^{59}Zn εp decay (182.0 ms) 1981Ho19,1984Ar12

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Caroline D. Nesaraja, Scott D. Geraedts and Balraj Singh	NDS 111,897 (2010)	12-Jan-2010

Parent: ^{59}Zn: E=0.0; $J^{\pi}=3/2^{-}$; $T_{1/2}$=182.0 ms *18*; Q(εp)=5680 *40*; %εp decay=0.10 *3*

^{59}Zn-Q(εp): From 2009AuZZ and 2003Au03.

^{59}Zn-J^{π},$T_{1/2}$: From 'Adopted Levels' for ^{59}Zn In (2002) ENSDF for α=59.

^{59}Zn-%εp decay: %εp=0.10 *3*.

1981Ho19: Measured E(p) and I(p) for β-delayed protons, Eγ, Iγ, p(t); Ge(Li) and Si detectors.

1984Ar12 (also 1981Ar13): Measured Eβ, Eγ, Iγ, β(t), I(β-delayed protons); high purity Ge detectors and Si(Au) ΔE-E telescope; FWHM=15 keV for delayed protons.

^{58}Ni Levels

E(level)	J^{π}
0.0	0^{+}

Delayed Protons (^{58}Ni)

E(p)†	E(^{58}Ni)	I(p)‡@	E(^{59}Cu)#	E(p)†	E(^{58}Ni)	I(p)‡@	E(^{59}Cu)#
	0.0	0.003	6460	1857 *5*	0.0	0.0073 *26*	5307
913 *10*	0.0	0.0030 *13*	4346	2025 *5*	0.0	0.0068 *21*	5477
1063 *5*	0.0	0.0060 *21*	4499	2089 *5*	0.0	0.012 *4*	5543
1264 *10*	0.0	0.0017 *13*	4703	2182 *10*	0.0	0.0047 *17*	5637
1331 *10*	0.0	0.0017 *13*	4771	2197 *10*	0.0	0.0043 *17*	5652
1376 *5*	0.0	0.0098 *30*	4817	2250 *10*	0.0	0.0034 *13*	5706
1778 *5*	0.0	0.019 *6*	5226	2410 *15*	0.0	0.0068 *26*	5869
1817 *5*	0.0	0.011 *3*	5266	2455 *15*	0.0	0.0021 *9*	5915

† From 1981Ho19.

‡ From measured proton intensities of 1981Ho19, renormalized so that total I(p)=0.10% *3* from ^{59}Zn decay (adopted value).

From 1984Ar12.

@ Absolute intensity per 100 decays.

& Placement of transition in the level scheme is uncertain.

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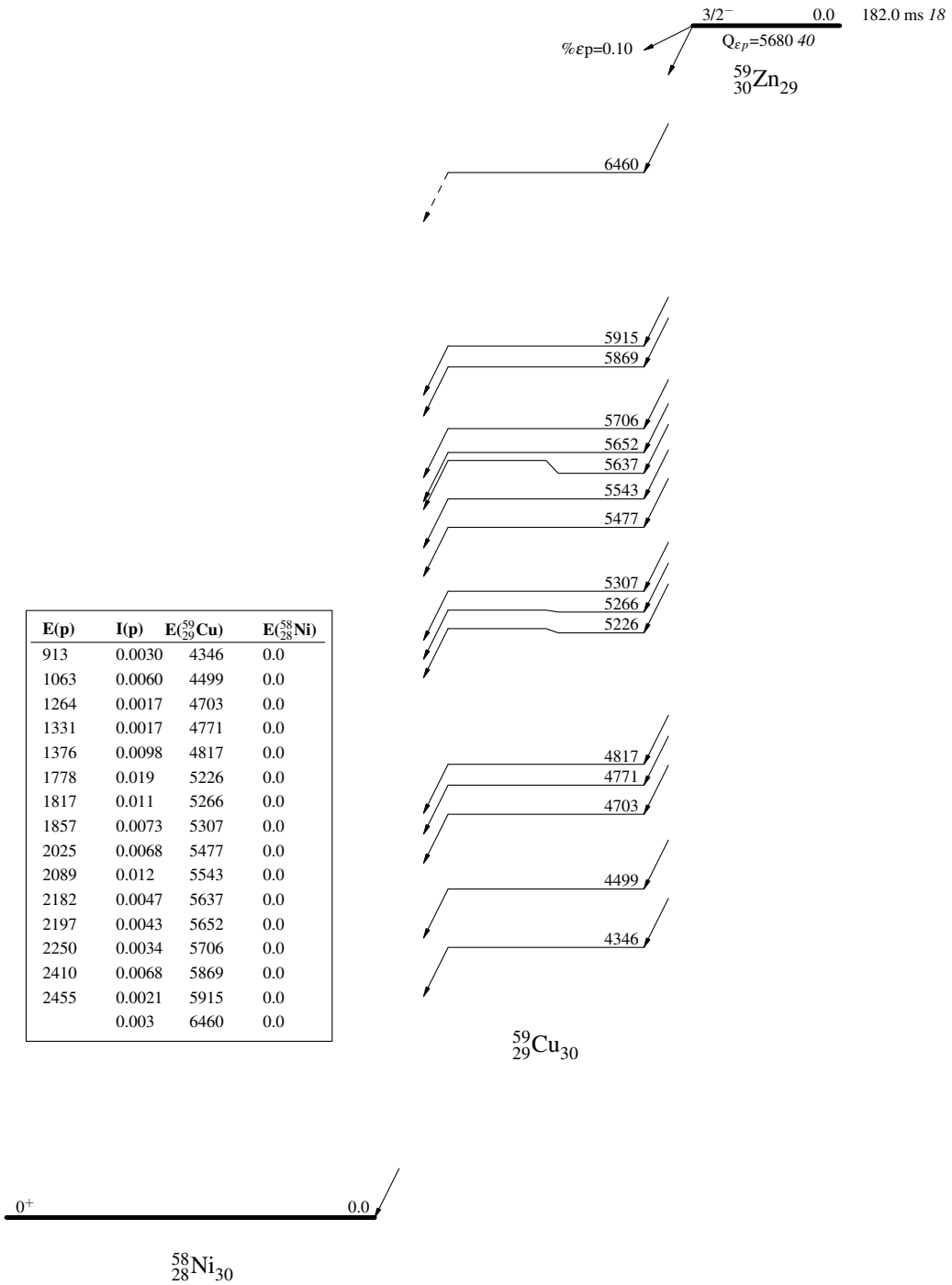
Decay Scheme

I(p) Intensities: I(p) per 100 parent decays



E(p)	I(p)	E($^{59}_{29}$Cu)	E($^{58}_{28}$Ni)
913	0.0030	4346	0.0
1063	0.0060	4499	0.0
1264	0.0017	4703	0.0
1331	0.0017	4771	0.0
1376	0.0098	4817	0.0
1778	0.019	5226	0.0
1817	0.011	5266	0.0
1857	0.0073	5307	0.0
2025	0.0068	5477	0.0
2089	0.012	5543	0.0
2182	0.0047	5637	0.0
2197	0.0043	5652	0.0
2250	0.0034	5706	0.0
2410	0.0068	5869	0.0
2455	0.0021	5915	0.0
	0.003	6460	0.0