

^{178}Os $Z = 76$ $N = 102$ [link to full NNDC output](#)

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

BE = 1420.780 (0.014) MeV

Qbeta+ = 2.109 (0.031) MeV

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

S-alpha=	-4.258	(0.031)	-----		
1780S 1	0.000	0+			1 5.0 M 4
1780S 2	0.132	2+			2 0.69 NS 5
1780S 3	0.399	4+			3
1780S 4	0.650	0+			4
1780S 5	0.762	6+			5
1780S 6	0.771	2+			6
1780S 7	0.864	2+			7
1780S 8	1.023	4+			8
1780S 9	1.032	3+			9
1780S 10				1.194 (8+)	10

1780S 11	1.213	4+			11
1780S 12				1.302 (3-)	12
1780S 13	1.396	6+			13
1780S 14				1.416 (5+,6+)	14
1780S 15				1.469 (4-)	15
1780S 16				1.539 (5-)	16
1780S 17				1.682 (10+)	17
1780S 18				1.707 (6-)	18
1780S 19				1.781 (7-)	19
1780S 20				2.018 (8-)	20

1780S 21				2.097 (7)	21
1780S 22				2.098 (9-)	22
1780S 23				2.220 (12+)	23
1780S 24				2.384 (10-)	24
1780S 25				2.465 (9)	25
1780S 26				2.489 (11-)	26
1780S 27				2.805 (14+)	27
1780S 28				2.817 (12-)	28
1780S 29				2.906 (11)	29
1780S 30				2.951 (13-)	30

1780S 31				3.315 (14-)	31
1780S 32				3.403 (13)	32
1780S 33				3.429 (16+)	33
1780S 34				3.474 (15-)	34
1780S 35				3.507 (16+)	35
1780S 36				3.873 (16-)	36

1780S 37				3.949	(15)	37
1780S 38				4.020	(18+)	38
1780S 39				4.040	(17-)	39
1780S 40				4.141	(18+)	40

1780S 41				4.483	(18-)	41
1780S 42				4.545	(17)	42
S-p	=	4.564	(0.031)	-----		
1780S 43				4.641	(19-)	43
1780S 44				4.663	(20+)	44
1780S 45				4.863	(20+)	45
1780S 46				5.130	(20-)	46
1780S 47				5.188	(19)	47
1780S 48				5.291	(21-)	48
1780S 49				5.382	(22+)	49
1780S 50				5.585	(22+)	50

1780S 51				5.877	(21)	51
1780S 52				6.155	(24+)	52
1780S 53				6.958	(26+)	53
S-2p	=	7.481	(0.031)	-----		
1780S 54				7.788	(28+)	54
1780S 55				8.652	(30+)	55
1780S 56				9.552	(32+)	56
S-n	=	9.659	(0.020)	-----		
1780S 57				10.489	(34+)	57
1780S 58				11.462	(36+)	58
1780S 59				12.471	(38+)	59
1780S 60				13.518	(40+)	60

1780S 61				0.0+X		61
1780S 62				282.7+X		62
1780S 63				646.2+X		63
1780S 64				1081.6+X		64
1780S 65				1585.2+X		65
1780S 66				2153.4+X		66
1780S 67				2775.1+X		67

S-p	=	4.564	(0.031)	-----		
S-n	=	9.659	(0.020)	-----		
S-2p	=	7.481	(0.031)	-----		
S-2n	=	17.589	(0.031)	-----		
S-alpha	=	-4.258	(0.031)	-----		
S+p	=	-1.826	(0.017)			
S+n	=	-7.547	(0.021)			
S+2p	=	-5.470	(0.018)			
S+2n	=	-16.956	(0.021)			
S+alpha	=	4.951	(0.019)			

gap p = 2.738 (0.035)
gap n = 2.113 (0.029)
gap 2p = 2.011 (0.036)
gap 2n = 0.633 (0.038)
gap alpha = 0.693 (0.036)