

^{189}Ir $Z = 77$ $N = 112$ adopted link ENSDF link

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

BE = 1503.688 (0.013) MeV

Qbeta+ = 0.537 (0.013) MeV

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

S-alpha=	-2.945	(0.013)	-----		
189IR 1	0.000	3/2+			1 13.2 D 1
189IR 2	0.094	1/2+			2 11.4 NS 3
189IR 3	0.114	5/2+			3 76 PS 18
189IR 4	0.177	3/2+			4 22 PS 10
189IR 5	0.301	7/2+			5 20 PS LT
189IR 6	0.318	5/2+			6
189IR 7			0.372	11/2-	7 13.3 MS 3
189IR 8	0.454	9/2+			8
189IR 9	0.465	7/2+			9
189IR 10				0.540	10

189IR 11				0.564 (9/2)-	11 0.54 NS 10
189IR 12			0.608	5/2-	12
189IR 13			0.616	7/2-	13 0.18 NS 2
189IR 14				0.644 (3/2,5/2)+	14
189IR 15	0.719	9/2+			15
189IR 16	0.721	3/2+			16
189IR 17			0.737	13/2-	17
189IR 18				0.742 (13/2)-	18
189IR 19	0.746	11/2+			19
189IR 20				0.753 (1/2:7/2) (+)	20

189IR 21				0.793 (1/2,3/2)+	21
189IR 22			0.828	3/2-	22
189IR 23				0.832 (9/2,11/2)-	23
189IR 24			0.838	15/2-	24
189IR 25				0.850 1/2,3/2,5/2+	25
189IR 26				0.899 (11/2+)	26
189IR 27				0.900 (9/2)-	27
189IR 28				0.903 (3/2)+	28
189IR 29	0.912	3/2+			29
189IR 30	0.918	13/2+			30

189IR 31				0.925 (3/2,5/2)-	31
189IR 32				0.946 (11/2-)	32
189IR 33				0.949	33
189IR 34				0.959 (3/2-,5/2-)	34
189IR 35				1.052 (3/2+)	35
189IR 36				1.074	36

189IR 37						1.101	(17/2-)	37
189IR 38						1.106	(3/2,5/2)+	38
189IR 39						1.115	-	39
189IR 40						1.137	(15/2)-	40

189IR 41				1.184	5/2-			41
189IR 42		1.203	3/2+					42
189IR 43						1.221	-	43
189IR 44						1.239	(3/2-,5/2,7/2+)	44
189IR 45		1.248	3/2+					45
189IR 46						1.249	(13/2+)	46
189IR 47				1.268	17/2-			47
189IR 48						1.288		48
189IR 49		1.296	15/2+					49
189IR 50						1.312	(3/2+,5/2,7/2+)	50

189IR 51						1.345	(3/2+,5/2+)	51
189IR 52				1.384	19/2-			52
189IR 53						1.396		53
189IR 54						1.448		54
189IR 55						1.452	(5/2)-	55
189IR 56						1.469		56
189IR 57						1.476	1/2+,3/2(+),5/2	57+
189IR 58						1.482	(17/2)+	58
189IR 59						1.500	(1/2,3/2)-	59
189IR 60						1.501	(3/2-,5/2-)	60

189IR 61		1.506	3/2+					61
189IR 62						1.537		62
189IR 63						1.558		63
189IR 64						1.572	(3/2,5/2)+	64
189IR 65						1.578	(17/2-)	65
189IR 66						1.609	(21/2-)	66
189IR 67						1.610	(3/2,5/2)-	67
189IR 68						1.615		68
189IR 69						1.623	1/2+,3/2,5/2+	69
189IR 70						1.651		70

189IR 71						1.656	(19/2-)	71
189IR 72						1.673		72
189IR 73						1.767	3/2,5/2+	73
189IR 74						1.791	(21/2-)	74
189IR 75						1.802	(5/2-)	75
189IR 76						1.815	(1/2,3/2)-	76
189IR 77						1.876	(21/2-)	77
189IR 78						1.910	(19/2+)	78
189IR 79		1.920	19/2+					79
189IR 80						2.060	(21/2-)	80

189IR 81				2.085	23/2-			81

189IR	82				2.109	(21/2-)	82	
189IR	83				2.110	(21/2+)	83	
189IR	84		2.128	23/2+			84	
189IR	85				2.248	(23/2-,25/2-)	85	
189IR	86				2.333	(25/2+)	86	3.7 MS 2

S-p = 4.601 (0.013)-----
S-n = 8.176 (0.016)-----
S-2p = 11.811 (0.013)-----
S-2n = 15.043 (0.031)-----
S-alpha= -2.945 (0.013)-----

S+p = -6.146 (0.013)
S+n = -6.375 (0.013)
S+2p = -9.926 (0.014)
S+2n = -14.402 (0.013)
S+alpha = 2.620 (0.015)

gap p = -1.545 (0.018)
gap n = 1.801 (0.020)
gap 2p = 1.885 (0.018)
gap 2n = 0.641 (0.033)
gap alpha = -0.325 (0.020)