Coulomb excitation 1973Bo24,1964Al28

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson and W. D. Kulp(a)	NDS 129, 1 (2015)	27-Jul-2015

1956Fa29: E(α)=4.4 MeV.
1959Al04: E(^{14}N)=16-26 MeV and E(^{20}Ne)=23 MeV.
1964Al28: E(^{14}N)=16.1 MeV, measured $\gamma(\theta)$.
1973Bo24: E(^{35}Cl)=60 MeV, measured excitation function, Ge(Li) detector.

^{87}Rb Levels

E(level)†	J$^\pi$‡	$T_{1/2}$	Comments
0	3/2$^-$		
402.6 *2*	5/2$^-$	0.078 ns *+11−60*	B(E2)↑=0.0056 *5* J$^\pi$: A_2=−0.148 *27* consistent only with J=5/2 (1964Al28). $T_{1/2}$: from B(E2)=0.0056 *5* and δ(402)=−0.24 *+9−12*, the level half-life is 0.080 ns *+11−60*; B(E2)↑: weighted average of 0.0054 *6* (1973Bo24), 0.0058 *12* (1956Fa29), and 0.0073 *25* (1959Al04, with ΔE_γ from a general comment).

† Nominal value from ^{87}Rb Adopted Levels.
‡ From ^{87}Rb Adopted Levels.

$\gamma(^{87}Rb)$

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	α†	Comments
402.6	5/2$^-$	402.58 *2*	100	0	3/2$^-$	M1+E2	−0.24 *+9−12*	0.00411 *18*	α(K)=0.00364 *16*; α(L)=0.000398 *19*; α(M)=6.6×10^{-5} *3* α(N)=7.4×10^{-6} *4*; α(O)=3.20×10^{-7} *13* δ: from A_2=−0.148 *27* from $\gamma(\theta)$ (1964Al28). 1964Al28 also report another δ=−1.70 *+35−40*, but rule it out because the resulting B(M1)(W.u.)=8x10^{-5} is considered to be unacceptably low.

† Additional information 1.

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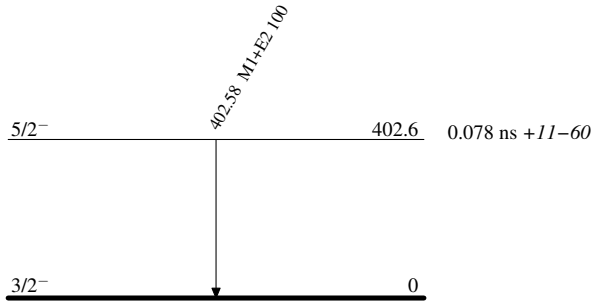
Level Scheme

Intensities: % photon branching from each level



$^{87}_{37}Rb_{50}$