

$^{109}\text{Sb}$        $Z = 51$        $N = 58$       adopted link      ENSDF link

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

BE = 916.125 ( 0.005) MeV

Qbeta+ = 6.379 ( 0.010) MeV

	Energy T	J+	J-	J-other	T1/2
-----					
S-alpha=	-0.965 ( 0.012)				
109SB	1			0.000 (5/2+)	1 17.2 S 5
109SB	2			0.402 (1/2+)	2
109SB	3			0.752 (3/2+)	3
109SB	4			0.832 (7/2+)	4
109SB	5			1.101 (9/2+)	5
109SB	6			1.331 (3/2,5/2,7/2)	6
109SB	7			1.341 (9/2+)	7
-----					
S-p	= 1.470 ( 0.008)				
109SB	8			1.501 (11/2-)	8
109SB	9			1.592 (3/2,5/2+)	9
109SB	10			1.620 (3/2,5/2,7/2)	10
-----					
109SB	11			1.837 (3/2,5/2+)	11
109SB	12			1.855 (11/2+)	12
109SB	13			1.969	13
109SB	14			2.019	14
109SB	15			2.046	15
109SB	16			2.092 (13/2+)	16
109SB	17			2.106	17
109SB	18			2.194 (13/2+)	18
109SB	19			2.272 (15/2+)	19
109SB	20			2.581 (15/2-)	20
-----					
109SB	21			2.651 (17/2+)	21
109SB	22			2.821 (17/2+)	22
109SB	23			2.827 (17/2-)	23
109SB	24			3.215 (19/2+)	24
109SB	25			3.301 (17/2+)	25
109SB	26			3.377 (19/2+)	26
109SB	27			3.488 (19/2-)	27
109SB	28			3.535 (21/2+)	28
109SB	29			3.589 (19/2-)	29
109SB	30			3.750 (21/2-)	30
-----					
109SB	31			3.762 (21/2+)	31
109SB	32			3.805 (19/2-)	32
109SB	33			3.874 (23/2+)	33
109SB	34			3.930 (23/2-)	34 84 PS 7
109SB	35			4.068 (19/2-)	35

109SB 36				4.234	(25/2+)	36
109SB 37				4.244	(21/2-)	37
109SB 38				4.245	(21/2-)	38
109SB 39				4.456	(23/2-)	39
109SB 40				4.484	(25/2-)	40
-----						
109SB 41				4.487	(23/2-)	41
109SB 42				4.601	(27/2-)	42
109SB 43				4.626	(27/2+)	43
109SB 44				4.684	(23/2-)	44
109SB 45				4.806	(25/2-)	45
109SB 46				4.959	(25/2-)	46
109SB 47				4.980	(27/2-)	47
109SB 48				5.043	(29/2+)	48
109SB 49				5.165	(27/2-)	49
109SB 50				5.190	(27/2-)	50
-----						
109SB 51				5.488	(31/2+)	51
109SB 52				5.488	(29/2-)	52
109SB 53				5.505	(31/2+)	53
109SB 54				5.562	(27/2-)	54
109SB 55				5.569	(29/2-)	55
109SB 56				5.717		56
109SB 57				5.799		57
109SB 58				5.824	(31/2-)	58
109SB 59				5.893	(29/2-)	59
109SB 60				5.976	(31/2-)	60
-----						
109SB 61				5.983	(33/2+)	61
109SB 62				5.985	(33/2+)	62
109SB 63				5.997	(31/2-)	63
109SB 64				6.157	(31/2-)	64
109SB 65				6.336	(33/2-)	65
109SB 66				6.452	(33/2-)	66
109SB 67				6.508	(35/2+)	67
109SB 68				6.511	(35/2+)	68
109SB 69				6.570		69
109SB 70				6.631	(31/2-)	70
-----						
109SB 71				6.668	(35/2-)	71
109SB 72				6.840	(31/2-)	72
109SB 73				6.844	(31/2-)	73
109SB 74				6.915	(35/2-)	74
109SB 75				6.949		75
109SB 76				7.041	(37/2+)	76
-----						
S-2p	=	7.262 ( 0.011)	-----			
109SB 77				7.350	(37/2-)	77
109SB 78				7.437	(35/2-)	78
109SB 79				7.465	(35/2-)	79
109SB 80				7.483	(37/2-)	80

-----				-----		
109SB	81			7.606	(35/2-)	81
109SB	82			7.684	(39/2-)	82
109SB	83			8.228	(39/2-)	83 449 FS +61-49
109SB	84			9.089	(43/2-)	84 283 FS +32-23

S-p = 1.470 ( 0.008)-----  
 S-n = 11.877 ( 0.008)-----  
 S-2p = 7.262 ( 0.011)-----  
 S-2n = 21.740 ( 0.007)-----  
 S-alpha = -0.965 ( 0.012)-----

S+p = -3.268 ( 0.008)  
 S+n = -9.270 ( 0.008)  
 S+2p = -3.281 ( 0.007)  
 S+2n = -20.728 ( 0.010)  
 S+alpha = 2.707 ( 0.010)

gap p = -1.798 ( 0.011)  
 gap n = 2.607 ( 0.011)  
 gap 2p = 3.982 ( 0.013)  
 gap 2n = 1.012 ( 0.012)  
 gap alpha = 1.742 ( 0.015)