

$^{164}\text{Er}$        $Z = 68$        $N = 96$       adopted link      ENSDF link

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

BE = 1336.439 ( 0.001) MeV

	Energy T	J+		J-		J-other		T1/2
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S-alpha=	-1.305	( 0.001)	-----					
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164ER 1	0.000	0+					1	STABLE
164ER 2	0.091	2+					2	1.569 NS 34
164ER 3	0.299	4+					3	86 PS 9
164ER 4	0.614	6+					4	
164ER 5	0.860	2+					5	1.9 PS 2
164ER 6	0.946	3+					6	
164ER 7	1.025	8+					7	2.59 PS 14
164ER 8	1.058	4+					8	
164ER 9	1.197	5+					9	
164ER 10	1.246	0+					10	
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164ER 11	1.315	2+					11	
164ER 12	1.359	6+					12	
164ER 13				1.387	1-		13	
164ER 14	1.417	0+					14	
164ER 15				1.434	3-		15	
164ER 16	1.470	4+					16	
164ER 17	1.484	2+					17	
164ER 18						1.495	18	
164ER 19						1.508	19	
164ER 20	1.518	10+					20	1.01 PS 5
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164ER 21	1.545	7+					21	
164ER 22				1.555	(5)-		22	
164ER 23				1.569	(3-)		23	
164ER 24				1.578	1-		24	
164ER 25						1.610 (4-,5-)	25	
164ER 26						1.632	26	
164ER 27						1.640	27	
164ER 28				1.664	5-		28	0.08 NS LT
164ER 29	1.683	(5+)					29	
164ER 30						1.702	30	
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164ER 31	1.702	0+					31	
164ER 32	1.707	(6)+					32	
164ER 33				1.715	(2-)		33	
164ER 34						1.726	34	
164ER 35						1.742	35	
164ER 36				1.745	6-		36	0.22 NS 3

164ER 37		1.745	8+						37
164ER 38					1.764	(7)-			38
164ER 39		1.766	0+						39
164ER 40		1.788	2+						40
-----									
164ER 41					1.798	(5)-			41
164ER 42								1.806	42
164ER 43					1.814	(6)-			43
164ER 44		1.833	2+						44
164ER 45		1.842	(0+)						45
164ER 46					1.846	7-			46
164ER 47								1.861 (0,1,2)+	47
164ER 48		1.875	1(+)						48
164ER 49		1.911	2+						49
164ER 50								1.929	50
-----									
164ER 51		1.954	2+						51
164ER 52								1.961	52
164ER 53					1.964	(8-)			53
164ER 54								1.970 (2+,3-,4+	54
164ER 55		1.977	9+						55
164ER 56					1.985	7-			56
164ER 57								2.003 (2+:5-)	57
164ER 58		2.005	8+						58
164ER 59								2.018	59
164ER 60								2.023	60
-----									
164ER 61		2.026	(2+)						61
164ER 62								2.032	62
164ER 63								2.035 1	63
164ER 64								2.046	64
164ER 65					2.055	(9)-			65
164ER 66		2.069	(8)+						66
164ER 67								2.069 (1-,2-)	67
164ER 68								2.082	68
164ER 69		2.083	12+						69
164ER 70					2.091	(8-)			70
-----									
164ER 71								2.094	71
164ER 72					2.109	9-			72
164ER 73								2.141	73
164ER 74								2.151	74
164ER 75					2.164	(8-)			75
164ER 76								2.168	76
164ER 77		2.173	0+						77
164ER 78		2.184	10+						78
164ER 79								2.240	79
164ER 80								2.254	80
-----									
164ER 81					2.261	(10-)			81

164ER 82	2.278	2+				82
164ER 83					2.279	83
164ER 84				2.337	(3-)	84
164ER 85				2.337	(9-)	85
164ER 86					2.340 (8)	86
164ER 87					2.356	87
164ER 88				2.364	(9-)	88
164ER 89					2.371	89
164ER 90					2.404 1	90
-----						
164ER 91				2.408	11-	91
164ER 92					2.416 1	92
164ER 93				2.421	(10)-	93
164ER 94	2.445	(2+)				94
164ER 95					2.448	95
164ER 96	2.463	10+				96
164ER 97				2.470	(11-)	97
164ER 98	2.479	11+				98
164ER 99					2.483	99
164ER 100	2.519	12+				100
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164ER 101					2.526 (9)	101
164ER 102					2.541 (1+,2+)	102
164ER 103					2.577 1	103
164ER 104				2.584	(10-)	104
164ER 105					2.592	105
164ER 106				2.631	(12-)	106
164ER 107					2.640 1	107
164ER 108	2.703	14+				108 0.27 PS 4
164ER 109					2.730 (10)	109
164ER 110	2.733	12+				110 0.76 PS +67-24
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164ER 111					2.747 1	111
164ER 112				2.759	(9-)	112
164ER 113					2.762 1	113
164ER 114				2.800	(12-)	114
164ER 115				2.815	13-	115
164ER 116				2.823	(11-)	116
164ER 117					2.823	117
164ER 118	2.875	14+				118
164ER 119					2.933 1	119
164ER 120					2.950 (11)	120
-----						
164ER 121					2.966 1	121
164ER 122				2.981	(10-)	122
164ER 123					3.018 1	123
164ER 124	3.027	13+				124
164ER 125					3.029	125
164ER 126				3.067	(14-)	126
164ER 127				3.079	(12-)	127

164ER 128				3.133	1	128		
164ER 129				3.179	1	129		
164ER 130				3.220	1	130		
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164ER 131			3.221	(11-)		131		
164ER 132			3.244	(14-)		132		
164ER 133	3.263	16+				133	0.30 PS	GT
164ER 134	3.267	14+				134	0.69 PS	+61-22
164ER 135			3.281	15-		135		
164ER 136					3.303	(6-,7-)	136	
164ER 137			3.352	(13-)		137		
164ER 138	3.378	(12+)				138	68 NS	2
164ER 139					3.408		139	
164ER 140	3.411	16+				140	0.21 PS	4
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164ER 141					3.458	1	141	
164ER 142	3.519	(15+)					142	
164ER 143	3.535	(2+)					143	
164ER 144					3.541	1,2	144	
164ER 145	3.546	(13+)					145	
164ER 146					3.551	1	146	
164ER 147			3.560	(16-)			147	
164ER 148					3.602	1	148	
164ER 149	3.630	2+					149	
164ER 150	3.734	(14+)					150	
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164ER 151					3.752	1	151	
164ER 152			3.760	(16-)			152	
164ER 153					3.768	(1+,2+)	153	
164ER 154	3.769	18+					154	
164ER 155	3.801	(16+)					155	
164ER 156			3.805	17-			156	
164ER 157	3.943	(15+)					157	
164ER 158					3.944	1	158	
164ER 159	4.018	(17+)					159	
164ER 160			4.106	(18-)			160	
-----								
164ER 161	4.121	18+					161	
164ER 162	4.169	(16+)					162	
164ER 163			4.345	(18-)			163	
164ER 164	4.346	20+					164	
164ER 165	4.364	(18+)					165	
164ER 166			4.385	(19-)			166	
164ER 167	4.413	(17+)					167	
164ER 168	4.590	(19+)					168	
164ER 169	4.673	(18+)					169	
164ER 170			4.702	(20-)			170	
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164ER 171	4.868	20+					171	
164ER 172	4.948	(19+)					172	

164ER 173				4.987	(20-)		173	
164ER 174		5.000	22+				174	
164ER 175					5.018	(21-)	175	
164ER 176		5.231	(21+)				176	
164ER 177		5.238	(20+)				177	
164ER 178					5.350	(22-)	178	
164ER 179		5.541	(21+)				179	
164ER 180		5.652	22+				180	
-----								
164ER 181					5.678	(22-)	181	
164ER 182					5.704	(23-)	182	
164ER 183		5.729	24+				183	
164ER 184		5.858	(22+)				184	
164ER 185					6.053	(24-)	185	
164ER 186		6.187	(23+)				186	
164ER 187					6.442	(25-)	187	
164ER 188		6.527	(24+)				188	
164ER 189		6.529	26+				189	
164ER 190					6.815	(26-)	190	
S-p	=	6.854	( 0.001)	-----				
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164ER 191		6.878	(25+)				191	
164ER 192					7.238	(27-)	192	
164ER 193		7.241	(26+)				193	
164ER 194		7.399	28+				194	
164ER 195		7.615	(27+)				195	
164ER 196					7.641	(28-)	196	
164ER 197		7.999	(28+)				197	
164ER 198					8.095	(29-)	198	
164ER 199		8.338	30+				199	
164ER 200		8.397	(29+)				200	
-----								
164ER 201					8.534	(30-)	201	
164ER 202		8.804	(30+)				202	
S-n	=	8.846	( 0.005)	-----				
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164ER 203					9.016	(31-)	203	
164ER 204		9.226	(31+)				204	
164ER 205		9.342	32+				205	
164ER 206					9.492	(32-)	206	
164ER 207		9.659	(32+)				207	
164ER 208					10.001	(33-)	208	
164ER 209		10.410	34+				209	
164ER 210					10.515	(34-)	210	
-----								
164ER 211					11.049	(35-)	211	
164ER 212		11.549	36+				212	
-----								
S-p	=	6.854	( 0.001)	-----				
S-n	=	8.846	( 0.005)	-----				

S-2p = 12.339 ( 0.001) -----  
S-2n = 15.751 ( 0.001) -----  
S-alpha= -1.305 ( 0.001) -----

S+p = -4.276 ( 0.002)  
S+n = -6.650 ( 0.001)  
S+2p = -10.229 ( 0.007)  
S+2n = -15.124 ( 0.001)  
S+alpha = 1.938 ( 0.001)

gap p = 2.577 ( 0.002)  
gap n = 2.196 ( 0.005)  
gap 2p = 2.110 ( 0.007)  
gap 2n = 0.627 ( 0.001)  
gap alpha = 0.633 ( 0.001)