

^{224}Ra $Z = 88$ $N = 136$ adopted link ENSDF link

Based on ensdf_240402 (Apr 2024), and mass evaluation from 2020

BE = 1720.303 (0.002) MeV

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

S-alpha=	-5.789 (0.003)	-----				

224RA 1	0.000	0+			1 3.6316 D 23	
224RA 2	0.084	2+			2 0.748 NS 19	
224RA 3			0.216 1-		3	
224RA 4	0.251	4+			4 0.181 NS 9	
224RA 5			0.290 3-		5	
224RA 6			0.433 (5)-		6	
224RA 7	0.479	6+			7 52.7 PS 42	
224RA 8			0.641 (7-)		8	
224RA 9	0.755	8+			9 20.8 PS +49-55	
224RA 10			0.906 (9-)		10	

224RA 11	0.916	0+			11	
224RA 12	0.966	2+			12	
224RA 13	0.993	(2+)			13	
224RA 14			1.053 1-		14	
224RA 15	1.069	10+			15	
224RA 16				1.090 (2,3)-	16	
224RA 17				1.187 0+,1,2	17	
224RA 18				1.217 (1-,2)	18	
224RA 19			1.221 (11-)		19	
224RA 20	1.223	0+			20	

224RA 21				1.348 2+,3+	21	
224RA 22			1.378 1-		22	
224RA 23				1.379 (1+,2+)	23	
224RA 24				1.390 (0+,1,2)	24	
224RA 25	1.414	(12+)			25	
224RA 26				1.425 (0,1,2)-	26	
224RA 27			1.436 1-		27	
224RA 28	1.437	2+			28	
224RA 29				1.554 1,2+	29	
224RA 30			1.574 (13-)		30	

224RA 31				1.614 (1-,2)	31	
224RA 32				1.627	32	
224RA 33	1.652	2+			33	
224RA 34				1.658 1(-),2+	34	
224RA 35				1.736 1,2+	35	
224RA 36				1.755 0+,1,2	36	

224RA 37						1.761		37
224RA 38		1.788	(14+)					38
224RA 39						1.790	1,2+	39
224RA 40						1.797	(1-,2)	40

224RA 41						1.818	(1-,2)	41
224RA 42						1.839	0,1,2	42
224RA 43						1.896	(1-,2)	43
224RA 44						1.949		44
224RA 45					1.965	(15-)		45
224RA 46						1.970	(0,1,2)	46
224RA 47						2.000	(1-,2)	47
224RA 48						2.043	0,1,2	48
224RA 49		2.052	2+					49
224RA 50						2.077	0+,1,2	50

224RA 51						2.117	1,2+	51
224RA 52						2.135	0,1,2	52
224RA 53		2.188	(16+)					53
224RA 54						2.229	(1-,2)	54
224RA 55						2.247	1,2+	55
224RA 56						2.369	1,2+	56
224RA 57					2.384	(17-)		57
224RA 58		2.612	(18+)					58
224RA 59					2.827	(19-)		59
224RA 60		3.059	(20+)					60

224RA 61					3.290	(21-)		61
224RA 62		3.526	(22+)					62
224RA 63					3.770	(23-)		63
224RA 64		4.011	(24+)					64
224RA 65					4.266	(25-)		65
224RA 66		4.512	(26+)					66
224RA 67					4.778	(27-)		67
224RA 68		5.030	(28+)					68
224RA 69						0.000		69

S-p = 6.846 (0.003) -----
S-n = 6.479 (0.003) -----
S-2p = 12.124 (0.003) -----
S-2n = 11.637 (0.005) -----
S-alpha= -5.789 (0.003) -----

S+p = -4.477 (0.005)
S+n = -4.904 (0.003)
S+2p = -10.206 (0.005)
S+2n = -11.301 (0.003)
S+alpha = 5.520 (0.003)

gap p = 2.368 (0.006)
gap n = 1.575 (0.004)
gap 2p = 1.918 (0.006)
gap 2n = 0.336 (0.005)
gap alpha = -0.269 (0.004)