^{60}Cu $Z = 29$ $N = 31$ link to full NNDC output

Based on ENSDF from Dec 2018, and mass evaluation from 2016

BE = 519.936 (0.002) MeV
Qbeta+ = 6.128 (0.002) MeV

	Energy	T	J+		J-		J-other		T1/2	
60CU 1	0.000		2+					1	23.7 M	4
60CU 2	0.062		1+					2	2.00 NS	10
60CU 3	0.287		2+					3		
60CU 4					0.336	(2+)		4		
60CU 5					0.364	(1+)		5		
60CU 6					0.454	(3+)		6		
60CU 7					0.558	(4+)		7		
60CU 8					0.572			8		
60CU 9					0.587	(3+)		9		
60CU 10					0.600			10		
60CU 11	0.670		1+					11		
60CU 12					0.781	(3+)		12		
60CU 13					0.904			13		
60CU 14					0.915	(+)		14		
60CU 15					0.947			15		
60CU 16					0.975			16		
60CU 17					1.008			17		
60CU 18					1.251			18		
60CU 19					1.333			19		
60CU 20					1.368			20		
60CU 21					1.422	(+)		21		
60CU 22					1.427			22		
60CU 23					1.492	(+)		23		
60CU 24					1.505			24		
60CU 25					1.604	(5+)		25		
60CU 26					1.646			26		
60CU 27					1.660			27		
60CU 28					1.668			28		
60CU 29					1.694	(+)		29		
60CU 30					1.768			30		
60CU 31					1.779	(5+)		31		
60CU 32					1.793			32		
60CU 33					1.878	(+)		33		
60CU 34					1.918	(+)		34		
60CU 35					1.981			35		
60CU 36					2.027	(5+)		36		
60CU 37					2.036			37		

60CU 38			2.170	(+)	38
60CU 39			2.197	(6+)	39
60CU 40			2.231	(+)	40
60CU 41			2.246		41
60CU 42			2.286	(+)	42
60CU 43			2.350	(+)	43
60CU 44			2.474	(+)	44
60CU 45			2.519		45
60CU 46			2.525		46
60CU 47			2.536	(0+)	47
60CU 48			2.539		48
60CU 49			2.593		49
60CU 50			2.633		50
60CU 51			2.658		51
60CU 52			2.692	(6+)	52
60CU 53			2.726		53
60CU 54			2.790	(+)	54
60CU 55			2.817	(6)	55
60CU 56			2.888		56
60CU 57			2.915	(+)	57
60CU 58			3.001	(+)	58
60CU 59			3.044		59
60CU 60			3.067		60
60CU 61			3.094		61
60CU 62			3.156	(6-)	62
60CU 63			3.162	(+)	63
60CU 64			3.191	(7+)	64
60CU 65			3.282		65
60CU 66			3.315		66
60CU 67			3.344		67
60CU 68			3.355	(7-)	68
60CU 69			3.452		69
60CU 70			3.545		70
60CU 71			3.575		71
60CU 72			3.594	(+)	72
60CU 73			3.624		73
60CU 74			3.699	(+)	74
60CU 75			3.772	(7-)	75
60CU 76			3.837		76
60CU 77			3.874	(+)	77
60CU 78			3.877	(4+)	78
60CU 79			3.980		79
60CU 80			4.093		80
S-p = 4.477 (0.002)					
60CU 81			4.479		81

```
 60CU  82 |                |                |   4.521     (8-)            82
 60CU  83 |                |                |   4.619                     83
 60CU  84 |                |                |   4.638                     84
S-alpha=   4.730 ( 0.002)-------------------------------------------------------------------------
 60CU  85 |                |                |   5.188     (9-)            85
 60CU  86 |                |   5.649     10- |                             86
 60CU  87 |                |                |   5.827                     87
 60CU  88 |                |                |   5.990     (9+)            88
 60CU  89 |                |   6.095     11- |                             89
 60CU  90 |                |                |   7.200                     90
-----------                                                               -----------------
 60CU  91 |  7.395     11+ |                |                             91
 60CU  92 |  8.133     13+ |                |                             92
 60CU  93 |                |                |  10.000                     93


S-p    =   4.477 ( 0.002)-------------------------------------------------------------------------
S-n    =  10.058 ( 0.002)-------------------------------------------------------------------------
S-2p   =  13.076 ( 0.002)-------------------------------------------------------------------------
S-2n   =  22.820 ( 0.002)-------------------------------------------------------------------------
S-alpha=   4.730 ( 0.002)-------------------------------------------------------------------------

S+p       =  -5.293 ( 0.016)
S+n       = -11.710 ( 0.002)
S+2p      =  -8.220 ( 0.002)
S+2n      = -20.585 ( 0.002)
S+alpha   =  -2.913 ( 0.002)

gap p     =  -0.815 ( 0.016)
gap n     =  -1.652 ( 0.003)
gap 2p    =   4.856 ( 0.003)
gap 2n    =   2.235 ( 0.002)
gap alpha =   1.817 ( 0.003)
```