

Coulomb excitation 2013Cr02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 178, 41 (2021).	12-Nov-2021

Intermediate energy Coulomb excitation.

[2013Cr02](#) (also [2013Ma17](#)): secondary ^{64}Cr beam produced by fragmentation of 130 MeV/nucleon ^{76}Ge beam with a ^9Be target followed by separation of fragments by A1900 fragment separator and S800 analyzer at NSCL facility. Target=492 mg/cm² ^{209}Bi . Measured time-of-flight and energy loss. The γ rays in coincidence with ^{64}Cr particles were detected with CAESAR array of 192 CsI(Na) scintillation crystals. Deduced cross section for the population of first 2^+ state, and B(E2). Comparison with large-scale shell model calculations.

 ^{64}Cr Levels

E(level)	J^π	$T_{1/2}$	Comments
0	0^+		
435	2^+	125 ps +49-29	B(E2) \uparrow =0.156 40 (2013Cr02) Angle-integrated Coulomb excitation σ =333 mb 83. $T_{1/2}$: deduced from B(E2) \uparrow =0.156 40, using adopted E_γ =429 3.

 $\gamma(^{64}\text{Cr})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
435	435	2^+	0	0^+	E_γ : from 2013Cr02 . E_γ =429 3 in Adopted dataset.

Coulomb excitation 2013Cr02Level Scheme