

$^{141}\text{Pr}$        $Z = 59$        $N = 82$       adopted link      ENSDF link

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

BE = 1177.912 ( 0.001) MeV

	Energy T	J+	J-	J-other	T1/2
141PR 1	0.000	5/2+			1 STABLE
141PR 2	0.145	7/2+			2 1.85 NS 3
141PR 3			1.118	11/2-	3 4.8 NS 1
141PR 4	1.127	3/2+			4 188 FS GT
141PR 5				1.293 (5/2)+	5 0.33 PS +10-7
S-alpha= 1.299 ( 0.002)					
141PR 6	1.299	5/2+			6 0.34 PS +22-10
141PR 7	1.436	3/2+			7 0.23 PS +8-5
141PR 8				1.452 (7/2)+	8 0.31 PS +11-7
141PR 9				1.456 +	9
141PR 10	1.457	9/2+			10 0.26 PS +7-5
141PR 11	1.494	11/2+			11 0.46 PS +36-15
141PR 12				1.510	12
141PR 13	1.521	9/2+			13 150 FS +19-16
141PR 14				1.559	14
141PR 15			1.580	5/2-	15 0.22 PS +6-4
141PR 16				1.597	16
141PR 17				1.608 (3/2)+	17 11.8 FS 7
141PR 18				1.651 (9/2)+	18 132 FS +21-17
141PR 19	1.657	1/2+			19 0.67 PS GT
141PR 20				1.666	20
141PR 21	1.768	13/2+			21 0.37 PS GT
141PR 22				1.787 (5/2)+	22 0.19 PS +5-4
141PR 23	1.796	15/2+			23 1.0 NS 1
141PR 24				1.812 (9/2+)	24 0.8 PS +12-3
141PR 25				1.842 (7/2+)	25 0.70 PS +59-22
141PR 26				1.849	26
141PR 27				1.854 (11/2+)	27 0.8 PS +16-3
141PR 28				1.910	28
141PR 29				1.913	29
141PR 30				1.943	30
141PR 31				1.975 (3/2+)	31 0.39 PS +19-10
141PR 32				1.986 (13/2+)	32 0.42 PS GT
141PR 33				2.000 (13/2-)	33 0.13 PS +11-5
141PR 34				2.000 (9/2)-	34 0.22 PS +12-6
141PR 35				2.004 (11/2+)	35 0.7 PS +10-3
141PR 36				2.018 (3/2+)	36 0.40 PS +26-12
141PR 37				2.045 (9/2+)	37 0.68 PS +86-25

141PR	38		2.069	17/2+				38		
141PR	39					2.076	(5/2+)	39	0.22 PS	+9-6
141PR	40					2.101	(3/2+)	40	0.17 PS	+7-4
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141PR	41					2.105	(5/2-)	41	87 FS	+15-11
141PR	42					2.105	(15/2-)	42	0.15 PS	+49-8
141PR	43					2.108	15/2(+)	43	28 FS	GT
141PR	44					2.126	(11/2+)	44	114 FS	GT
141PR	45					2.136	(7/2-)	45	0.27 PS	+11-7
141PR	46					2.155	(1/2+,3/2,5/2+)	46		
141PR	47					2.172	(9/2-)	47	101 FS	+18-15
141PR	48					2.178	(5/2-)	48		
141PR	49					2.188	(3/2+)	49	0.26 PS	+24-9
141PR	50					2.190	(1/2-)	50	215 FS	GT
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141PR	51		2.206	11/2+				51	171 FS	+40-28
141PR	52					2.229	(7/2+)	52	0.7 PS	+61-4
141PR	53					2.230		53		
141PR	54					2.234	3/2	54		
141PR	55					2.243		55		
141PR	56					2.248	(5/2-)	56	147 FS	+35-25
141PR	57					2.254	+	57		
141PR	58					2.265	(3/2+)	58	0.18 PS	+10-7
141PR	59					2.267	(1/2+)	59	184 FS	GT
141PR	60					2.270		60		
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141PR	61					2.296		61		
141PR	62					2.303	(9/2+)	62	0.25 PS	+15-7
141PR	63					2.316	(5/2,7/2)	63	130 FS	+35-24
141PR	64					2.337	(15/2-)	64	28 FS	GT
141PR	65					2.346	(9/2+)	65	0.21 PS	+26-8
141PR	66					2.354		66		
141PR	67					2.363	(5/2-)	67	39 FS	+10-8
141PR	68					2.365		68		
141PR	69					2.382	(9/2-)	69	0.24 PS	+28-9
141PR	70					2.399		70		
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141PR	71					2.403	(9/2+)	71	0.49 PS	+85-20
141PR	72					2.420	(9/2+)	72	0.5 PS	+17-2
141PR	73					2.453	(5/2-)	73	18.7 FS	+35-28
141PR	74					2.455	(15/2+)	74	94 FS	GT
141PR	75					2.462	(5/2+)	75	136 FS	+57-33
141PR	76					2.473	(1/2-)	76	14 FS	GT
141PR	77					2.499		77		
141PR	78					2.500	(9/2+)	78	102 FS	+28-19
141PR	79					2.520	(3/2+)	79	0.2 PS	+18-1
141PR	80					2.564	(7/2-)	80	55 FS	+10-8
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141PR	81					2.581	(11/2+)	81	13 FS	GT
141PR	82					2.583	(7/2-)	82	24 FS	+7-6

141PR 83				2.586		83		
141PR 84				2.601	(5/2-, 7/2-)	84	59 FS	+37-20
141PR 85				2.604	(5/2-, 7/2-)	85	28 FS	+12-9
141PR 86				2.607	(1/2+)	86	0.12 PS	+11-5
141PR 87				2.609	+	87		
141PR 88				2.612	(9/2+)	88	29 FS	+5-4
141PR 89				2.623	(5/2+, 7/2+)	89	72 FS	+19-14
141PR 90				2.627	(15/2-)	90		
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141PR 91				2.646	(9/2+)	91	90 FS	+25-17
141PR 92				2.660	(11/2+)	92	156 FS	GT
141PR 93				2.669	(13/2-)	93	42 FS	+23-14
141PR 94				2.683	(5/2, 7/2)+	94	0.22 PS	+22-8
141PR 95				2.692	-	95		
141PR 96				2.699		96		
141PR 97		2.708	15/2-			97	0.04 PS	+12-3
141PR 98				2.710	(3/2+)	98	0.16 PS	+46-8
141PR 99				2.718	(9/2, 11/2)	99	159 FS	GT
141PR 100				2.722	(3/2+)	100	44 FS	+16-11
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141PR 101				2.731	(9/2+)	101	55 FS	+23-15
141PR 102				2.740	(1/2-)	102	87 FS	GT
141PR 103				2.750		103		
141PR 104				2.777	(9/2)	104	44 FS	+12-9
141PR 105				2.782	(5/2+, 7/2+)	105	0.15 PS	+10-5
141PR 106				2.783	(13/2+)	106	51 FS	GT
141PR 107				2.786		107		
141PR 108				2.802	(9/2+)	108	0.12 PS	+16-5
141PR 109				2.807	(3/2+, 5/2-)	109	51 FS	+25-15
141PR 110				2.811	(1/2+)	110	76 FS	GT
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141PR 111				2.814	(1/2-)	111	24 FS	+26-14
141PR 112				2.820		112		
141PR 113				2.838	(5/2-, 7/2-)	113	24 FS	+13-9
141PR 114				2.840	(9/2-)	114	56 FS	+48-23
141PR 115				2.845	(3/2-)	115	45 FS	+90-28
141PR 116	2.848	9/2+				116	97 FS	GT
141PR 117				2.864		117	0.06 PS	+150-4
141PR 118				2.876		118		
141PR 119				2.882	(7/2+, 9/2+)	119	55 FS	GT
141PR 120				2.888	(9/2, 11/2+)	120	24 FS	GT
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141PR 121				2.897	(11/2+)	121		
141PR 122		2.928	19/2-			122		
141PR 123				2.929	(5/2+, 7/2+)	123	0.08 PS	+14-4
141PR 124				2.941		124		
141PR 125				2.951	(1/2+)	125		
141PR 126	2.963	19/2+				126		
141PR 127				2.984	(5/2-, 7/2-)	127		
141PR 128				2.986	+	128		

141PR 129				3.001	(11/2+)	129
141PR 130				3.016	(5/2-)	130
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141PR 131		3.017	21/2+			131
141PR 132				3.019	(17/2)-	132 0.2 NS 1
141PR 133				3.034	(1/2+)	133
141PR 134				3.046	(11/2+,9/2)	134
141PR 135				3.057		135
141PR 136				3.065	(9/2-)	136
141PR 137				3.076	(3/2+)	137
141PR 138				3.080		138
141PR 139				3.083	(5/2)	139 0.02 EV
141PR 140				3.115		140
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141PR 141				3.129		141
141PR 142				3.156		142
141PR 143				3.203	(-)	143
141PR 144				3.206		144
141PR 145				3.255		145
141PR 146				3.272		146
141PR 147				3.294		147
141PR 148				3.324		148
141PR 149				3.338		149
141PR 150				3.346		150
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141PR 151				3.349	(7/2)	151 0.05 EV
141PR 152				3.370		152
141PR 153				3.376		153
141PR 154			3.397 21/2-			154
141PR 155				3.417		155
141PR 156				3.427		156
141PR 157				3.449		157
141PR 158			3.471 23/2-			158
141PR 159				3.495		159
141PR 160				3.508		160
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141PR 161				3.527	(21/2-)	161
141PR 162				3.581		162
141PR 163		3.586	23/2+			163 0.2 NS 1
141PR 164				3.590		164
141PR 165				3.643		165
141PR 166				3.644		166
141PR 167				3.659		167
141PR 168				3.706		168
141PR 169				3.761		169
141PR 170				3.773		170
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141PR 171				3.791		171
141PR 172				3.812		172
141PR 173				3.829		173

141PR 174				3.879				174
141PR 175				3.913				175
141PR 176				4.371	-			176
141PR 177				4.741				177
S-p = 5.229 ( 0.002)-----								
141PR 178				6.117	7/2(+)			178 0.052 EV 10
141PR 179		6.879	7/2+					179 0.085 EV 10
141PR 180				7.187	5/2			180
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141PR 181			7.256	5/2-				181 0.29 EV 3
141PR 182		7.631	5/2+					182 0.090 EV +40-10
141PR 183		7.915	5/2+					183 0.007 EV 3
141PR 184				8.880	(5/2,7/2)			184
S-n = 9.400 ( 0.006)-----								
141PR 185			9.751	7/2-				185 60 KEV

S-p = 5.229 ( 0.002)-----  
S-n = 9.400 ( 0.006)-----  
S-2p = 13.370 ( 0.002)-----  
S-2n = 17.328 ( 0.004)-----  
S-alpha= 1.299 ( 0.002)-----

S+p = -7.225 ( 0.002)  
S+n = -5.843 ( 0.002)  
S+2p = -11.524 ( 0.003)  
S+2n = -13.196 ( 0.002)  
S+alpha = 2.322 ( 0.003)

gap p = -1.995 ( 0.003)  
gap n = 3.556 ( 0.007)  
gap 2p = 1.846 ( 0.004)  
gap 2n = 4.132 ( 0.005)  
gap alpha = 3.621 ( 0.004)