

$^{87}\text{Y}$        $Z = 39$        $N = 48$       adopted link      ENSDF link

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

BE = 754.711 ( 0.001) MeV

Qbeta+ = 1.862 ( 0.001) MeV

	Energy T	J+	J-	J-other	T1/2
87Y 1			0.000	1/2-	1 79.8 H 3
87Y 2	0.381	9/2+			2 13.37 H 3
87Y 3			0.794	5/2-	3 10 NS LE
87Y 4			0.983	3/2-	4
87Y 5	1.153	5/2+			5
87Y 6			1.182	3/2-	6
87Y 7			1.203	5/2-	7
87Y 8				1.321	8
87Y 9	1.404	13/2+			9 10 NS LE
87Y 10				1.405 (7/2+,9/2+)	10 10 NS LE
87Y 11				1.504	11
87Y 12	1.591	11/2+			12 10 NS LE
87Y 13				1.608 7/2+,9/2+	13
87Y 14			1.609	3/2-	14
87Y 15				1.623 (5/2,7/2)	15
87Y 16				1.630 (1/2-,3/2-)	16
87Y 17			1.641	1/2-	17
87Y 18				1.705	18
87Y 19				1.719 3/2-,5/2-	19
87Y 20				1.756 5/2	20
87Y 21				1.768 (9/2-)	21
87Y 22			1.802	5/2-	22
87Y 23				1.814 3/2-,5/2-	23
87Y 24			1.849	1/2-	24
87Y 25			1.980	7/2-	25
87Y 26				2.009 (7/2)	26
87Y 27				2.021 (7/2-,9/2-)	27
87Y 28				2.038 (11/2+)	28 10 NS LE
87Y 29				2.073 (3/2,5/2,7/2)	29
87Y 30				2.073 (7/2+,9/2+)	30
87Y 31				2.083 (3/2)-	31
87Y 32				2.095 3/2-,5/2-	32
87Y 33	2.112	5/2+			33
87Y 34				2.122 5/2+,7/2+	34
87Y 35				2.155 (9/2-)	35
87Y 36				2.159	36
87Y 37				2.165 7/2,9/2-	37

87Y	38				2.186	7/2-						38
87Y	39							2.202	7/2-,9/2-			39
87Y	40							2.202	7/2+,9/2+			40
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87Y	41				2.209	3/2-						41
87Y	42							2.211	(1/2)			42
87Y	43							2.216	9/2+,11/2+			43
87Y	44							2.242	(7/2,9/2-)			44
87Y	45							2.245				45
87Y	46				2.249	9/2-						46
87Y	47							2.256	3/2-,5/2-			47
87Y	48							2.276	(9/2-&7/2+)			48
87Y	49				2.278	7/2-						49
87Y	50							2.279	(7/2-)			50
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87Y	51							2.292	5/2+,7/2+			51
87Y	52		2.303	13/2+								52
87Y	53							2.314	(5/2+,7/2+)			53
87Y	54							2.345				54
87Y	55							2.354	(7/2,9/2,11/2)			55
87Y	56		2.365	7/2+								56
87Y	57				2.367	15/2-						57
87Y	58							2.400				58
87Y	59		2.409	3/2+								59
87Y	60		2.428	17/2+								60
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87Y	61							2.446	(5/2)+			61
87Y	62				2.449	9/2-						62
87Y	63				2.479	13/2-						63
87Y	64							2.502	(5/2+)			64
87Y	65				2.532	11/2-						65
87Y	66							2.532				66
87Y	67		2.552	9/2+								67
87Y	68							2.564	9/2,11/2+			68
87Y	69							2.572	(3/2-)			69
87Y	70				2.599	9/2-						70
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87Y	71							2.602	(7/2)+			71
87Y	72							2.616	(3/2-)			72
87Y	73							2.649	(15/2-)			73
87Y	74		2.661	7/2+								74
87Y	75							2.668	(5/2)			75
87Y	76				2.676	17/2-						76
87Y	77		2.682	11/2+								77
87Y	78							2.730	5/2-,7/2-			78
87Y	79							2.737	9/2+,11/2+			79
87Y	80		2.747	3/2+								80
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87Y	81							2.762	(3/2-)			81
87Y	82							2.801	(3/2+&11/2+)			82

87Y	83					2.808	9/2+,11/2+	83		
87Y	84					2.808	(13/2-)	84		
87Y	85		2.827	21/2+				85	0.53 NS	3
87Y	86					2.828	(3/2,5/2)-	86		
87Y	87				2.831	9/2-		87		
87Y	88					2.871	11/2-,13/2-	88		
87Y	89					2.901	3/2-,5/2-	89		
87Y	90					2.907	3/2+,5/2+	90		
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87Y	91					2.960	(5/2+)	91		
87Y	92				2.961	17/2-		92		
87Y	93					2.987	(19/2+)	93	49 PS	LT
87Y	94					2.996	(17/2)	94		
87Y	95		2.996	5/2+				95		
87Y	96					2.996	(7/2,9/2,11/2)	96		
87Y	97					3.038	9/2+,11/2+	97		
87Y	98					3.043	3/2+,5/2+	98		
87Y	99					3.057	(5/2+,7/2+)	99		
87Y	100					3.090	3/2+,5/2+	100		
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87Y	101					3.093	9/2+,11/2+	101		
87Y	102					3.094	(21/2)	102	49 PS	LT
87Y	103					3.120	5/2+,7/2+	103		
87Y	104					3.120	(13/2-)	104		
87Y	105					3.181	(13/2+,15/2+)	105		
87Y	106					3.195	(1/2+)	106		
87Y	107					3.245	9/2+,11/2+	107		
87Y	108					3.263	9/2+,11/2+	108		
87Y	109					3.308	3/2+,5/2+	109		
87Y	110					3.351	3/2+,5/2+	110		
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87Y	111					3.402	(19/2-)	111		
87Y	112					3.405	3/2+,5/2+	112		
87Y	113					3.447	(19/2-)	113		
87Y	114					3.500	(11/2+)	114		
87Y	115					3.553	(23/2+)	115	0.083 PS	21
87Y	116					3.595	(21/2,23/2,25/2+116)	116		
87Y	117					3.595	(21/2+)	117	0.5 NS	2
87Y	118					3.640		118		
87Y	119					3.730	(7/2-)	119		
87Y	120					3.767	(21/2-)	120		
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87Y	121					3.840	(11/2-)	121		
87Y	122					3.909	(23/2-)	122		
87Y	123					4.039	(25/2+)	123	0.17 PS	4
87Y	124					4.214	(27/2)	124		
87Y	125					4.555	(23/2+)	125		
87Y	126					4.564	(23/2-)	126		
87Y	127		4.610	25/2+				127	0.12 PS	4
87Y	128					5.228	(25/2-)	128		

87Y	129				5.288	(27/2+)	129	0.10	PS	3
87Y	130				5.320	(25/2-)	130			
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87Y	131				5.495	(25/2+)	131			
87Y	132				5.760	(27/2-)	132	2.1	PS	GT
S-p	=	5.784	(	0.001)	-----					
87Y	133				5.827	(27/2+)	133			
87Y	134				5.935	(29/2-)	134	1.8	PS	4
S-alpha=	=	6.373	(	0.003)	-----					
87Y	135				6.536	(31/2-)	135	0.18	PS	4
87Y	136				7.017	(33/2-)	136	0.11	PS	3

S-p = 5.784 ( 0.001)-----  
 S-n = 11.807 ( 0.014)-----  
 S-2p = 15.429 ( 0.001)-----  
 S-2n = 21.319 ( 0.019)-----  
 S-alpha= 6.373 ( 0.003)-----

S+p = -7.900 ( 0.006)  
 S+n = -9.352 ( 0.002)  
 S+2p = -12.185 ( 0.024)  
 S+2n = -20.835 ( 0.001)  
 S+alpha = -6.045 ( 0.003)

gap p = -2.115 ( 0.006)  
 gap n = 2.455 ( 0.014)  
 gap 2p = 3.244 ( 0.024)  
 gap 2n = 0.483 ( 0.019)  
 gap alpha = 0.328 ( 0.004)