

$^{72}\text{Br}$        $Z = 35$        $N = 37$       [link to full NNDC output](#)

Based on ENSDF from Dec 2018, and mass evaluation from 2016

BE = 612.814 ( 0.001) MeV

Qbeta+ = 8.806 ( 0.002) MeV

	Energy T	J+	J-	J-other	T1/2
72BR 1	0.000	1+			1 78.6 S 24
72BR 2				0.101 (3-)	2 10.6 S 3
72BR 3				0.124 (1)	3
72BR 4				0.131 (2-)	4
72BR 5				0.163	5
72BR 6				0.218 (1,3)	6
72BR 7				0.230 (3+)	7
72BR 8				0.289 (3+)	8
72BR 9	0.310	1+			9
72BR 10				0.314 1(-)	10
72BR 11				0.328 1(-)	11
72BR 12				0.333 (3-)	12 0.51 NS 12
72BR 13				0.371 (4-)	13 2.1 NS 4
72BR 14				0.379 1(-)	14
72BR 15				0.393	15
72BR 16				0.398 (2-)	16 101 PS 20
72BR 17				0.403 (4-)	17
72BR 18	0.415	1+			18
72BR 19				0.467 (5-)	19 0.37 NS 16
72BR 20				0.510 1(-)	20
72BR 21				0.544 (5+)	21
72BR 22				0.545	22
72BR 23	0.576	1+			23
72BR 24	0.577	1+			24
72BR 25				0.603	25
72BR 26				0.659 (5-)	26 155 PS 16
72BR 27				0.668 (4-)	27 106 PS 14
72BR 28				0.682 1	28
72BR 29				0.708 1	29
72BR 30				0.717 (6-)	30 1.7 NS 2
72BR 31				0.722 1	31
72BR 32				0.749 (5-)	32
72BR 33	0.756	1+			33
72BR 34				0.796	34
72BR 35	0.902	1+			35
72BR 36	0.939	1+			36
72BR 37				0.958 (7-)	37 9.0 PS 21

72BR 38						0.991	(6-)	38	85 PS	8		
72BR 39		1.028	1+					39				
72BR 40						1.154	1(-)	40				
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72BR 41						1.173	1	41				
72BR 42						1.188	(7-)	42	16 PS	2		
72BR 43						1.260	(7-)	43				
72BR 44						1.319	(7-)	44				
72BR 45						1.323	1	45				
72BR 46						1.345	(8-)	46	71 PS	4		
72BR 47		1.386	1+					47				
72BR 48						1.448	(9+)	48	59 PS	4		
72BR 49		1.605	1+					49				
72BR 50						1.612	(8-)	50				
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72BR 51		1.704	1+					51				
72BR 52						1.722		52				
72BR 53		1.772	1+					53				
72BR 54		1.799	1+					54				
72BR 55		1.835	1+					55				
72BR 56						1.944	1(-)	56				
72BR 57						1.950	1(-)	57				
72BR 58						1.988	1(-)	58				
72BR 59						1.990	(9-)	59				
72BR 60						2.082	(9-)	60				
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72BR 61						2.186	(10-)	61				
72BR 62						2.480	(10-)	62				
72BR 63						2.498	(11+)	63				
S-alpha=		2.592	( 0.002)	-----								
72BR 64						3.027	(11-)	64				
72BR 65						3.078	(11-)	65				
S-p		3.204	( 0.003)	-----								
72BR 66		3.305	1+					66				
72BR 67						3.330	(12-)	67				
72BR 68						3.516	(12-)	68				
72BR 69						3.629	(13+)	69	0.35 PS	10		
72BR 70						4.204	(13-)	70				
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72BR 71						4.327	(13-)	71				
72BR 72						4.716	(14-)	72				
72BR 73						4.718	(14-)	73				
72BR 74						4.887	(15+)	74				
72BR 75						5.324	(15-)	75				
72BR 76						5.361		76				
72BR 77						5.516	(15-)	77				
72BR 78						5.653	(14+)	78				
72BR 79						5.992	(16-)	79				
72BR 80						6.242	(16-)	80				
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72BR 81				6.265	(17+)	81
72BR 82				6.563	(17-)	82
72BR 83				7.049	(17-)	83
72BR 84				7.104	(16+)	84
72BR 85				7.376	(18-)	85
72BR 86				7.877	(19+)	86
72BR 87				7.912	(18-)	87
72BR 88				7.967	(19-)	88
72BR 89				8.090		89
72BR 90				8.753	(18+)	90
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72BR 91				8.804	(19-)	91
72BR 92				8.809	(20-)	92
S-2p	=	9.298	( 0.050)	-----		
72BR 93				9.530	(21-)	93
72BR 94				9.746	(20-)	94
72BR 95				9.819	(21+)	95
72BR 96				10.407	(22-)	96
72BR 97				10.543	(20+)	97
S-n	=	10.631	( 0.005)	-----		
72BR 98				11.299	(23-)	98
72BR 99				11.802	(22-)	99
72BR 100				11.846	(23+)	100
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72BR 101				12.368	(24-)	101
72BR 102				12.535	(22+)	102
72BR 103				13.382	(25-)	103
72BR 104				13.938	(25+)	104
72BR 105				14.810	(26-)	105
72BR 106				15.899	(27-)	106
72BR 107				16.232	(27+)	107
72BR 108				17.801	(28-)	108
72BR 109				18.808	(29+)	109
72BR 110				18.968	(29-)	110
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S-p = 3.204 ( 0.003)-----  
S-n = 10.631 ( 0.005)-----  
S-2p = 9.298 ( 0.050)-----  
S-2n = 23.779 ( 0.015)-----  
S-alpha= 2.592 ( 0.002)-----

S+p = -4.779 ( 0.007)  
S+n = -12.657 ( 0.007)  
S+2p = -7.432 ( 0.003)  
S+2n = -22.369 ( 0.006)  
S+alpha = -3.842 ( 0.001)

gap p = -1.575 ( 0.007)

gap n = -2.026 ( 0.009)  
gap 2p = 1.866 ( 0.050)  
gap 2n = 1.410 ( 0.016)  
gap alpha = -1.250 ( 0.002)