

$^{97}\text{Ru}$        $Z = 44$        $N = 53$       adopted link      ENSDF link

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

BE = 834.615 ( 0.003) MeV

Qbeta+ = 1.104 ( 0.005) MeV

	Energy T	J+	J-	J-other	T1/2
97RU 1	0.000	5/2+			1 2.83 D 23
97RU 2	0.189	3/2+			2 0.23 NS 2
97RU 3	0.422	7/2+			3 25 PS 8
97RU 4	0.528	3/2+			4
97RU 5				0.611 (1/2+,3/2,5/2+)	5
97RU 6	0.771	3/2+			6
97RU 7	0.840	7/2+			7
97RU 8	0.879	9/2+			8
97RU 9	0.908	1/2+			9
97RU 10				1.185 3/2+,5/2+	10
97RU 11	1.199	11/2+			11 7 PS 4
97RU 12	1.229	9/2+			12
97RU 13				1.377	13
97RU 14				1.477 3/2+,5/2+	14
97RU 15				1.543 (7/2,9/2,11/2+)	15
97RU 16				1.596	16
97RU 17				1.620 (11/2)+	17
97RU 18				1.651 (13/2+)	18
S-alpha=	1.738 ( 0.003)				
97RU 19				1.826 (13/2)+	19
97RU 20				1.846 (15/2)+	20 12.7 PS 14
97RU 21			1.879 11/2-		21
97RU 22				1.929 3/2+,5/2+	22
97RU 23	1.932	7/2+			23
97RU 24				1.990 (7/2)	24
97RU 25				1.999 7/2+,9/2+,11/2+	25
97RU 26				2.005	26
97RU 27				2.020	27
97RU 28				2.080	28
97RU 29	2.151	7/2+			29
97RU 30	2.173	1/2+			30
97RU 31			2.198 3/2-		31
97RU 32			2.246 3/2-		32
97RU 33	2.284	1/2+			33
97RU 34				2.301 1/2,3/2	34
97RU 35				2.313 1/2-,3/2-	35
97RU 36				2.350	36

97RU 37						2.506	(17/2+)	37		
97RU 38		2.506	1/2+					38		
97RU 39						2.546	(17/2+)	39	11.4 PS	12
97RU 40				2.553	15/2-			40		
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97RU 41				2.565	3/2-			41		
97RU 42						2.576	1/2-, 3/2-	42		
97RU 43						2.591	7/2+, 9/2+, 11/2+	43		
97RU 44				2.596	15/2-			44		
97RU 45						2.599	(17/2+)	45		
97RU 46						2.605		46		
97RU 47						2.640	(17/2+)	47		
97RU 48				2.648	3/2-			48		
97RU 49		2.652	1/2+					49		
97RU 50						2.660	(19/2+)	50		
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97RU 51		2.702	1/2+					51		
97RU 52						2.739	(21/2+)	52	7.8 NS	2
97RU 53						2.743	(17/2+)	53		
97RU 54		2.755	7/2+					54		
97RU 55						2.759	(19/2+)	55		
97RU 56						2.760	7/2+, 9/2+, 11/2+	56		
97RU 57						2.763	(19/2+)	57		
97RU 58						2.765	1/2-, 3/2-	58		
97RU 59						2.766	7/2+, 9/2+, 11/2+	59		
97RU 60						2.797	1/2-, 3/2-	60		
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97RU 61				2.930	3/2-			61		
97RU 62		2.966	7/2+					62		
97RU 63						3.030	3/2+, 5/2+	63		
97RU 64						3.226	(19/2-)	64		
97RU 65				3.265	3/2-			65		
97RU 66						3.270	(19/2-)	66		
97RU 67						3.296	1/2-, 3/2-	67		
97RU 68						3.303	(21/2+)	68		
97RU 69						3.369	7/2+, 9/2+, 11/2+	69		
97RU 70				3.375	3/2-			70		
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97RU 71				3.459	3/2-			71		
97RU 72						3.481	(21/2+)	72		
97RU 73						3.609	(23/2+)	73		
97RU 74						3.621	(23/2+)	74		
97RU 75						3.670	(25/2+)	75	4.9 PS	6
97RU 76						3.941		76		
97RU 77						3.942	(23/2-)	77		
97RU 78						4.263	(27/2+)	78	4.9 PS	6
97RU 79						4.653	(27/2+)	79		
97RU 80						4.694	(27/2-)	80		
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97RU 81						4.730	(29/2+)	81	7.1 PS	9

97RU 82			4.763		82	
97RU 83			5.106	(31/2+)	83	
97RU 84			5.373	(33/2+)	84	12.5 PS LE
97RU 85			5.490		85	
97RU 86			5.722		86	
97RU 87			6.133	(31/2+)	87	
97RU 88			6.248	(35/2+)	88	
97RU 89			6.313		89	
97RU 90			6.765	(35/2+)	90	
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97RU 91			6.777		91	
97RU 92			6.890	(37/2+)	92	
97RU 93			7.380	(39/2+)	93	
97RU 94			7.463	(39/2+)	94	
S-p =	7.588	( 0.006)	-----			
97RU 95			7.639	(39/2+)	95	13.9 PS LE
97RU 96			7.679		96	
97RU 97			7.908		97	
S-n =	8.112	( 0.003)	-----			
97RU 98			8.159	(39/2+)	98	
97RU 99			8.407		99	
97RU 100			8.468	(43/2+)	100	
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97RU 101			8.489	(41/2+)	101	
97RU 102			8.542		102	
97RU 103			8.621		103	
97RU 104			9.204	(45/2+)	104	
97RU 105			9.383		105	
97RU 106			9.423		106	
97RU 107			9.447		107	
97RU 108			9.729		108	
97RU 109			9.764	(45/2+)	109	
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S-p =	7.588	( 0.006)	-----			
S-n =	8.112	( 0.003)	-----			
S-2p =	12.987	( 0.003)	-----			
S-2n =	18.805	( 0.010)	-----			
S-alpha=	1.738	( 0.003)	-----			
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S+p =	-4.344	( 0.012)				
S+n =	-10.176	( 0.007)				
S+2p =	-10.640	( 0.006)				
S+2n =	-17.647	( 0.003)				
S+alpha =	-1.737	( 0.005)				
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gap p =	3.244	( 0.014)				
gap n =	-2.064	( 0.008)				
gap 2p =	2.346	( 0.006)				
gap 2n =	1.158	( 0.010)				

gap alpha = 0.002 ( 0.006)