Coulomb excitation 2012Ba31

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 114, 1849 (2013)	31-Dec-2012

Additional information 1.

Beam=81.7 MeV/nucleon ^{60}Cr in the form of cocktail beam mixed with ^{58}Cr and ^{62}Cr. Target=252 mg/cm^2 ^{197}Au.

Intermediate energy Coulomb excitation.

Secondary beam produced in fragmentation of 130 MeV/nucleon ^{76}Ge beam on a 423 mg/cm^2 ^{9}Be target followed by selection and purification using A1900 separator at National Superconducting Cyclotron Laboratory (NSCL). Gamma-rays were detected in coincidence with scattered ^{60}Cr projectiles. Measured Coulomb excitation cross sections and calculated B(E2) values using Winther-Alder theory.

^{60}Cr Levels

E(level)	J^π	$T_{1/2}$	Comments
0	0^+		
643 *6*	2^+	23 ps *3*	B(E2)↑=0.1105 *145* (2012Ba31) B(E2) deduced from σ=237 mb *17* (2012Ba31). $T_{1/2}$: deduced by evaluator from B(E2) using Eγ=643 keV.

$\gamma(^{60}Cr)$

E_γ	E_i(level)	J_i^π	E_f	J_f^π
643 *6*	643	2^+	0	0^+

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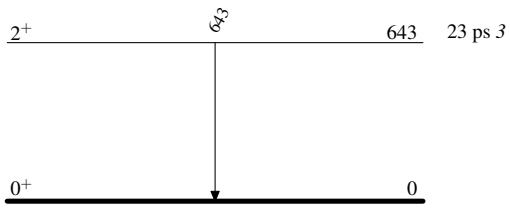
Level Scheme



$^{60}_{24}Cr_{36}$