^{180}W $Z = 74$ $N = 106$ link to full NNDC output

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

BE = 1444.579 (0.001) MeV

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

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180W  129 |                |                |   4.629     (19+)          129
180W  130 |                |                |   4.673     (20+)          130
----------                                                               ----------
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
----------                                                               ----------
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
----------                                                               ----------
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)
```