

$^{180}\text{W}$        $Z = 74$        $N = 106$       adopted link      ENSDF link

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

BE = 1444.580 ( 0.001) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-2.515	( 0.002)	-----		
180W 1	0.000	0+			1 1.8E18 Y 2
180W 2	0.104	2+			2 1.28 NS 5
180W 3	0.338	4+			3
180W 4	0.688	6+			4
180W 5			1.006	2-	5 7.4 NS 4
180W 6			1.082	3-	6
180W 7	1.117	2+			7
180W 8	1.138	8+			8
180W 9			1.185	4-	9
180W 10	1.233	3+			10
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180W 11			1.308	5-	11
180W 12				1.322 (2+)	12
180W 13	1.361	4+			13
180W 14	1.381	0+			14
180W 15			1.462	6-	15
180W 16				1.472 (0+)	16
180W 17	1.514	0+			17
180W 18			1.529	8-	18 5.47 MS 9
180W 19	1.536	5+			19
180W 20				1.568	20
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180W 21	1.587	2+			21
180W 22			1.624	7-	22
180W 23				1.633 (1-,2)	23
180W 24				1.635 (3,4+)	24
180W 25				1.640 (5-)	25 19.2 NS 3
180W 26	1.664	10+			26
180W 27	1.689	0+			27
180W 28				1.694	28
180W 29	1.703	6+			29
180W 30			1.726	9-	30
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180W 31				1.730 (4+,5,6+)	31
180W 32				1.764 (6-)	32
180W 33	1.768	0+			33
180W 34				1.785 (4+,5+)	34
180W 35				1.815 (2+,3)	35
180W 36			1.831	8-	36
180W 37			1.832	2-	37

180W	38					1.851		38
180W	39					1.855		39
180W	40					1.912	(7-)	40
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180W	41					1.918	(4+,5,6+)	41
180W	42					1.926	(6+,7,8+)	42
180W	43	1.932	7+					43
180W	44					1.932	(0+)	44
180W	45			1.945	10-			45
180W	46					1.955		46
180W	47			2.025	9-			47
180W	48	2.037	0+					48
180W	49					2.059		49
180W	50					2.083	(8-)	50
-----								
180W	51					2.118		51
180W	52					2.127		52
180W	53					2.133	(8+)	53
180W	54					2.164		54
180W	55					2.177		55
180W	56	2.182	0+					56
180W	57			2.187	11-			57
180W	58					2.203		58
180W	59					2.212		59
180W	60					2.228		60
-----								
180W	61	2.235	12+					61
180W	62					2.257		62
180W	63					2.274	(9-)	63
180W	64					2.274	(9+)	64
180W	65			2.284	10-			65
180W	66					2.293		66
180W	67	2.327	0+					67
180W	68					2.348		68
180W	69					2.400		69
180W	70			2.416	2-			70
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180W	71					2.424	(10+)	71
180W	72			2.435	2-			72
180W	73			2.452	12-			73
180W	74					2.494	(10-)	74
180W	75			2.501	11-			75
180W	76					2.523		76
180W	77					2.532		77
180W	78					2.547		78
180W	79					2.589	(11+)	79
180W	80					2.723	(11-)	80
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180W	81			2.737	13-			81
180W	82					2.764	(12+)	82

180W	83			2.813	12-				83
180W	84	2.823	14+						84
180W	85			2.884	2-				85
180W	86						2.910		86
180W	87						2.966	(13+)	87
180W	88						3.000	(12-)	88
180W	89			3.043	14-				89
180W	90			3.047	13-				90
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180W	91						3.176	(14+)	91
180W	92						3.248	(13-)	92
180W	93			3.265	14-				93 2.3 US 2
180W	94						3.356		94
180W	95			3.368	15-				95
180W	96						3.390	(15+)	96 8.6 NS 6
180W	97						3.411	(14-)	97
180W	98	3.413	16+						98
180W	99						3.422	(15+)	99
180W	100						3.515		100
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180W	101						3.529		101
180W	102						3.548	(16+)	102 20.3 NS 6
180W	103						3.582		103
180W	104						3.606		104
180W	105			3.657	15-				105
180W	106						3.695	(16+)	106
180W	107						3.698		107
180W	108			3.713	16-				108
180W	109						3.745		109
180W	110						3.832		110
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180W	111						3.845	(15-)	111
180W	112						3.888	(17+)	112
180W	113						3.898	(16-)	113
180W	114						3.967	(17+)	114
180W	115						4.002		115
180W	116						4.017	(18+)	116
180W	117						4.066	(16-)	117
180W	118						4.075	(17-)	118
180W	119						4.148	(17-)	119
180W	120						4.249	(18+)	120
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180W	121						4.270		121
180W	122						4.320	(17-)	122
180W	123						4.339	(18+)	123
180W	124						4.417	(18-)	124
180W	125						4.456	(18-)	125
180W	126						4.526		126
180W	127						4.554		127
180W	128						4.607	(19+)	128

180W	129				4.629	(19+)	129			
180W	130				4.673	(20+)	130			
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180W	131				4.711	(19-)	131			
180W	132				4.761	(18-)	132			
180W	133				4.846	(19-)	133			
180W	134				4.853	(20-)	134			
180W	135				4.857		135			
180W	136				5.025	(20+)	136			
180W	137				5.027	(19-)	137			
180W	138				5.030	(20-)	138			
180W	139				5.095	(20+)	139			
180W	140				5.129	(21-)	140			
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180W	141				5.179		141			
180W	142				5.340	(21+)	142			
180W	143				5.402	(22+)	143			
180W	144				5.435	(21+)	144			
180W	145				5.454	(22-)	145			
180W	146				5.519		146			
180W	147				5.745	(21-)	147			
180W	148				5.816	(23-)	148			
180W	149				5.859	(22+)	149			
180W	150				5.878	(22-)	150			
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180W	151				5.975	(23-)	151	0.7	NS	LT
180W	152				6.115	(23-)	152	1.4	NS	AP
180W	153				6.163	(23+)	153			
180W	154				6.208	(24-)	154			
180W	155				6.212	(24+)	155			
180W	156				6.293	(23+)	156			
180W	157				6.304	(24+)	157	0.7	NS	LT
S-p	=	6.568	(	0.002)	-----					
180W	158				6.627	(25-)	158			
180W	159				6.734	(25+)	159			
180W	160				7.070	(26-)	160			
-----										
180W	161				7.101	(26+)	161			
180W	162				7.177	(26+)	162			
180W	163				7.634	(27+)	163			
180W	164				8.067	(28+)	164			

S-p = 6.568 ( 0.002)-----  
S-n = 8.412 ( 0.015)-----  
S-2p = 11.779 ( 0.002)-----  
S-2n = 15.372 ( 0.015)-----  
S-alpha= -2.515 ( 0.002)-----

S+p = -4.170 ( 0.013)

S+n = -6.669 ( 0.002)  
S+2p = -9.551 ( 0.022)  
S+2n = -14.753 ( 0.002)  
S+alpha = 2.959 ( 0.002)

gap p = 2.397 ( 0.013)  
gap n = 1.743 ( 0.015)  
gap 2p = 2.228 ( 0.022)  
gap 2n = 0.619 ( 0.015)  
gap alpha = 0.443 ( 0.003)