

^{137}Nd $Z = 60$ $N = 77$ adopted link ENSDF link

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

BE = 1138.414 (0.012) MeV

Qbeta+ = 3.618 (0.014) MeV

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

S-alpha=	-0.409	(0.020)	-----		
137ND 1	0.000	1/2+			1 38.5 M 15
137ND 2	0.109	3/2+			2
137ND 3				0.269 (3/2)+	3
137ND 4	0.286	5/2+			4
137ND 5			0.519	11/2-	5 1.60 S 15
137ND 6	0.615	7/2+			6
137ND 7				0.798	7
137ND 8				0.835 (7/2+)	8
137ND 9				0.852 (7/2+)	9
137ND 10				0.977	10

137ND 11			1.101	13/2-	11
137ND 12			1.189	15/2-	12
137ND 13				1.375 (7/2,5/2-)	13
137ND 14				1.376 (11/2+)	14
137ND 15				1.511 (11/2)-	15
137ND 16				1.684 (15/2-)	16
137ND 17				1.707 (9/2,11/2)	17
137ND 18				1.716 (15/2)	18
137ND 19				1.789	19
137ND 20			1.895	17/2-	20

137ND 21				1.900 9/2-,11/2+	21
137ND 22				1.988 (9/2,11/2)	22
137ND 23				2.066 (13/2-)	23
137ND 24				2.072 (19/2-)	24
137ND 25				2.223 (19/2+)	25 2.5 NS 15
137ND 26				2.370 (9/2,11/2,13/2)-	26
137ND 27				2.415 (19/2-)	27
137ND 28				2.434	28
137ND 29				2.442 (17/2+)	29
137ND 30				2.474 (17/2-)	30

137ND 31				2.631 (23/2+)	31
137ND 32				2.722	32
137ND 33				2.751 (19/2+)	33
137ND 34				2.777 (19/2-)	34
137ND 35				2.804	35
137ND 36				2.851 (21/2+)	36

137ND 37				2.880	(21/2-)	37
137ND 38				2.947	(21/2+)	38
137ND 39				3.049	(21/2-)	39
137ND 40				3.082	(23/2-)	40

137ND 41				3.161	(23/2+)	41
137ND 42				3.221	(23/2-)	42
137ND 43				3.327	(25/2)	43
137ND 44				3.365	(23/2-)	44
137ND 45				3.373	(23/2-)	45
137ND 46				3.380	(25/2+)	46
137ND 47				3.410	(25/2+)	47
137ND 48				3.497	(23/2+)	48
137ND 49				3.555	(27/2+)	49
137ND 50				3.675	(27/2+)	50

137ND 51				3.692	(27/2-)	51
137ND 52				3.717		52
137ND 53				3.757	(25/2-)	53
137ND 54				3.786	(25/2-)	54
137ND 55				3.837	(27/2-)	55
137ND 56				3.896	(27/2-)	56
137ND 57				4.043		57
137ND 58				4.112	(29/2+)	58
137ND 59				4.160	(29/2-)	59
137ND 60				4.247	(29/2-)	60

137ND 61				4.465		61
137ND 62				4.476	(31/2+)	62
137ND 63				4.514	(31/2-)	63
137ND 64				4.534	(31/2+)	64
137ND 65				4.587	(29/2-)	65
137ND 66				4.728	(31/2+)	66
137ND 67				4.822	(31/2-)	67
137ND 68				4.844	(31/2-)	68
137ND 69				4.870	(31/2-)	69
137ND 70				4.886	(29/2+)	70

137ND 71				4.910	(33/2-)	71
137ND 72				4.925	(29/2+)	72
137ND 73				4.939	(29/2+)	73
137ND 74				4.948	(33/2-)	74
137ND 75				5.025	(33/2+)	75
137ND 76				5.108	(33/2-)	76
137ND 77				5.180	(35/2+)	77
137ND 78				5.195	(31/2)	78
137ND 79				5.373	(35/2-)	79
137ND 80				5.415	(35/2+)	80

137ND 81				5.416	(35/2-)	81

137ND	82			5.520	(33/2+)	82			
S-p	=	5.532	(0.016)	-----					
137ND	83			5.559	(35/2+)	83			
137ND	84			5.597	(33/2+)	84			
137ND	85			5.702	(35/2-)	85			
137ND	86			5.788	(37/2-)	86			
137ND	87			5.813	(37/2-)	87			
137ND	88			5.824	(37/2-)	88			
137ND	89			5.854	(35/2+)	89			
137ND	90			5.952	(35/2+)	90			

137ND	91			6.021	(37/2+)	91			
137ND	92			6.080	(39/2+)	92			
137ND	93			6.161	(37/2+)	93			
137ND	94			6.194	(39/2-)	94			
137ND	95			6.199	(37/2+)	95			
137ND	96			6.264	(39/2-)	96			
137ND	97			6.360	(39/2-)	97			
137ND	98			6.472	(39/2+)	98			
137ND	99			6.479	(39/2+)	99			
137ND	100			6.516	(39/2+)	100			

137ND	101			6.532	(39/2+)	101			
137ND	102			6.644	(39/2+)	102			
137ND	103			6.669	(41/2-)	103			
137ND	104			6.795	(41/2-)	104			
137ND	105			6.851	(41/2-)	105			
137ND	106			6.916	(41/2+)	106			
137ND	107			6.940	(41/2+)	107			
137ND	108			7.081	(41/2+)	108			
137ND	109			7.101	(43/2-)	109			
137ND	110			7.187	(43/2-)	110			

137ND	111			7.197	(43/2+)	111			
137ND	112			7.314	(43/2-)	112			
137ND	113			7.340	(43/2+)	113			
137ND	114			7.586	(43/2+)	114			
137ND	115			7.652	(45/2-)	115			
137ND	116			7.703	(45/2-)	116			
137ND	117			7.743	(45/2+)	117	0.180 PS	14	
137ND	118			7.797	(45/2+)	118	0.15 PS	10	
137ND	119			8.041	(45/2-)	119			
137ND	120			8.188	(47/2-)	120			

137ND	121			8.197	(47/2-)	121			
137ND	122			8.325	(47/2+)	122	0.10 PS	3	
137ND	123			8.349	(47/2-)	123			
S-n	=	8.456	(0.017)	-----					
137ND	124			8.604	(49/2+)	124	0.118 PS	14	
137ND	125			8.746	(49/2-)	125			

137ND 126				8.922	(49/2+)	126	0.17	PS	7
137ND 127				9.338	(51/2-)	127			
137ND 128				9.365	(49/2-)	128			
137ND 129				9.373	(51/2-)	129			
137ND 130				9.412	(49/2-)	130			

137ND 131				9.525	(53/2+)	131	0.104	PS	14
S-2p	=	9.545	(0.016)	-----					
137ND 132				9.569	(51/2+)	132			

S-p = 5.532 (0.016)-----
S-n = 8.456 (0.017)-----
S-2p = 9.545 (0.016)-----
S-2n = 19.513 (0.022)-----
S-alpha= -0.409 (0.020)-----

S+p = -2.619 (0.016)
S+n = -10.505 (0.016)
S+2p = -7.374 (0.016)
S+2n = -18.576 (0.030)
S+alpha = 1.225 (0.015)

gap p = 2.913 (0.023)
gap n = -2.049 (0.023)
gap 2p = 2.171 (0.022)
gap 2n = 0.937 (0.037)
gap alpha = 0.816 (0.025)