3/2-	20 22 FS 6
45CA 21				2.878 (15/2-)	21 2.1 PS GT
45CA 22				2.953	22
45CA 23			2.977	5/2-	23 42 FS 19
45CA 24				3.024 1/2, 3/2, 5/2	24
45CA 25				3.035	25
45CA 26				3.151	26
45CA 27			3.241	3/2-	27 36 FS 12
45CA 28				3.278	28
45CA 29				3.295 (3/2+, 5/2+)	29
45CA 30				3.322 5/2-, 7/2-	30
45CA 31				3.348	31
45CA 32			3.418	1/2-	32 35 FS 7
45CA 33				3.442 1/2-, 3/2-	33
45CA 34				3.463	34
45CA 35				3.491 3/2-, 5/2+	35
45CA 36				3.556	36
45CA 37				3.560 (1/2+)	37

45CA 38						3.654	1/2,3/2,5/2	38		
45CA 39						3.675		39		
45CA 40						3.705	1/2,3/2,5/2	40		

45CA 41						3.753		41		
45CA 42						3.783	1/2-,3/2-	42	26 FS	LT
45CA 43						3.838	(1/2)-	43	15 FS	LT
45CA 44						3.942		44		
45CA 45						3.993	5/2-,7/2-	45		
45CA 46						4.048		46		
45CA 47						4.115		47		
45CA 48						4.177	5/2-,7/2-	48		
45CA 49						4.258		49		
45CA 50						4.286		50		

45CA 51						4.312	(1/2-,3/2-)	51		
45CA 52						4.388		52		
45CA 53						4.421		53		
45CA 54						4.468	1/2-,3/2-	54		
45CA 55						4.511	(1/2-,3/2-)	55		
45CA 56						4.559		56		
45CA 57				4.616	1/2-			57	12 FS	LT
45CA 58						4.695	(5/2-,7/2,9/2+)	58		
45CA 59						4.750	3/2+,5/2+	59		
45CA 60		4.762	1/2+					60		

45CA 61						4.810	1/2-,3/2-	61		
45CA 62						4.837	3/2+,5/2+	62		
45CA 63						4.885	(5/2-,7/2-)	63		
45CA 64		4.919	1/2+					64		
45CA 65		4.981	1/2+					65		
45CA 66						5.000	(1/2)-	66	9.7 FS	LT
45CA 67		5.047	1/2+					67		
45CA 68						5.079		68		
45CA 69						5.128	(1/2+)	69		
45CA 70						5.164		70		

45CA 71		5.201	1/2+					71		
45CA 72						5.237	1/2-,3/2-	72		
45CA 73						5.285		73		
45CA 74						5.309		74		
45CA 75						5.324	3/2+,5/2+	75		
45CA 76		5.352	1/2+					76		
45CA 77						5.373	1/2-,3/2-	77		
45CA 78						5.390	7/2+,9/2+	78		
45CA 79						5.417	3/2+,5/2+	79		
45CA 80						5.440	1/2-,3/2-	80		

45CA 81		5.479	1/2+					81		
45CA 82						5.521	7/2+,9/2+	82		

45CA 83				5.551		83
45CA 84				5.569		84
45CA 85				5.598		85
45CA 86				5.629		86
45CA 87				5.687		87
45CA 88				5.716		88
45CA 89				5.742	(3/2+,5/2+)	89
45CA 90				5.764	5/2-,7/2-	90

45CA 91				5.792		91
45CA 92		5.818	1/2+			92
45CA 93				5.846	1/2-,3/2-	93
45CA 94				5.892	3/2+,5/2+	94
45CA 95				5.915		95
45CA 96				5.948		96
45CA 97				5.967		97
45CA 98				5.990		98
45CA 99				6.018		99
45CA 100				6.051		100

45CA 101				6.077		101
45CA 102				6.106		102
45CA 103				6.234		103
45CA 104				6.301		104

S-p = 12.320 (0.001)-----
S-n = 7.415 (0.000)-----
S-2p = 23.380 (0.005)-----
S-2n = 18.546 (0.000)-----
S-alpha= 10.170 (0.000)-----

S+p = -8.238 (0.001)
S+n = -10.398 (0.002)
S+2p = -18.703 (0.000)
S+2n = -17.675 (0.002)
S+alpha = -10.177 (0.000)

gap p = 4.082 (0.001)
gap n = -2.984 (0.002)
gap 2p = 4.677 (0.005)
gap 2n = 0.871 (0.002)
gap alpha = -0.007 (0.001)