^{140}Pr $Z = 59$ $N = 81$ adopted link ENSDF link

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

BE = 1168.512 (0.006) MeV
Qbeta+ = 3.388 (0.006) MeV

	Energy	T	J+	J-		J-other		T1/2	
140PR 1	0.000		1+				1	3.39 M	1
140PR 2	0.027		2+				2		
140PR 3	0.030		3+				3		
140PR 4	0.128		5+				4	0.35 US	2
140PR 5	0.192		3+				5		
140PR 6	0.271		2+				6		
140PR 7	0.287		3+				7		
140PR 8					0.331	(4,5)+	8		
140PR 9					0.391	(4,5)+	9		
140PR 10					0.420	2+,3+	10		
140PR 11					0.577	(4,5)+	11		
140PR 12					0.604	(3)+	12		
140PR 13					0.630	1+,2+,3+	13		
140PR 14					0.642		14		
140PR 15					0.670		15		
140PR 16					0.764	(7)-	16	3.05 US	20
140PR 17					0.785	(8)-	17		
140PR 18					0.862	(4)-	18		
140PR 19					0.885		19		
140PR 20					0.888		20		
140PR 21					0.889	(5)-	21		
140PR 22					0.904	(2-)	22		
140PR 23					0.913		23		
140PR 24					0.967		24		
140PR 25					0.983		25		
140PR 26					1.018	3+,4+,5+	26		
140PR 27					1.025		27		
140PR 28					1.034	2-,3-	28		
140PR 29					1.036	(8)	29		
140PR 30					1.054	(1+,2,3+)	30		
140PR 31					1.061		31		
S-alpha=	1.074 (0.054)								
140PR 32					1.079		32		
140PR 33					1.133		33		
140PR 34					1.147	(2)-	34		
140PR 35					1.183	(1,2,3)+	35		
140PR 36					1.204	(5+)	36		

140PR	37					1.214	(9)	37
140PR	38	1.230	5+					38
140PR	39					1.293	1+,2+,3+	39
140PR	40					1.320	(5+,6+,7+)	40
140PR	41					1.328		41
140PR	42					1.335		42
140PR	43					1.342		43
140PR	44			1.370	4-			44
140PR	45					1.378		45
140PR	46					1.385		46
140PR	47					1.405		47
140PR	48					1.430	(1+,2+,3+)	48
140PR	49					1.488		49
140PR	50					1.502		50
140PR	51					1.525		51
140PR	52					1.565		52
140PR	53					1.586		53
140PR	54					1.652		54
140PR	55					1.672		55
140PR	56					1.684		56
140PR	57					1.718		57
140PR	58					1.751		58
140PR	59					1.762	(9+)	59
140PR	60					1.768		60
140PR	61					1.816	(10+)	61
140PR	62					1.825		62
140PR	63					1.860	1+,2+,3+	63
140PR	64					1.939		64
140PR	65					1.960	4-,5-,6-	65
140PR	66					1.973		66
140PR	67					1.984		67
140PR	68					2.020		68
140PR	69					2.117		69
140PR	70					2.197	(11+)	70
140PR	71					2.221		71
140PR	72					2.277		72
140PR	73					2.282		73
140PR	74					2.333		74
140PR	75					2.349		75
140PR	76					2.416		76
140PR	77					2.446		77
140PR	78					2.466		78
140PR	79					2.477	(12)	79
140PR	80					2.491		80
140PR	81					2.542		81

```
140PR  82 |                |                |   2.570                    82
140PR  83 |                |                |   2.602                    83
140PR  84 |                |                |   2.632                    84
140PR  85 |                |                |   2.655                    85
140PR  86 |                |                |   2.748                    86
140PR  87 |                |                |   2.822                    87
140PR  88 |                |                |   2.859                    88
140PR  89 |                |                |   2.870                    89
140PR  90 |                |                |   2.878     (13)           90
-----------                                                    -----------------
140PR  91 |                |                |   2.895                    91
140PR  92 |                |                |   2.929                    92
140PR  93 |                |                |   2.953                    93
140PR  94 |                |                |   2.990                    94
140PR  95 |                |                |   3.005                    95
140PR  96 |                |                |   3.019     (14)           96
140PR  97 |                |                |   3.118     (15)           97
140PR  98 |                |                |   3.247                    98
140PR  99 |                |                |   3.588                    99
140PR 100 |                |                |   3.627                   100
-----------                                                    -----------------
140PR 101 |                |                |   3.631                   101
140PR 102 |                |                |   3.734                   102
140PR 103 |                |                |   3.788                   103
140PR 104 |                |                |   3.865                   104
140PR 105 |                |                |   3.912                   105
140PR 106 |                |                |   4.031                   106
140PR 107 |                |                |   4.035                   107
140PR 108 |                |                |   4.079     (17)          108
140PR 109 |                |                |   4.397                   109
140PR 110 |                |                |   4.550                   110
-----------                                                    -----------------
140PR 111 |                |                |   4.718                   111
S-p    =   5.017 ( 0.006)-------------------------------------------------------------------------
140PR 112 |                |                |   6.500                   112


S-p    =   5.017 ( 0.006)-------------------------------------------------------------------------
S-n    =   7.929 ( 0.007)-------------------------------------------------------------------------
S-2p   =  12.751 ( 0.006)-------------------------------------------------------------------------
S-2n   =  17.700 ( 0.012)-------------------------------------------------------------------------
S-alpha=   1.074 ( 0.054)-------------------------------------------------------------------------

S+p       =  -6.794 ( 0.007)
S+n       =  -9.400 ( 0.006)
S+2p      = -11.033 ( 0.024)
S+2n      = -15.243 ( 0.006)
S+alpha   =   0.845 ( 0.007)

gap p     =  -1.777 ( 0.009)
```

```
gap n     =  -1.471 ( 0.010)
gap 2p    =   1.717 ( 0.025)
gap 2n    =   2.457 ( 0.013)
gap alpha =   1.919 ( 0.054)
```