

^{142}Sm $Z = 62$ $N = 80$ adopted link ENSDF link

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

BE = 1176.604 (0.002) MeV

Qbeta+ = 2.160 (0.024) MeV

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

S-alpha=	-0.610	(0.012)	-----		
142SM 1	0.000	0+			1 72.49 M 5
142SM 2	0.768	2+			2
142SM 3				1.451 (0+)	3
142SM 4				1.572	4
142SM 5				1.658 (2)+	5
142SM 6			1.784 3-		6
142SM 7	1.791	4+			7
142SM 8	2.056	2+			8
142SM 9	2.173	0+			9
142SM 10	2.280	0+			10

142SM 11			2.348 5-		11
142SM 12				2.354 (2+)	12
142SM 13			2.372 7-		13 170 NS 2
142SM 14				2.374 (2+)	14
142SM 15				2.416 (4)	15
142SM 16	2.420	6+			16 2 NS LT
142SM 17				2.439 (0+)	17
142SM 18				2.497	18
142SM 19				2.522 (0+)	19
142SM 20	2.582	4+			20

142SM 21				2.656	21
142SM 22				2.747 (2+)	22
142SM 23	2.867	4+			23
142SM 24			2.912 7-		24
142SM 25	2.955	4+			25
142SM 26				3.003 (6+)	26
142SM 27				3.007	27
142SM 28				3.032 (0+)	28
142SM 29				3.052	29
142SM 30			3.113 8-		30

142SM 31				3.118	31
142SM 32				3.182	32
142SM 33				3.188 (0+)	33
142SM 34				3.220	34
142SM 35				3.245	35
142SM 36	3.326	8+			36

142SM	37				3.387	9-				37
142SM	38							3.571		38
142SM	39				3.640	11-				39
142SM	40		3.662	10+						40 480 NS 60

142SM	41							3.714		41
142SM	42							3.799		42
142SM	43		3.826	10+						43
142SM	44				3.975	10-				44
142SM	45							4.072	(7-)	45
142SM	46							4.211		46
142SM	47				4.294	11-				47
142SM	48							4.309	(7-)	48
142SM	49				4.372	11-				49
142SM	50		4.542	11+						50

142SM	51				4.547	13-				51 2.6 NS 6
142SM	52							4.630		52
142SM	53		4.746	12+						53
142SM	54							4.970	(11+)	54
142SM	55							5.048	12	55
142SM	56							5.134	13	56
142SM	57							5.224	14	57
142SM	58							5.418	15	58
S-p	=		5.748	(0.014)	-----					
142SM	59							5.764	16	59
142SM	60							5.803	16	60

142SM	61							6.090		61

S-p	=		5.748	(0.014)	-----					
S-n	=		11.119	(0.009)	-----					
S-2p	=		9.302	(0.004)	-----					
S-2n	=		19.668	(0.013)	-----					
S-alpha	=		-0.610	(0.012)	-----					

S+p	=		-2.548	(0.011)						
S+n	=		-8.607	(0.003)						
S+2p	=		-7.356	(0.028)						
S+2n	=		-19.126	(0.002)						
S+alpha	=		0.471	(0.004)						

gap p	=		3.200	(0.018)						
gap n	=		2.513	(0.009)						
gap 2p	=		1.947	(0.028)						
gap 2n	=		0.542	(0.013)						
gap alpha	=		-0.139	(0.013)						