

Coulomb excitation

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson, D. Symochko(a), M. Fadil(b), and J. K. Tuli		NDS 112, 1949 (2011)	1-Jun-2010

 $^{142}\text{Nd}(x,x')$.

Coul. ex. (1978Mo10,1978Ki09,1973Ch13,1966Ec02,1965Ch20,1963Ha20,1960Na13).

 $x=^{16}\text{O}$ E=54-72 MeV (1973Ch13), 44 MeV (1966Ec02). $x=^{12}\text{C}$ E=70.4 MeV (1977Hi07). $x=\alpha$ E=96, 115 MeV (1978Mo10), 12.6 MeV (1978Ki09), 17 MeV (1960Na13), 14-20 MeV (1963Ha20).Observed and studied giant resonances in (α,α') E=115 MeV (1976Yo02), (e,e') E=15.9-29 MeV (1977Sa15), 50, 64.3 MeV (1975Sc03); see 1976Mo21. ^{142}Nd Levels

E(level)	J^π	$T_{1/2}$	Comments
0	0^+		
1575.41 20	2^+	0.110 ps 2	B(E2) \uparrow =0.265 4 (1978Ki09) B(E2) from (α,α'); others: 0.27 3 (1973Ch13), 0.29 4 (1971Ma27), 0.42 5 (1966Ec02), \approx 0.34 (1960Na13). $T_{1/2}$: from B(E2).

 $\gamma(^{142}\text{Nd})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	α^\dagger	Comments
1575.4 2	100	1575.41	2^+	0	0^+	E2	0.001003 14	$\alpha=0.001003$ 14; $\alpha(\text{K})=0.000773$ 11; $\alpha(\text{L})=0.0001006$ 14; $\alpha(\text{M})=2.12\times 10^{-5}$ 3; $\alpha(\text{N+..})=0.000109$ $\alpha(\text{N})=4.74\times 10^{-6}$ 7; $\alpha(\text{O})=7.20\times 10^{-7}$ 10; $\alpha(\text{P})=4.69\times 10^{-8}$ 7; $\alpha(\text{IPF})=0.0001035$ 15 E_γ : from 1998Wi05.

 \dagger Additional information 1.

Coulomb excitationLevel SchemeIntensities: Relative $I_{(\gamma+ce)}$ 