

$^{136}\text{Sm}$        $Z = 62$        $N = 74$       [link to full NNDC output](#)

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

BE = 1116.005 ( 0.013) MeV

Qbeta+ = 4.359 ( 0.070) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-2.190 ( 0.027)-----				
136SM 1	0.000	0+			1 47 S 2
136SM 2	0.255	2+			2 88 PS 9
136SM 3	0.686	4+			3 5.0 PS 5
136SM 4				0.713 (2+)	4
136SM 5				1.171 (4+)	5
136SM 6	1.221	6+			6 1.5 PS 5
136SM 7				1.491 (2+)	7
136SM 8				1.641 (6+)	8
136SM 9	1.799	8+			9 1.0 PS 3
136SM 10				2.250 (8+)	10
-----					
136SM 11				2.265 (8-)	11 15 US 1
136SM 12				2.275 (7-)	12
136SM 13	2.415	10+			13 0.9 PS 3
136SM 14				2.679 (9-)	14
136SM 15				2.738 (9-)	15
136SM 16				2.768 (8-)	16
136SM 17				2.954 (10+)	17
136SM 18				3.092 (12+)	18
136SM 19				3.112 (10-)	19
136SM 20				3.218 (10-)	20
-----					
136SM 21				3.291 (11-)	21
136SM 22	3.337	12+			22
136SM 23				3.556 (11-)	23
136SM 24				3.683 (12+)	24
136SM 25				3.828 (14+)	25
136SM 26				3.889 (14+)	26
136SM 27				3.892 (12-)	27
136SM 28				3.921 (13-)	28
136SM 29				3.991 (14+)	29
136SM 30				4.015 (12-)	30
-----					
S-p =	4.048 ( 0.076)-----				
136SM 31				4.169	31
136SM 32				4.322	32
136SM 33				4.423	33
136SM 34				4.437 (14+)	34
136SM 35				4.465 (13-)	35

136SM 36				4.588		36
136SM 37				4.598	(14-)	37
136SM 38				4.603	(16+)	38
136SM 39				4.619	(15-)	39
136SM 40				4.735	(16+)	40
-----						
136SM 41				4.837	(16+)	41
136SM 42				4.862		42
136SM 43				4.928	(14-)	43
136SM 44				5.205		44
136SM 45				5.379	(17-)	45
136SM 46				5.446	(18+)	46
136SM 47				5.592		47
136SM 48				5.636	(18+)	48
S-2p	=	5.743	( 0.017)	-----		
136SM 49				5.796	(18+)	49
136SM 50				6.002		50
-----						
136SM 51				6.206	(19-)	51
136SM 52				6.356	(20+)	52
136SM 53				6.595	(20+)	53
136SM 54				7.110	(21-)	54
136SM 55				7.328	(22+)	55
136SM 56				7.567	(22+)	56
136SM 57				8.350	(24+)	57
136SM 58				8.610	(24+)	58
136SM 59				5635.8+Y		59
136SM 60				6523.8+Y		60
-----						
136SM 61				7486.0+Y		61
136SM 62				8527.0+Y		62
136SM 63				9646.0+Y		63
136SM 64				10845.0+Y		64
136SM 65				12124.0+Y		65
136SM 66				13483+Y		66
136SM 67				14919+Y		67
136SM 68				16422+Y		68
136SM 69				17989+Y		69
136SM 70				19618+Y		70
-----						
136SM 71				U		71
136SM 72				U+465.8		72
136SM 73				U+624.8		73
136SM 74				U+627.1		74
136SM 75				U+760.1		75
136SM 76				U+946.9		76
136SM 77				U+1197.5		77
136SM 78				U+1512.3		78
136SM 79				U+1888.8		79
136SM 80				U+2317.8		80

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S-p    =  4.048 ( 0.076)-----
S-n    = 12.025 ( 0.155)-----
S-2p   =  5.743 ( 0.017)-----
S-2n   =  0.000 ( 0.000)-----
S-alpha= -2.190 ( 0.027)-----

S+p    = -0.624 ( 0.013)
S+n    = -9.287 ( 0.044)
S+2p   =  0.000 ( 0.000)
S+2n   = -20.829 ( 0.017)
S+alpha =  2.604 ( 0.031)

gap p   =  3.424 ( 0.078)
gap n   =  2.738 ( 0.161)
gap 2p  =  0.000 ( 0.000)
gap 2n  =  0.000 ( 0.000)
gap alpha =  0.414 ( 0.041)

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