

^{136}Nd $Z = 60$ $N = 76$ adopted link ENSDF link

Based on ensdf_240402 (Apr 2024), and mass evaluation from 2020

BE = 1129.958 (0.012) MeV

Qbeta+ = 2.141 (0.016) MeV

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

S-alpha=	-0.844	(0.024)	-----		

136ND 1	0.000	0+			1 50.65 M 33
136ND 2	0.374	2+			2
136ND 3	0.862	2+			3
136ND 4	0.976	4+			4 8 PS LT
136ND 5	1.231	(3)+			5
136ND 6	1.542	(4+)			6
136ND 7	1.747	6+			7 14 PS LT
136ND 8				1.776	8
136ND 9				1.818	9
136ND 10				1.926	10

136ND 11			2.036	(5-)	11
136ND 12	2.046	(5+)			12
136ND 13				2.181	13
136ND 14				2.228 (3-,4,5,6	14
136ND 15				2.346	15
136ND 16				2.417	16
136ND 17			2.440	(7-)	17 21 PS 7
136ND 18			2.484	(6-)	18
136ND 19				2.523	19
136ND 20	2.633	8+			20 7 PS LT

136ND 21			2.758	(8-)	21
136ND 22			2.941	(9-)	22 6 PS 2
136ND 23				3.172	23
136ND 24			3.244	(10-)	24
136ND 25	3.279	(10+)			25
136ND 26	3.296	10+			26 51 PS 6
136ND 27				3.331	27
136ND 28	3.553	(10+)			28
136ND 29			3.602	(11-)	29
136ND 30	3.686	12+			30 19 PS 3

136ND 31				3.765	31
136ND 32	3.768	(10+)			32
136ND 33			3.782	(9-)	33
136ND 34				3.828	34
136ND 35	3.997	(12+)			35

136ND	36			4.002	(10-)				36	
136ND	37			4.017	(12-)				37	
136ND	38						4.028		38	
136ND	39			4.256	(11-)				39	
136ND	40	4.320	(12+)						40	

136ND	41						4.347		41	
136ND	42	4.348	(14+)						42 4 PS LT	
136ND	43						4.387		43	
136ND	44			4.426	(13-)				44	
136ND	45	4.455	(13+)						45	
136ND	46						4.547		46	
136ND	47			4.550	(12-)				47	
136ND	48						4.838		48	
136ND	49	4.849	(14+)						49	
136ND	50	4.856	(14+)						50	

136ND	51			4.895	(13-)				51	
136ND	52						4.940		52	
136ND	53	5.022	(14+)						53	
136ND	54			5.023	(14-)				54	
136ND	55	5.032	(14+)						55	
136ND	56	5.133	(15+)						56	
136ND	57	5.192	(16+)						57	
136ND	58			5.306	(14-)				58	
136ND	59						5.309		59	
136ND	60			5.348	(13-)				60	

136ND	61						5.372		61	
136ND	62			5.416	(15-)				62	
136ND	63			5.417	(14-)				63	
136ND	64			5.531	(14-)				64	
S-p	=	5.552	(0.017)	-----						
136ND	65	5.570	(16+)						65	
136ND	66						5.597		66	
136ND	67			5.647	(15-)				67 0.64 PS 6	
136ND	68	5.695	(16+)						68	
136ND	69						5.728		69	
136ND	70			5.731	(15-)				70 0.88 PS 4	

136ND	71			5.760	(15-)				71	
136ND	72	5.844	(16+)						72	
136ND	73	5.877	(16+)						73	
136ND	74	5.943	(17+)						74	
136ND	75			5.955	(16-)				75 0.61 PS 7	
136ND	76			5.979	(16-)				76 0.60 PS 6	
136ND	77	6.008	(16+)						77	
136ND	78			6.040	(16-)				78	
136ND	79	6.192	(18+)						79	
136ND	80	6.231	(15+)						80	

136ND 81	6.239	(17+)				81			
136ND 82				6.261	(16-)				
136ND 83						6.275			
136ND 84				6.312	(17-)		84	0.49 PS	4
136ND 85				6.323	(17-)		85	0.42 PS	5
136ND 86	6.348	(16+)					86		
136ND 87				6.360	(17-)		87		
136ND 88	6.472	(18+)					88		
136ND 89	6.523	(18+)					89		
136ND 90	6.546	(18+)					90		
136ND 91	6.580	(17+)					91		
136ND 92						6.587			
136ND 93				6.676	(18-)		93		
136ND 94				6.713	(18-)		94	0.39 PS	6
136ND 95	6.756	(18+)					95		
136ND 96				6.757	(18-)		96	0.35 PS	5
136ND 97	6.771	(18+)					97		
136ND 98	6.868	(19+)					98		
136ND 99	6.885	(18+)					99		
136ND 100						6.930	100		
136ND 101	6.931	(19+)					101		
136ND 102				7.029	(17-)		102		
136ND 103				7.142	(19-)		103		
136ND 104				7.149	(19-)		104	0.222 PS	35
136ND 105				7.223	(19-)		105	0.215 PS	35
136ND 106	7.256	(20+)					106		
136ND 107	7.294	(19+)					107		
136ND 108	7.331	(20+)					108		
136ND 109	7.355	(20+)					109		
136ND 110				7.533	(20-)		110		
136ND 111				7.576	(20-)		111		
136ND 112				7.648	(19-)		112		
136ND 113	7.670	(20+)					113		
136ND 114				7.685	(19-)		114		
136ND 115	7.686	(21+)					115		
136ND 116				7.717	(20-)		116		
136ND 117	7.732	(20+)					117		
136ND 118				8.021	(21-)		118		
136ND 119				8.050	(21-)		119		
136ND 120	8.051	(21+)					120		
136ND 121				8.064	(21-)		121		
136ND 122	8.100	(21+)					122		
136ND 123	8.149	(22+)					123		
136ND 124	8.223	(22+)					124		
136ND 125				8.235	(21-)		125		

136ND 126						8.380 (22)		126
136ND 127				8.402		(21-)		127
136ND 128		8.467		(22+)				128
136ND 129				8.509		(22-)		129
136ND 130				8.555		(22-)		130

136ND 131		8.622		(22+)				131
136ND 132		8.653		(23+)				132
136ND 133						8.755 (23)		133
136ND 134				8.777		(22-)		134
136ND 135		8.795		(22+)				135
S-2p	=	8.944 (0.024)	-----					
136ND 136		8.948		(23+)				136 0.062 PS 28
136ND 137				9.020		(23-)		137
136ND 138				9.048		(23-)		138
136ND 139						9.165 (24)		139
136ND 140		9.172		(24+)				140

136ND 141		9.179		(24+)				141
136ND 142				9.197		(23-)		142
136ND 143				9.342		(23-)		143
136ND 144		9.492		(24+)				144 0.042 PS 21
136ND 145				9.557		(24-)		145
136ND 146				9.569		(24-)		146
136ND 147						9.618 (25)		147
136ND 148		9.746		(25+)				148
136ND 149				9.894		(25-)		149
136ND 150				10.055		(25-)		150

136ND 151		10.092		(25+)				151
136ND 152						10.109 (26)		152
136ND 153		10.191		(26+)				153
136ND 154				10.193		(25-)		154
136ND 155		10.344		(26+)				155
136ND 156				10.499		(26-)		156
136ND 157						10.638 (27)		157
136ND 158		10.763		(26+)				158
136ND 159				10.785		(27-)		159
136ND 160		10.969		(27+)				160

136ND 161				10.973		(27-)		161
S-n	=	11.057 (0.022)	-----					
136ND 162		11.277		(28+)				162
136ND 163				11.491		(28-)		163
136ND 164		11.648		(28+)				164
136ND 165				11.784		(29-)		165
136ND 166				11.957		(29-)		166
136ND 167		12.336		(29+)				167
136ND 168		12.418		(30+)				168
136ND 169				12.556		(30-)		169

136ND 170		12.882	(31-)		170

136ND 171		13.007	(31-)		171
136ND 172		13.700	(32-)		172
136ND 173		14.070	(33-)		173
136ND 174		14.125	(33-)		174
136ND 175		14.926	(34-)		175
136ND 176		15.311	(35-)		176
136ND 177		15.355	(35-)		177
136ND 178		16.226	(36-)		178
136ND 179		16.566	(37-)		179
136ND 180		16.744	(37-)		180

136ND 181		17.593	(38-)		181
136ND 182		17.891	(39-)		182
136ND 183		19.290	(41-)		183

S-p = 5.552 (0.017) -----
S-n = 11.057 (0.022) -----
S-2p = 8.944 (0.024) -----
S-2n = 19.696 (0.017) -----
S-alpha= -0.844 (0.024) -----

S+p = -2.162 (0.018)
S+n = -8.456 (0.017)
S+2p = -6.876 (0.017)
S+2n = -18.960 (0.017)
S+alpha = 1.318 (0.017)

gap p = 3.390 (0.024)
gap n = 2.601 (0.028)
gap 2p = 2.068 (0.029)
gap 2n = 0.735 (0.024)
gap alpha = 0.474 (0.029)