

Coulomb excitation [1961An07](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty		NDS 205,1 (2025)	31-May-2025

Coulomb excitation was carried out using beams of ^{14}N , $E=12\text{-}53$ MeV, ^{20}Ne , $E=16\text{-}26$ MeV. Deduced $B(E2)\uparrow$ value with respect to $B(E2)\uparrow=0.42$ of 560 keV level in ^{76}Se , current value $B(E2)\uparrow=0.422$ 5 ([2024Si02](#)).

 ^{25}Mg Levels

E(level) [†]	J^π [†]	$T_{1/2}$ [‡]	Comments
0	$5/2^+$	stable	
585.042 22	$1/2^+$	4.59 ns	$B(E2)\uparrow=0.000060$
974.746 23	$3/2^+$	7.4 ps	$B(E2)\uparrow=0.00036$
1611.767 11	$7/2^+$	21.8 fs	$B(E2)\uparrow=0.011$

[†] From Adopted Levels.

[‡] Deduced from $B(E2)\uparrow$ and adopted γ -ray properties.

 $\gamma(^{25}\text{Mg})$

$E_i(\text{level})$	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult. [†]	δ [†]	α [‡]	Comments
585.042	$1/2^+$	585.028 30	100	0	$5/2^+$	E2			
974.746	$3/2^+$	389.710 35	84.8 15	585.042	$1/2^+$	M1+E2	+0.13 3		
		974.742 35	100.0 15	0	$5/2^+$	M1+E2	+0.34 12		
1611.767	$7/2^+$	1611.712 11	100	0	$5/2^+$	M1+E2	-0.207 13	1.05×10^{-4} 2	$\alpha(K)=5.59 \times 10^{-6}$ 8; $\alpha(L)=3.59 \times 10^{-7}$ 5; $\alpha(M)=1.331 \times 10^{-8}$ 19 $\alpha(\text{IPF})=9.94 \times 10^{-5}$ 14

[†] From Adopted Gammas.

[‡] [Additional information 1](#).

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Level Scheme

Intensities: Relative photon branching from each level

