^{65}Cu(p,n), (p,nγ) IAR 1967Co04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 111, 1093 (2010)	3-Mar-2009

Target $J^\pi=3/2^-$.
(p,n): 1967Co04: E(p)≈2.5-4.2 MeV; σ(E(p)) and Γ′s; proportional counter.
1973Kn02: E(p)≈2.185 MeV; E(n), deduced n(θ), Γ; neutron time-of-flight.
1966Ha16: E(p)=2.2-4.0 MeV; σ(E(p)) and Γ; proportional counter.
(p,n),(p,nγ): 1971Da32: E(p)≈2.8-3.0 MeV; σ(E(p)), $\gamma(\theta)$ and n(θ); neutron time-of-flight.
Except as noted, data are from 1967Co04.
E(p) are in laboratory coordinates.

^{66}Zn Levels

E(level)[†]	J^π	Comments
0		
11059.1 *10*	$2^-,3^-$	Γ: ≥2.3 eV *2*, ≤8 eV *2* (1973Kn02). E(level): from E(p) above threshold=148.4 eV *9* (1973Kn02); and ^{65}Cu(p,n) reaction Q=2134.4 *3* (2003Au03). J^π: from measurement of n(θ) isotropic within 10% (1973Kn02).
11392 *10*		E(p)=2506 *10*.
11409 *10*		E(p)=2523 *10*.
11455[‡] *10*		Γ=30 keV *5* E(p)=2569 *10*.
11512 *10*		Γ=15 keV *5* E(p)=2627 *10*.
11590[‡] *10*		Γ=30 keV *5* E(p)=2707 *10*.
11652 *10*		Γ=12 keV *5* E(p)=2769 *10*. IAS of ^{66}Cu(275).
11696 *10*		Γ=17 keV *5* E(p)=2814 *10*.
11755 *10*		Γ=18 keV *5* E(p)=2874 *10*. IAS of ^{66}Cu(386).
11839 *10*	(2^+)	Γ=22 keV *5* E(p)=2959 *10*. IAS of ^{66}Cu(465). J^π: from measurement of n(θ) and $\gamma(\theta)$ (1971Da32).
11914 *10*		Γ=25 keV *5* E(p)=3035 *10*.
12192? *10*		E(p)=3318 *10*.
12216 *10*		Γ=19 keV *5* E(p)=3342 *10*. IAS of ^{66}Cu(823).
12291 *10*		Γ=14 keV *5* E(p)=3418 *10*.
12322 *10*		Γ=17 keV *5* E(p)=3450 *10*.
12399 *10*		Γ=14 keV *5* E(p)=3528 *10*. IAS of ^{66}Cu(1017).
12431? *10*		IAS of ^{66}Cu(1052). E(p)=3560 *10*, resonance in 1966Ha16.
12550 *10*		E(p)=3681 *10*.

Continued on next page (footnotes at end of table)

^{65}Cu(p,n), (p,nγ) IAR 1967Co04 (continued)

^{66}Zn Levels (continued)

E(level)[†]	Comments
	IAS of ^{66}Cu(1154).
12600[‡] *10*	Γ=39 keV *5* E(p)=3732 *10*. IAS of ^{66}Cu(1213).
12649 *10*	E(p)=3782 *10*. IAS of ^{66}Cu(1247).
12686 *10*	Γ=13 keV *5* E(p)=3819 *10*.
12712 *10*	Γ=15 keV *5* E(p)=3846 *10*. IAS of ^{66}Cu(1344).

[†] From S(p)=8924.5 *10* (2009AuZZ, 2003Au03) + E(p)(c.m.).
[‡] Resonance may be a group of unresolved states (1967Co04).