

^{137}Sm $Z = 62$ $N = 75$ adopted link ENSDF link

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

BE = 1125.257 (0.029) MeV

Qbeta+ = 6.081 (0.031) MeV

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

S-alpha=	-1.916 (0.055)				
137SM 1				0.000 (9/2-)	1 45 S 1
137SM 2				0.209 (11/2-)	2
137SM 3	0.290	7/2+			3
137SM 4				0.541 (13/2-)	4
137SM 5	0.583	9/2+			5
137SM 6				0.765 (15/2-)	6
137SM 7				0.891 (11/2-)	7
137SM 8	1.161	13/2+			8
137SM 9				1.203 (17/2-)	9
137SM 10				1.413 (15/2)	10

137SM 11				1.428 (15/2-)	11
137SM 12				1.449 (19/2-)	12
137SM 13	1.790	17/2+			13
137SM 14				1.987 (21/2-)	14
137SM 15				1.996 (17/2+)	15
137SM 16				2.076 (19/2-)	16
137SM 17				2.228 (19/2+)	17
137SM 18				2.254 (23/2-)	18
137SM 19	2.366	21/2+			19
137SM 20				2.375 (21/2+)	20

137SM 21				2.407 (19/2-)	21
137SM 22				2.440 (21/2+)	22
137SM 23				2.511 (21/2-)	23
137SM 24				2.588 (23/2-)	24
137SM 25				2.647 (23/2+)	25
137SM 26				2.713 (25/2-)	26
137SM 27				2.789 (23/2-)	27
137SM 28				2.826 (25/2+)	28
137SM 29				2.872 (27/2-)	29
137SM 30				2.881 (25/2+)	30

137SM 31	3.010	25/2+			31
137SM 32				3.127 (29/2-)	32
137SM 33				3.157 (27/2+)	33
137SM 34				3.365 (29/2+)	34 3.1 PS 4
137SM 35				3.382 (27/2-)	35
137SM 36				3.408 (31/2-)	36

137SM	37						3.492	(29/2+)		37
137SM	38		3.743	29/2+						38
137SM	39						3.784	(33/2-)		39
137SM	40						3.817	(31/2+)		40

137SM	41						3.849	(31/2-)		41
137SM	42						3.994	(33/2+)		42
S-p	=		4.111	(0.075)	-----					
137SM	43						4.184	(35/2-)		43
137SM	44						4.215	(33/2+)		44
137SM	45						4.516	(35/2-)		45
137SM	46		4.538	33/2+						46
137SM	47						4.569	(35/2+)		47
137SM	48						4.645	(37/2-)		48
137SM	49						4.714	(37/2+)		49 2.8 PS
137SM	50						4.974	(37/2+)		50

137SM	51						5.134	(39/2-)		51
137SM	52						5.324	(39/2+)		52
137SM	53						5.338	(39/2-)		53
137SM	54						5.360	(37/2+)		54
137SM	55						5.520	(41/2+)		55 1.5 PS
137SM	56						5.655	(41/2-)		56
137SM	57						6.262	(43/2-)		57
S-2p	=		6.356	(0.034)	-----					
137SM	58						6.410	(45/2+)		58 0.55 PS
137SM	59						7.380	(49/2+)		59 0.40 PS
137SM	60						8.425	(53/2+)		60 0.27 PS

S-n	=		9.252	(0.031)	-----					
137SM	61						9.540	(57/2+)		61 0.15 PS
137SM	62						0.000	(9/2-)		62 45 S 1

S-p	=		4.111	(0.075)	-----					
S-n	=		9.252	(0.031)	-----					
S-2p	=		6.356	(0.034)	-----					
S-2n	=		21.277	(0.157)	-----					
S-alpha	=		-1.916	(0.055)	-----					

S+p	=		-1.047	(0.040)						
S+n	=		-11.577	(0.031)						
S+2p	=		-4.257	(0.142)						
S+2n	=		-20.531	(0.031)						
S+alpha	=		2.343	(0.035)						

gap p	=		3.064	(0.085)						
gap n	=		-2.325	(0.044)						
gap 2p	=		2.099	(0.146)						
gap 2n	=		0.746	(0.160)						

gap alpha = 0.427 (0.065)