

Coulomb excitation [1983Hu01,1977Ro27,1982Ro07](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 195,1 (2024)	19-Sep-2023

Additional information 1.

Coulomb excitation experiments: [1963Bj04](#) and [1963El06](#): p or d on enriched ($\approx 99\%$) target and measured in magnetic spectrograph; [1977PiZR](#), [1977Ro27](#), and [1982Ro07](#): 13 – 15.5 MeV α 's on enriched ($>99\%$) target and measured in magnetic spectrograph; and [1982Hu02](#) and [1983Hu01](#): 12.5-MeV α 's and 48-MeV ^{16}O on thick enriched (20.4%) target and measured γ 's in coincidence with scattered particles.

 ^{162}Er Levels

E(level) [†]	J^{π} [‡]	$T_{1/2}$	Comments
0	0^+		
102.1	2^+	1.37 ns 2	B(E2) \uparrow =5.01 3 B(E2) \uparrow : from 1977Ro27 . Other: 4.89 25 (1963Bj04). Additional information 2. $T_{1/2}$: computed by the evaluator from the listed B(E2) value and $\alpha=2.73$. In the calculation, an uncertainty of 1.4% in the α value was assumed. For other values of $T_{1/2}$, see the Adopted Levels data set.
329	4^+		B(E4) \uparrow =0.03 +6-3 B(E4) \uparrow : computed from E4 matrix element of 0.16 +16-26 (1977Ro27).
667	6^+		
900.7	2^+	1.25 ps 7	B(E2) \uparrow =0.164 8 B(E2) \uparrow : from 1982Ro07 (for 900.7 γ). $T_{1/2}$: computed by the evaluator from the listed B(E2) value and the adopted γ branching.
1171	2^+	1.2 ps 2	B(E2) \uparrow =0.042 7 B(E2) \uparrow : from 1982Ro07 . $T_{1/2}$: computed by the evaluator from the listed B(E2) value and the adopted γ branching. The possible contribution of multistep processes to the measured B(E2) value has been considered by 2002Ca35 , in ^{162}Tm ε decay (21.70 min), and been estimated to be small (<10%).
1357	3^-		B(E3) \uparrow =0.19 4 B(E3) \uparrow : from 1982Ro07 .
1429	2^+	0.43 ps 19	B(E2) \uparrow =0.018 8 B(E2) \uparrow : from 1982Ro07 . $T_{1/2}$: computed by the evaluator from the listed B(E2) value and the adopted γ branching.
≈ 1500	2^+		B(E2) \uparrow =0.011 11 B(E2) \uparrow : from 1982Ro07 . For a deduced $T_{1/2}$ value for this level, see the Adopted Levels data set.
1623	3^-		B(E3) \uparrow <0.072 B(E3) \uparrow : from 1982Ro07 .

[†] Nominal value from ^{162}Er Adopted Levels, except for the 1623 which is from Coulomb excitation.

[‡] From ^{162}Er Adopted Levels; see ^{162}Er Adopted Levels for the band assignments.

 $\gamma(^{162}\text{Er})$

E_{γ} [†]	$E_i(\text{level})$	J_i^{π}	E_f	J_f^{π}
798.6	900.7	2^+	102.1	2^+
900.7	900.7	2^+	0	0^+

[†] Nominal value from ^{162}Er Adopted γ radiations.

Coulomb excitation 1983Hu01,1977Ro27,1982Ro07Level Scheme