

$^{28}\text{Al}$        $Z = 13$        $N = 15$       adopted link      ENSDF link

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

BE = 232.677 ( 0.000) MeV

Qbeta- = 4.642 ( 0.000) MeV

	Energy T	J+	J-	J-other	T1/2
28AL 1	0.000	3+			1 2.245 M 2
28AL 2	0.031	2+			2 2.07 NS 5
28AL 3	0.972	0+			3 33 PS 2
28AL 4	1.014	3+			4 103 FS 14
28AL 5	1.373	1+			5 223 FS 35
28AL 6	1.620	1+			6 92 FS 22
28AL 7	1.623	2+			7 63 FS 10
28AL 8	2.139	2+			8 8 FS 1
28AL 9	2.201	1+			9 32 FS 2
28AL 10	2.272	4+			10 22 FS 3
28AL 11	2.486	2+			11 66 FS 7
28AL 12	2.582	5+			12 313 FS 25
28AL 13	2.656	4+			13 22 FS 3
28AL 14				2.988 (3,1)+	14 62 FS 55
28AL 15	3.011	0+			15
28AL 16	3.105	1+			16 15 FS 3
28AL 17				3.296 (3+)	17 8 FS 3
28AL 18	3.347	2+			18 6 FS 2
28AL 19			3.465 4-		19 44 FS 2
28AL 20				3.542 (1)+	20
28AL 21				3.591 (3-)	21 29 FS 4
28AL 22				3.601	22
28AL 23	3.671	3+			23 132 FS 42
28AL 24				3.709 (2,3)+	24 187 FS 21
28AL 25	3.760	0+			25
28AL 26			3.876 2-		26 19 FS 2
28AL 27				3.901 (1,3)+	27 187 FS 28
28AL 28	3.936	2+			28 21 FS 7
28AL 29			4.033 5-		29 108 FS 43
28AL 30	4.115	1+			30
28AL 31	4.244	2+			31 42 FS 21
28AL 32				4.313 (1,3,5)+	32
28AL 33				4.385	33
28AL 34				4.462 (2,4)+	34
28AL 35	4.517	3+			35
28AL 36	4.597	3+			36 159 FS 83
28AL 37			4.691 3-		37 4.9 FS 6

28AL 38						4.739	(0 TO 5)+	38		
28AL 39				4.765	2-			39	3.5 FS	14
28AL 40		4.849	1+					40		
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28AL 41				4.904	2-			41	5.7 FS	8
28AL 42						4.928		42		
28AL 43				4.997	2-			43		
28AL 44		4.999	2+					44		
28AL 45		5.016	3+					45		
28AL 46				5.135	3-			46	5.6 FS	7
28AL 47						5.165	6-, (4-, 5-)	47	49 FS	LT
28AL 48						5.177	(1+ TO 3+)	48	7 FS	3
28AL 49						5.190		49		
28AL 50						5.287		50		
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28AL 51						5.333		51		
28AL 52						5.345		52		
28AL 53						5.378		53	4 FS	2
28AL 54						5.406	(0 TO 2)-	54		
28AL 55				5.442	2-			55	3.3 FS	10
28AL 56						5.530		56		
28AL 57						5.741	(1 TO 4+)	57	4 FS	1
28AL 58						5.761		58		
28AL 59				5.798	2-			59	4 FS	LT
28AL 60						5.809		60		
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28AL 61						5.861	(2,3+)	61	7 FS	LT
28AL 62						5.904	(1,2,3)+	62		
28AL 63						5.925		63		
28AL 64						5.957		64		
28AL 65						5.981		65		
28AL 66		5.993	2 0+					66		
28AL 67						6.005		67	35 NS	LT
28AL 68				6.020	2-			68		
28AL 69						6.064		69		
28AL 70						6.071	(0,1)+	70		
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28AL 71						6.160		71		
28AL 72						6.199	(2+ TO 4+)	72	4 FS	LT
28AL 73						6.238	(0,1,2)-	73		
28AL 74		6.317	2+					74	4 FS	LT
28AL 75						6.329		75		
28AL 76						6.420	(1+,2+)	76		
28AL 77						6.441	(3+,4)	77		
28AL 78						6.454		78		
28AL 79						6.462		79		
28AL 80						6.481		80		
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28AL 81						6.493		81		
28AL 82						6.512		82		

28AL 83			6.564		83
28AL 84			6.569		84
28AL 85			6.572		85
28AL 86			6.584		86
28AL 87			6.623	(1+ TO 4+)	87
28AL 88			6.651	(1 TO 2)-	88
28AL 89			6.671		89
28AL 90			6.720		90
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28AL 91			6.757	(2+,3)	91
28AL 92			6.773		92
28AL 93			6.788		93
28AL 94			6.809		94
28AL 95			6.826		95
28AL 96			6.835		96
28AL 97			6.853		97
28AL 98			6.894	(2+,3)	98
28AL 99			6.911		99
28AL 100			6.931		100
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28AL 101			6.967		101
28AL 102			7.022		102
28AL 103			7.087		103
28AL 104			7.118	(1,2,3)+	104
28AL 105			7.146		105
28AL 106			7.176	(1+,2+,3+)	106
28AL 107			7.194		107
28AL 108			7.243		108
28AL 109			7.258		109
28AL 110			7.269	(2+,3+,4+)	110
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28AL 111			7.318		111
28AL 112			7.341		112
28AL 113			7.409	(1+ TO 4+)	113
28AL 114			7.444		114
28AL 115			7.457		115
28AL 116			7.502		116
28AL 117			7.592		117
28AL 118			7.654		118
28AL 119			7.669		119
28AL 120			7.700		120
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S-p = 9.553 ( 0.000)-----  
S-n = 7.725 ( 0.000)-----  
S-2p = 24.568 ( 0.004)-----  
S-2n = 20.783 ( 0.000)-----  
S-alpha= 10.858 ( 0.000)-----

S+p = -12.333 ( 0.000)  
S+n = -9.428 ( 0.000)  
S+2p = -17.928 ( 0.000)  
S+2n = -15.156 ( 0.002)  
S+alpha = -9.879 ( 0.000)

gap p = -2.780 ( 0.000)  
gap n = -1.703 ( 0.000)  
gap 2p = 6.640 ( 0.004)  
gap 2n = 5.627 ( 0.002)  
gap alpha = 0.979 ( 0.000)