Coulomb excitation   **2008St04**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 188,1 (2023)	17-Jan-2023

2008St04: E=2.99 MeV/nucleon ^{71}Cu beam provided by REX-ISOLDE facility. Radioactive ion beam produced in the reaction U(p,X) at 1.4 GeV protons (target=UC_x) using laser ionization RILIS. Measured $E\gamma$, $I\gamma$, (particle)γ coin using MINIBALL Ge array, and charged particles with a double-sided silicon strip detector. Deduced B(E2)(W.u.) values from experimental Coulomb excitation cross sections deduced from observed gamma-ray yields normalized to the known cross section for excitation of the first 2^+ states in ^{104}Pd and ^{120}Sn targets.

^{71}Cu Levels

E(level)	$J^{\pi\dagger}$	$T_{1/2}$	Comments
0.0	$3/2^-$		
454.2 *1*	$1/2^-$		Since $\delta(454\gamma)$ is unknown, no half-life is deduced from measured B(E2) value.
534	$5/2^-$		Since $\delta(534\gamma)$ is unknown, no half-life is deduced from measured B(E2) value.
1190	$7/2^-$	1.15 ps *13*	$T_{1/2}$: deduced by evaluators from experimental B(E2)(W.u.) and branching ratio. Configuration=$\pi 2p_{3/2} \otimes 2^+$ in ^{70,72}Ni proposed earlier is consistent with B(E2) values (2008St04).

† As proposed by 2008St04.

$\gamma(^{71}\text{Cu})$

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.‡	Comments
454.2	$1/2^-$	454.2 *1*		0.0	$3/2^-$	[M1+E2]	B(E2)(W.u.)=20.4 *22* (2008St04)
534	$5/2^-$	534		0.0	$3/2^-$	[M1+E2]	B(E2)(W.u.)=3.9 *5* (2008St04)
1190	$7/2^-$	655	10.1† *11*	534	$5/2^-$		
		1190	100† *3*	0.0	$3/2^-$	[E2]	B(E2)(W.u.)=10.7 *12* (2008St04)

† From the Adopted Levels, Gammas dataset.
‡ Assumed from J^π values.

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Level Scheme

Intensities: Relative photon branching from each level