

$^{82}\text{Zr}$        $Z = 40$        $N = 42$       adopted link      ENSDF link

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

BE = 694.168 ( 0.002) MeV

Qbeta+ = 4.450 ( 0.006) MeV

	Energy T	J+	J-	J-other	T1/2
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82ZR 1	0.000	0+			1 32 S 5
82ZR 2	0.407	2+			2 22 PS 9
82ZR 3	1.041	4+			3 3.3 PS 7
82ZR 4				1.061	4
82ZR 5	1.449	(3)+			5
82ZR 6	1.888	6+			6 0.5 PS 2
82ZR 7				2.057	7
82ZR 8	2.175	(5)+			8
82ZR 9			2.692	(4-)	9
82ZR 10			2.792	5(-)	10
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82ZR 11			2.857	5-	11
S-alpha=	2.865 ( 0.008)	-----			
82ZR 12	2.909	8+			12 0.22 PS 6
82ZR 13	3.068	(7)+			13
82ZR 14			3.128	6-	14
82ZR 15			3.287	(6-)	15
82ZR 16			3.481	7(-)	16
82ZR 17			3.507	7-	17
82ZR 18			3.947	8-	18
82ZR 19			4.023	(8-)	19
82ZR 20	4.037	10+			20 0.16 PS 4
-----					
82ZR 21	4.086	(9)+			21
82ZR 22			4.348	9(-)	22
82ZR 23			4.444	(9-)	23
82ZR 24			4.908	10-	24
82ZR 25			4.973	(10-)	25
S-p =	5.190 ( 0.006)	-----			
82ZR 26	5.195	(11)+			26
82ZR 27	5.213	12+			27 0.13 PS 4
82ZR 28			5.361	11(-)	28
82ZR 29			5.550	(11-)	29
82ZR 30			5.989	12-	30
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82ZR 31			6.100	(12-)	31
82ZR 32	6.406	(13+)			32
82ZR 33	6.491	14+			33 0.27 PS LT
82ZR 34			6.536	13(-)	34

82ZR	35				7.042	14-		35
82ZR	36				7.345	(14-)		36
82ZR	37		7.680	(15)+				37
82ZR	38				7.688	(15-)		38
82ZR	39		7.750	(15+)				39
82ZR	40		7.860	16+				40
S-2p	=		7.881	(0.004)	-----			
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82ZR	41				7.908	(15-)		41
82ZR	42		7.992	(16+)				42
82ZR	43				8.114	16-		43
82ZR	44				9.047	(17-)		44
82ZR	45		9.070	(17)+				45
82ZR	46		9.112	18+				46
82ZR	47		9.183	(17)+				47
82ZR	48				9.235	(17-)		48
82ZR	49				9.339	(18-)		49
82ZR	50		9.453	(18+)				50
-----								
82ZR	51		10.491	(20+)				51
82ZR	52				10.753	(20-)		52
82ZR	53		12.127	(22+)				53
82ZR	54				12.365	(22-)		54
82ZR	55		14.013	(24+)				55
S-n	=		14.129	(0.010)	-----			
82ZR	56		16.120	(26+)				56
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S-p	=		5.190	(0.006)	-----			
S-n	=		14.129	(0.010)	-----			
S-2p	=		7.881	(0.004)	-----			
S-2n	=		24.628	(0.080)	-----			
S-alpha	=		2.865	(0.008)	-----			
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S+p	=		-1.288	(0.162)				
S+n	=		-10.369	(0.007)				
S+2p	=		-5.132	(0.336)				
S+2n	=		-23.950	(0.006)				
S+alpha	=		-2.922	(0.003)				
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gap p	=		3.902	(0.162)				
gap n	=		3.760	(0.012)				
gap 2p	=		2.749	(0.336)				
gap 2n	=		0.678	(0.080)				
gap alpha	=		-0.057	(0.008)				