

^{140}Gd $Z = 64$ $N = 76$ [link to full NNDC output](#)

Based on ENSDF from Dec 2018, and mass evaluation from 2016

BE = 1141.697 (0.028) MeV

Qbeta+ = 5.204 (0.059) MeV

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

S-alpha=	-2.604	(0.031)	-----		
140GD 1	0.000	0+			1 15.8 S 4
140GD 2	0.329	2+			2
140GD 3				0.713 (2+)	3
140GD 4	0.836	4+			4
140GD 5				1.068 (3+)	5
140GD 6				1.281 (4+)	6
140GD 7	1.464	6+			7
140GD 8				1.693 (5+)	8
140GD 9				1.881 (6+)	9
140GD 10	2.140	8+			10

140GD 11				2.411 (7+)	11
140GD 12				2.632 (8+)	12
140GD 13	2.797	10+			13
140GD 14	2.927	10+			14
140GD 15				3.034 9(-)	15
140GD 16	3.267	12+			16
140GD 17				3.617 (12+)	17
140GD 18				3.625 11(-)	18

S-p =	3.673	(0.031)	-----		
140GD 19	3.849	14+			19
140GD 20				4.025 (12,13)	20

140GD 21				4.320 (13-)	21
140GD 22	4.593	16+			22

S-2p =	4.863	(0.030)	-----		
140GD 23				5.461 (18+)	23
140GD 24				6.423 (20+)	24

S-p =	3.673	(0.031)	-----		
S-n =	0.000	(0.000)	-----		
S-2p =	4.863	(0.030)	-----		
S-2n =	0.000	(0.000)	-----		
S-alpha=	-2.604	(0.031)	-----		

S+p =	-0.047	(0.109)	-----		
S+n =	-9.513	(0.034)	-----		
S+2p =	0.000	(0.000)	-----		

S+2n = -21.320 (0.040)
S+alpha = 2.787 (0.029)

gap p = 3.626 (0.113)
gap n = 0.000 (0.000)
gap 2p = 0.000 (0.000)
gap 2n = 0.000 (0.000)
gap alpha = 0.184 (0.042)