

^{129}La $Z = 57$ $N = 72$ adopted link ENSDF link

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

BE = 1077.930 (0.021) MeV

Qbeta+ = 3.737 (0.024) MeV

	Energy T	J+	J-	J-other	T1/2

S-alpha=	-0.341	(0.023)	-----		
129LA 1				0.000 (3/2+)	1 11.6 M 2
129LA 2				0.068 (5/2+)	2
129LA 3				0.172 (11/2-)	3 0.56 S 5
129LA 4				0.216 (1/2+:9/2+)	4
129LA 5				0.240 (5/2+)	5
129LA 6				0.248 (7/2+)	6
129LA 7				0.271 (1/2:7/2+)	7
129LA 8				0.398 (3/2+,5/2+,7/2+)	8
129LA 9				0.440 (7/2+)	9
129LA 10				0.442 (15/2-)	10 90 PS 4

129LA 11				0.446 (9/2+)	11
129LA 12				0.464 (5/2+,7/2+)	12
129LA 13				0.472 (1/2+:7/2+)	13
129LA 14				0.556 (1/2:7/2+)	14
129LA 15				0.588 (1/2+:7/2+)	15
129LA 16				0.620 (3/2+:9/2+)	16
129LA 17				0.646 (9/2+)	17
129LA 18				0.652 (1/2:9/2+)	18
129LA 19				0.697 (11/2+)	19
129LA 20				0.706 (5/2+:9/2+)	20

129LA 21				0.782 (5/2+:9/2+)	21
129LA 22				0.796 (3/2+:7/2+)	22
129LA 23				0.832 (3/2+:9/2+)	23
129LA 24				0.917 (19/2-)	24 6.0 PS 9
129LA 25				0.929 (7/2+:11/2+)	25
129LA 26				0.935 (1/2:9/2+)	26
129LA 27				0.966 (1/2:7/2+)	27
129LA 28				0.992 (11/2+)	28
129LA 29				1.015 (1/2:7/2+)	29
129LA 30				1.022 (13/2+)	30

129LA 31				1.120 (13/2-)	31
129LA 32				1.120	32
129LA 33				1.234 (13/2+)	33
129LA 34				1.275 (15/2:19/2-)	34
129LA 35				1.305 (17/2-)	35
129LA 36				1.316 (15/2+)	36

129LA 37				1.329	(15/2:19/2-)	37
129LA 38				1.524	(11/2+:15/2+)	38
129LA 39				1.558	(23/2-)	39 1.2 PS GE
129LA 40				1.587	(17/2-)	40

129LA 41				1.651	(15/2:19/2-)	41
129LA 42				1.654	(13/2+)	42
129LA 43				1.725	(15/2+)	43
129LA 44				1.753		44
129LA 45				1.753	(17/2+)	45
129LA 46				1.803		46
129LA 47				1.851	(19/2-)	47
129LA 48				1.950	(21/2-)	48
129LA 49				1.952	(23/2:27/2-)	49
129LA 50				1.957	(9/2+:17/2+)	50

129LA 51				1.972	(15/2-,17/2,19/2 51-)	
129LA 52				1.985	(19/2+)	52
129LA 53				2.004	(15/2:19/2-)	53
129LA 54				2.070	(19/2+)	54
129LA 55				2.118	(15/2-:23/2-)	55
129LA 56				2.170	(19/2)	56
129LA 57				2.206	(19/2:23/2-)	57
129LA 58				2.219	(15/2+)	58
129LA 59				2.221	(21/2-)	59
129LA 60				2.243	(17/2+)	60

S-p = 3.243 (0.021)-----
S-n = 10.769 (0.058)-----
S-2p = 9.661 (0.022)-----
S-2n = 19.570 (0.034)-----
S-alpha= -0.341 (0.023)-----

S+p = -5.388 (0.035)
S+n = -8.375 (0.034)
S+2p = -7.555 (0.052)
S+2n = -18.588 (0.035)
S+alpha = 0.961 (0.025)

gap p = -2.145 (0.041)
gap n = 2.394 (0.067)
gap 2p = 2.106 (0.056)
gap 2n = 0.982 (0.049)
gap alpha = 0.620 (0.034)