

$^{78}\text{Br}$        $Z = 35$        $N = 43$       adopted link      ENSDF link

Based on ensdf\_240402 (Apr 2024), and mass evaluation from 2020

BE = 675.633 ( 0.004) MeV  
 Qbeta- = 0.726 ( 0.004) MeV  
 Qbeta+ = 3.574 ( 0.004) MeV

	Energy T	J+	J-	J-other	T1/2
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78BR 1	0.000	1+			1 6.45 M 4
78BR 2			0.032 (2-)		2 11.3 NS 30
78BR 3				0.055 (1,2)+	3 7.5 NS 11
78BR 4				0.125 (1,2)+	4
78BR 5	0.181	(4+)			5 119.4 US 10
78BR 6				0.193 (0:3)(+)	6
78BR 7				0.197 (1,2,3)(+)	7 4.7 NS 5
78BR 8				0.204 (0:3)(+)	8 5.9 NS 6
78BR 9	0.228	(5+)			9 84 NS 8
78BR 10				0.243 (2,3)-	10 17 NS 2
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78BR 11				0.245 (2,3)+	11
78BR 12				0.263 (3,4)-	12
78BR 13			0.265 (5-)		13 5.1 NS 5
78BR 14				0.284	14
78BR 15				0.292	15
78BR 16				0.312	16
78BR 17				0.330 (1,2)+	17
78BR 18	0.338	(6+)			18 7.3 NS 12
78BR 19				0.367 (1:4)-	19
78BR 20				0.389 (3,4)-	20
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78BR 21				0.391 (2,3)+	21
78BR 22				0.415	22
78BR 23			0.423 (6-)		23 25 NS LT
78BR 24				0.433 (1,2)+	24
78BR 25	0.438	(7+)			25 3 NS LT
78BR 26				0.447 (0+:3+)	26
78BR 27				0.457 (0:3+)	27
78BR 28	0.468	(8+)			28
78BR 29				0.474	29
78BR 30				0.477 (3-,4-)	30
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78BR 31				0.498 (1,2)+	31
78BR 32				0.508	32
78BR 33				0.527	33
78BR 34				0.551 (0:3)+	34
78BR 35				0.579 (2,3)+	35

78BR 36						0.601		36
78BR 37						0.643 (0:3)+		37
78BR 38						0.648 (4)		38
78BR 39						0.663 (0:3)+&(2		39
78BR 40				0.685	(7-)			40
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78BR 41						0.717 (1,2,3)+		41
78BR 42						0.793 (1,2)+		42
78BR 43				0.828	(8-)			43
78BR 44						0.854 (1,2,3)+		44
78BR 45						0.868 (1,2,3)+		45
78BR 46						0.891 (1,2,3)+		46
78BR 47						0.912 (1,2)+		47
78BR 48						0.930 (1,2,3)+		48
78BR 49		0.977	(9+)					49
78BR 50						0.989 (0:3)+		50
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78BR 51						1.001 (1,2,3)+		51
78BR 52						1.026 (0:3)+		52
78BR 53				1.030	(8-)			53
78BR 54						1.039 (0:3)+		54
78BR 55						1.060 (1+,2+)		55
78BR 56						1.130 (1,2,3)(+)		56
78BR 57						1.173 (2,3)+		57
78BR 58						1.188 (1,2,3)(+)		58
78BR 59						1.200 (0:3)(+)		59
78BR 60						1.243 (0:3)+		60
-----								
78BR 61						1.261 (2,3)+		61
78BR 62		1.372	(10+)					62
78BR 63						1.395 (2,3)+		63
78BR 64				1.463	(9-)			64
78BR 65						1.486 (0,1)+		65
78BR 66						1.570 (LE 3)+		66
78BR 67						1.691 (2,3)+		67
78BR 68						1.746 (0:3)+		68
78BR 69						1.823 (2+,3+)		69
78BR 70				1.905	(10-)			70
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78BR 71		1.941	(11+)					71
78BR 72						1.985		72
78BR 73						2.062 (2+,3+)		73
78BR 74						2.162 (2+,3+)		74
78BR 75				2.455	(11-)			75
78BR 76		2.585	(12+)					76
78BR 77				3.016	(12-)			77
78BR 78		3.149	(13+)					78
78BR 79				3.620	(13-)			79
78BR 80		4.049	(14+)					80
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78BR	81				4.297	(14-)		81
78BR	82		4.542	(15+)				82
78BR	83				4.922	(15-)		83
S-alpha=	5.017	( 0.004)	-----					
78BR	84		5.604	(16+)				84
78BR	85		6.087	(17+)				85

S-p	=	6.142	( 0.004)	-----				
S-n	=	8.289	( 0.005)	-----				
S-2p	=	15.739	( 0.004)	-----				
S-2n	=	19.306	( 0.010)	-----				
S-alpha=	5.017	( 0.004)	-----					

S+p	=	-8.279	( 0.005)
S+n	=	-10.687	( 0.004)
S+2p	=	-13.301	( 0.004)
S+2n	=	-18.580	( 0.004)
S+alpha	=	-5.161	( 0.005)

gap p	=	-2.138	( 0.006)
gap n	=	-2.399	( 0.006)
gap 2p	=	2.437	( 0.005)
gap 2n	=	0.726	( 0.011)
gap alpha	=	-0.144	( 0.006)