

^{84}Zr $Z = 40$ $N = 44$ adopted link ENSDF link

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

BE = 718.119 (0.006) MeV

Qbeta+ = 2.473 (0.007) MeV

	Energy T	J+	J-	J-other	T1/2
84ZR 1	0.000	0+			1 25.8 M 5
84ZR 2	0.540	2+			2 14.1 PS 8
84ZR 3	1.119	2+			3
84ZR 4				1.244 (0+)	4
84ZR 5	1.263	4+			5 2.8 PS 4
84ZR 6	1.576	3+			6
84ZR 7	1.888	4+			7
84ZR 8				1.967	8
84ZR 9	2.136	6+			9 1.8 PS 3
84ZR 10	2.335	5+			10
84ZR 11	2.740	6+			11
84ZR 12				2.811 (4-)	12
84ZR 13				2.826 (5-)	13 11 PS 4
84ZR 14				3.079 (6-)	14
84ZR 15	3.089	8+			15 0.39 PS 7
84ZR 16	3.202	7+			16
84ZR 17				3.313 (6-)	17
84ZR 18				3.494 (7-)	18 5.4 PS 21
S-alpha=	3.535 (0.007)				
84ZR 19				3.552 (7-)	19
84ZR 20				3.723 (7-)	20
84ZR 21				4.037 (8-)	21
84ZR 22	4.069	10+			22 0.36 PS 3
84ZR 23	4.138	9+			23
84ZR 24				4.379 (9-)	24
84ZR 25				4.588 (10+)	25
84ZR 26				4.869 (10-)	26
84ZR 27	5.136	12+			27 0.248 PS 22
84ZR 28	5.150	11+			28
84ZR 29				5.316 (11-)	29
84ZR 30				5.616 (12+)	30
84ZR 31				5.785 (12-)	31
84ZR 32				6.248 (13+)	32
84ZR 33	6.302	14+			33 0.157 PS 15
84ZR 34				6.325 (13-)	34 0.46 PS 10
S-p =	6.505 (0.019)				
84ZR 35				6.644 (14+)	35

84ZR	36				6.797	(14-)	36	0.51	PS	8
84ZR	37				7.300	(15+)	37			
84ZR	38				7.411	(15-)	38	0.30	PS	8
84ZR	39		7.498	16+			39	0.166	PS	15
84ZR	40				7.857	(16+)	40			

84ZR	41				7.929	(16-)	41	232	FS	19
84ZR	42				8.499	(17+)	42			
84ZR	43				8.608	(17-)	43	0.16	PS	5
84ZR	44		8.744	18+			44	0.131	PS	11
84ZR	45				9.197	(18-)	45	107	FS	23
84ZR	46				9.220	(18+)	46			
84ZR	47				9.917	(19+)	47			
84ZR	48				9.936	(19-)	48	0.15	PS	4

S-p = 6.505 (0.019)-----
 S-n = 13.581 (0.008)-----
 S-2p = 9.990 (0.008)-----
 S-2n = 23.950 (0.006)-----
 S-alpha= 3.535 (0.007)-----

S+p = -2.147 (0.007)
 S+n = -9.825 (0.008)
 S+2p = -7.267 (0.006)
 S+2n = -22.690 (0.007)
 S+alpha = -3.690 (0.007)

gap p = 4.358 (0.021)
 gap n = 3.757 (0.012)
 gap 2p = 2.722 (0.010)
 gap 2n = 1.260 (0.009)
 gap alpha = -0.155 (0.009)