

⁹⁹Ru Z = 44 N = 55 adopted link ENSDF link

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

BE = 852.263 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
99RU 1	0.000	5/2+			1 STABLE
99RU 2	0.090	3/2+			2 20.5 NS 1
99RU 3	0.322	3/2+			3
99RU 4	0.341	7/2+			4
99RU 5				0.443 (3/2)+	5 11 PS 3
99RU 6				0.576 (5/2)+	6 1.1 PS 3
99RU 7	0.618	7/2+			7 0.7 PS 3
99RU 8				0.618 (1/2)+	8 1.04 NS 8
99RU 9	0.720	9/2+			9 2.25 PS 23
99RU 10				0.734 (5/2)+	10
99RU 11				0.897 (1/2+,3/2,5/2+)	11 0.15 NS LT
99RU 12				0.999 (1/2+,3/2,5/2+)	12
99RU 13	1.048	11/2+			13 4.5 PS 25
99RU 14			1.070 11/2-		14 2.8 NS 2
99RU 15				1.118 7/2(+)	15
99RU 16	1.201	5/2+			16
99RU 17	1.261	7/2+			17
99RU 18	1.278	9/2+			18
99RU 19			1.291 7/2-		19
99RU 20				1.306 (3/2+,5/2,7/2+)	20
99RU 21	1.320	11/2+			21 2.4 PS 11
99RU 22				1.383 (1/2+,3/2)	22
99RU 23				1.408	23 0.21 PS 10
99RU 24				1.414 (1/2,3/2,5/2+)	24
99RU 25				1.474 (7/2,5/2)	25 0.17 PS 10
99RU 26	1.497	13/2+			26 0.62 PS 21
99RU 27	1.499	9/2+			27 0.24 PS 11
99RU 28				1.531 (1/2+,3/2)	28
99RU 29			1.572 15/2-		29
99RU 30				1.583 (7/2,5/2)	30 0.14 PS 5
99RU 31				1.662 (1/2+,3/2)	31
99RU 32	1.685	7/2+			32
99RU 33				1.711	33
99RU 34			1.717 9/2-		34
99RU 35				1.750 (1/2+,3/2)	35
99RU 36				1.823	36
99RU 37				1.847 (11/2+)	37 0.32 PS 11
99RU 38			1.862 13/2-		38 0.49 PS 18

99RU 39						1.899				39
99RU 40				1.944		11/2-				40

99RU 41		1.966		13/2+						41
99RU 42										42
99RU 43		2.020		15/2+						43 0.35 PS 14
99RU 44										44
99RU 45								(3/2-)		44
99RU 46										45
99RU 47										46
99RU 48										47
99RU 49										48
99RU 50						2.268		19/2-		49
99RU 51										50
99RU 52										50

S-alpha= 2.338 (0.000)-----										
99RU 51						2.384		9/2(+)		51 0.09 PS 3
99RU 52						2.393		(15/2-)		52 0.17 PS 7
99RU 53						2.401		(17/2)+		53 0.6 PS 3
99RU 54						2.411				54
99RU 55						2.654				55
99RU 56						2.752		(15/2,17/2)+		56
99RU 57						2.822		(17/2,19/2,21/2)		57+
99RU 58						2.852		(19/2-)		58
99RU 59						2.875		(19/2)+		59
99RU 60						2.997		(19/2)+		60

99RU 61						3.020		(21/2)+		61
99RU 62						3.037		(19/2)-		62 0.35 PS +14-7
99RU 63						3.094		(19/2)+		63 0.42 PS +35-17
99RU 64				3.200		23/2-				64 0.42 PS +14-7
99RU 65						3.207		(23/2-)		65
99RU 66						3.324		(19/2)+		66
99RU 67						3.353				67
99RU 68						3.460		(17/2)+		68
99RU 69						3.466		(19/2,21/2,23/2)		69- 0.56 PS +28-14
99RU 70						3.484		(21/2+)		70

99RU 71						3.534		(23/2-)		71
99RU 72						3.536		(17/2,19/2,21/2)		72
99RU 73						3.638		(23/2)+		73
99RU 74						3.983		(23/2)-		74 0.9 PS GT
99RU 75						4.047		(23/2,25/2)-		75
99RU 76						4.103		(25/2)+		76 0.70 PS 14
99RU 77						4.223		(27/2-)		77 0.59 PS 7
99RU 78						4.233		(23/2)+		78 0.7 PS +21-4
99RU 79						4.292		(23/2+)		79
99RU 80						4.324				80

99RU 81						4.381		(25/2)+		81
99RU 82						4.438		(23/2+)		82

99RU 83						4.487	(27/2)-	83	0.42 PS	14
99RU 84						4.518		84		
99RU 85						4.591	(27/2+)	85		
99RU 86						5.005	(27/2)-	86		
99RU 87						5.031	(27/2+)	87		
99RU 88						5.168	(27/2,29/2)-	88	0.21 PS	+14-7
99RU 89				5.357	31/2-			89	0.28 PS	+14-7
99RU 90						5.574	(31/2+)	90		

99RU 91						5.603	(31/2)-	91	0.21 PS	7
99RU 92		5.912	31/2+					92		
99RU 93						5.952	(31/2-)	93		
99RU 94				6.479	35/2-			94		
99RU 95				6.596	35/2-			95		
99RU 96						6.746	(35/2+)	96		
99RU 97		6.875	35/2+					97		
99RU 98						7.181	(35/2-)	98		
S-n	=	7.472	(0.006)	-----						
99RU 99				7.563	39/2-			99		
99RU 100				7.831	39/2-			100		

99RU 101		8.005	39/2+					101		
S-p	=	8.482	(0.003)	-----						
99RU 102						8.499	(41/2-)	102		
99RU 103						8.738	(43/2-)	103		
99RU 104				8.878	43/2-			104		
99RU 105				9.044	43/2-			105		
99RU 106		9.191	43/2+					106		

S-p	=	8.482	(0.003)	-----						
S-n	=	7.472	(0.006)	-----						
S-2p	=	14.659	(0.000)	-----						
S-2n	=	17.647	(0.003)	-----						
S-alpha	=	2.338	(0.000)	-----						

S+p	=	-5.255	(0.018)							
S+n	=	-9.673	(0.000)							
S+2p	=	-12.385	(0.005)							
S+2n	=	-16.475	(0.001)							
S+alpha	=	-2.257	(0.001)							

gap p	=	3.227	(0.018)							
gap n	=	-2.202	(0.006)							
gap 2p	=	2.274	(0.005)							
gap 2n	=	1.172	(0.003)							
gap alpha	=	0.082	(0.001)							