

^{47}Ca $Z = 20$ $N = 27$ [link to full NNDC output](#)

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

BE = 406.049 (0.002) MeV

Qbeta- = 1.992 (0.003) MeV

	Energy T	J+	J-	J-other	T1/2
47CA 1			0.000	7/2-	1 4.536 D 3
47CA 2			2.014	3/2-	2 6 PS GT
47CA 3	2.578	3/2+			3 12 PS GT
47CA 4	2.600	1/2+			4 1 PS GT
47CA 5				2.849 (1/2-, 3/2-)	5
47CA 6				2.875 (1/2-, 3/2-)	6
47CA 7				3.267 (5/2-, 7/2-)	7
47CA 8				3.296	8
47CA 9			3.425	7/2-	9
47CA 10				3.563 (9/2-)	10
47CA 11				3.844 (7/2+, 11/2-)	11
47CA 12				3.877 (5/2-)	12
47CA 13				3.933 (5/2-, 7/2-)	13
47CA 14				3.934 (11/2-)	14
47CA 15				4.000 (13/2)	15
47CA 16				4.019 1/2-, 3/2-	16
47CA 17				4.058 1/2-, 3/2-	17
47CA 18				4.103 (3/2+, 5/2+)	18
47CA 19				4.205 (7/2+, 9/2+)	19
47CA 20				4.386 (7/2+)	20
47CA 21				4.402 1/2-, 3/2-	21
47CA 22				4.403 (15/2)	22
47CA 23				4.455	23
47CA 24				4.531 (3/2+)	24
47CA 25				4.584 (5/2+)	25
47CA 26				4.611 (5/2+)	26
47CA 27				4.714 (9/2-)	27
47CA 28				4.785 5/2-, 7/2-	28
47CA 29				4.809 1/2-, 3/2-	29
47CA 30				4.811 (17/2)	30
47CA 31				4.880 (13/2-)	31
47CA 32				4.918 (9/2-)	32
47CA 33				4.960 3/2+, 5/2+	33
47CA 34				4.980 3/2+, 5/2+	34
47CA 35				5.053 (7/2+)	35
47CA 36				5.189 1/2-, 3/2-	36
47CA 37				5.220	37

47CA 38				5.254	3/2+,5/2+	38
47CA 39				5.305	3/2+,5/2+	39
47CA 40				5.325	7/2+,9/2+	40

47CA 41				5.427		41
47CA 42				5.459	3/2+,5/2+	42
47CA 43				5.488	1/2-,3/2-	43
47CA 44				5.503	1/2,3/2,5/2+	44
47CA 45				5.550		45
47CA 46				5.588		46
47CA 47				5.639		47
47CA 48				5.760	(1/2-,3/2-)	48
47CA 49	5.785	1/2+				49
47CA 50				5.809		50

47CA 51				5.842		51
47CA 52				5.866	1/2-,3/2-	52
47CA 53				5.875	3/2+,5/2+	53
47CA 54				5.916		54
47CA 55				5.963	(5/2-,7/2-)	55
47CA 56				6.062	3/2+,5/2+	56
47CA 57				6.127	3/2+,5/2+	57
47CA 58				6.158		58
47CA 59				6.191		59
47CA 60				6.253	3/2+,5/2+	60

47CA 61				6.276	3/2+,5/2+	61
47CA 62				6.366		62
47CA 63				6.465	3/2+,5/2+	63
47CA 64				6.540	3/2+,5/2+	64
47CA 65				6.610	3/2+,5/2+	65
47CA 66				6.635	3/2+,5/2+	66
47CA 67				6.670	3/2+,5/2+	67
47CA 68				6.719	(5/2-,7/2-)	68
47CA 69				6.760	(5/2-,7/2-)	69
47CA 70				6.878	(5/2-,7/2-)	70

47CA 71				6.920	(3/2+,5/2+)	71
47CA 72				7.023		72
47CA 73				7.063	(5/2-,7/2-)	73
47CA 74				7.117		74
47CA 75				7.151	3/2+,5/2+	75
S-n =	7.276	(0.003)	-----	-----	-----	-----
47CA 76				7.296	3/2+,5/2+	76
47CA 77				7.415	3/2+,5/2+	77
47CA 78				7.489	3/2+,5/2+	78
47CA 79				7.545		79
47CA 80				7.642		80

47CA 81				7.679		81

47CA 82				7.736	3/2+,5/2+	82
47CA 83				7.785		83
47CA 84				7.842		84
47CA 85		7.893	1/2+			85
47CA 86				7.893	3/2+,5/2+	86
47CA 87				7.954	3/2+,5/2+	87
47CA 88				7.995		88
47CA 89		8.021	1/2+			89
47CA 90		8.121	1/2+			90

47CA 91				8.264	(5/2-,7/2-)	91
47CA 92				8.301	3/2+,5/2+	92
47CA 93				8.352	3/2+,5/2+	93
47CA 94		8.380	1/2+			94
47CA 95				8.447		95
47CA 96		8.595	1/2+			96
47CA 97				8.595	3/2+,5/2+	97
47CA 98		8.669	1/2+			98
47CA 99				8.669	3/2+,5/2+	99
47CA 100		8.748	1/2+			100

47CA 101				8.748	3/2+,5/2+	101
47CA 102				8.902		102
47CA 103				8.995		103
47CA 104		9.124	1/2+			104
47CA 105				9.230	3/2+,5/2+	105
47CA 106				9.271	(5/2-,7/2-)	106
47CA 107		9.341	1/2+			107
47CA 108		9.451	1/2+			108
47CA 109				9.545	3/2+,5/2+	109
47CA 110				9.612		110

47CA 111				9.678	3/2+,5/2+	111
47CA 112		9.720	1/2+			112
47CA 113				9.720	3/2+,5/2+	113
47CA 114		9.776	1/2+			114
47CA 115				9.776	3/2+,5/2+	115
47CA 116				9.830		116
47CA 117				9.924		117
47CA 118				9.978	3/2+,5/2+	118
47CA 119				10.056	3/2+,5/2+	119
47CA 120				10.182	3/2+,5/2+	120

47CA 121				10.238		121
47CA 122				10.302	3/2+,5/2+	122
47CA 123				10.358	3/2+,5/2+	123
47CA 124				10.431	3/2+,5/2+	124
47CA 125				10.485	3/2+,5/2+	125
47CA 126				10.581	3/2+,5/2+	126
47CA 127				10.640	3/2+,5/2+	127

47CA 128				10.680	3/2+,5/2+	128
47CA 129	10.765	1/2+				129
47CA 130				11.003	3/2+,5/2+	130

47CA 131				11.187		131
47CA 132				11.580		132
47CA 133				11.826		133
47CA 134	12.737	9/2 1/2+				134
S-alpha=	12.759	(0.006)	-----			
47CA 135				13.084	9/2 (3/2)+	135
S-p	= 14.219	(0.002)	-----			
47CA 136				16.218	(9/ (5/2+)	136
S-2n	= 17.675	(0.002)	-----			
47CA 137				18.149	(5/2-,7/2-)	137

S-p = 14.219 (0.002)-----
 S-n = 7.276 (0.003)-----
 S-2p = 27.152 (0.002)-----
 S-2n = 17.675 (0.002)-----
 S-alpha= 12.759 (0.006)-----

S+p = -9.448 (0.005)
 S+n = -9.952 (0.002)
 S+2p = -20.797 (0.002)
 S+2n = -15.098 (0.002)
 S+alpha = -9.813 (0.002)

gap p = 4.771 (0.006)
 gap n = -2.675 (0.004)
 gap 2p = 6.354 (0.003)
 gap 2n = 2.577 (0.003)
 gap alpha = 2.946 (0.006)