

^{140}Nd $Z = 60$ $N = 80$ adopted link ENSDF link

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

BE = 1167.301 (0.003) MeV

Qbeta+ = 0.429 (0.007) MeV

	Energy T	J+	J-	J-other	T1/2
140ND 1	0.000	0+			1 3.37 D 2
S-alpha=	0.174 (0.003)				
140ND 2	0.774	2+			2 1.40 PS 11
140ND 3	1.413	0+			3
140ND 4	1.414	2+			4
140ND 5				1.489 (2)+	5
140ND 6	1.802	4+			6
140ND 7			1.935 3-		7
140ND 8				2.124 3(-)	8
140ND 9	2.140	2+			9 152 FS 62
140ND 10			2.222 7-		10 0.60 MS 5
140ND 11			2.276 5-		11
140ND 12	2.330	0+			12
140ND 13	2.332	2+			13
140ND 14	2.359	0+			14
140ND 15	2.367	6+			15
140ND 16	2.400	4+			16
140ND 17	2.467	2+			17
140ND 18			2.514 5-		18
140ND 19	2.547	0+			19
140ND 20				2.575 (4+,5-)	20
140ND 21	2.585	0+			21
140ND 22			2.606 3-		22
140ND 23				2.611 (2+)	23
140ND 24				2.670	24
140ND 25	2.686	4+			25
140ND 26	2.714	2+			26
140ND 27				2.810	27
140ND 28				2.833 (2+)	28
140ND 29				2.842 7(-)	29
140ND 30				2.889 (5-)	30
140ND 31	2.909	0+			31
140ND 32				2.943 (6+,7-)	32
140ND 33	3.014	4+			33
140ND 34				3.036 (1,2)	34
140ND 35	3.061	4+			35
140ND 36			3.062 7-		36

140ND	37					3.136	(4+)		37
140ND	38	3.140	0+						38
140ND	39	3.185	8+						39
140ND	40					3.206	(2+)		40

140ND	41					3.239	(2+)		41
140ND	42			3.240	8-				42
140ND	43	3.286	4+						43
140ND	44					3.324	2+&4+		44
140ND	45	3.387	2+						45
140ND	46					3.419	7,8,9(-)		46
140ND	47			3.455	9-				47
140ND	48	3.460	4+						48
140ND	49	3.493	4+						49
140ND	50					3.507	0+,1,2		50

140ND	51					3.510			51
140ND	52					3.561	(2+)		52
140ND	53			3.574	3-				53
140ND	54					3.621	(4+)		54
140ND	55	3.622	10+						55 27 NS 5
140ND	56					3.650			56
140ND	57					3.666	(7-)		57
140ND	58					3.673	7(-)		58
140ND	59					3.733			59
140ND	60	3.755	6+						60

140ND	61					3.780			61
140ND	62					3.810			62
140ND	63					3.844	(6+)		63
140ND	64					3.889	(1-)		64
140ND	65					3.925			65
140ND	66					3.949			66
140ND	67					3.959	(9-)		67
140ND	68			4.031	10-				68
140ND	69	4.157	10+						69
140ND	70					4.170			70

140ND	71			4.176	10-				71
140ND	72			4.323	11-				72
140ND	73					4.350	7,8,9		73
140ND	74					4.367	7,8,9(-)		74
140ND	75			4.389	11-				75
140ND	76			4.514	12-				76 0.25 NS
140ND	77			4.703	13-				77
140ND	78			4.878	11-				78
140ND	79	4.915	11+						79
140ND	80			5.099	12-				80

140ND	81			5.139	12-				81

140ND 82				5.312	13-				82	
140ND 83				5.432	14-				83	
140ND 84				5.614	15-				84	
140ND 85				5.644	15-				85	
140ND 86				5.903	16-				86	
140ND 87							5.967	(14-)	87	
140ND 88				5.971	15-				88	
140ND 89							5.988	(15-)	89	
140ND 90		6.158	16+						90	

140ND 91							6.183	(16-)	91	
140ND 92		6.352	15+						92	
140ND 93				6.408	17-				93	
140ND 94							6.410	16	94	
140ND 95							6.432	(17-)	95	
140ND 96							6.516	(14+)	96	
S-p	=	6.718	(0.005)	-----						
140ND 97							6.731	(15+)	97	
140ND 98							6.746	(18-)	98	
140ND 99							6.764		99	
140ND 100		6.770	16+						100	

140ND 101		6.807	16+						101	
140ND 102		6.861	16+						102	
140ND 103							6.892	(16+)	103	
140ND 104				6.967	17-				104	
140ND 105				7.057	17-				105	
140ND 106							7.133	(17+)	106	
140ND 107							7.170	(19-)	107	
140ND 108				7.207	18-				108	
140ND 109							7.398	(18+)	109	
140ND 110							7.435	(20+)	110 1.23 US 7	

140ND 111				7.470	16-				111	
140ND 112				7.488	19-				112	
140ND 113		7.525	18+						113	
140ND 114				7.795	18-				114	
140ND 115		7.813	18+						115	
140ND 116							7.826	(18+)	116	
140ND 117				7.950	19-				117	
140ND 118							8.040	(20-)	118	
140ND 119		8.049	19+						119	
140ND 120		8.169	18+						120	

140ND 121				8.191	20-				121	
140ND 122		8.323	19+						122	
140ND 123				8.339	18-				123	
140ND 124		8.439	20+						124	
140ND 125				8.525	21-				125	
140ND 126		8.549	20+						126	

140ND 127		8.605	20+							127
140ND 128					8.633	21-				128
140ND 129					8.777	22-				129
140ND 130		8.906	21+							130

140ND 131					8.981	20-				131
140ND 132					9.011	23-				132
140ND 133					9.011	22-				133
140ND 134		9.035	21+							134
140ND 135					9.173	21-				135
140ND 136		9.267	22+							136
140ND 137					9.323	23-				137
140ND 138		9.347	22+							138
140ND 139					9.524	23-				139
140ND 140		9.566	22+							140

140ND 141					9.569	22-				141
140ND 142		9.647	22+							142
140ND 143								9.671	22(-)	143
140ND 144					9.771	24-				144
140ND 145					9.794	23-				145
140ND 146		9.872	23+							146
140ND 147								9.892	23(-)	147

S-p = 6.718 (0.005)-----
S-n = 10.312 (0.028)-----
S-2p = 11.269 (0.003)-----
S-2n = 18.383 (0.012)-----
S-alpha= 0.174 (0.003)-----

S+p = -3.555 (0.014)
S+n = -8.006 (0.005)
S+2p = -9.302 (0.004)
S+2n = -17.835 (0.003)
S+alpha = -0.133 (0.004)

gap p = 3.163 (0.015)
gap n = 2.306 (0.028)
gap 2p = 1.967 (0.005)
gap 2n = 0.547 (0.013)
gap alpha = 0.040 (0.005)