

¹⁶⁷Er IT decay (2.269 s) 1968Fu09,1986Ne05

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 191,1 (2023)	22-Aug-2023

Parent: ¹⁶⁷Er: E=207.801 5; J^π=1/2⁻; T_{1/2}=2.269 s 6; %IT decay=100

Identification: delayed decay of 207.8 level in ¹⁶⁷Er observed with both ¹⁶⁷Ho (1957Mi01) and ¹⁶⁷Tm (1962Ha24) sources.

Others:

1976Ga33: measured E_γ, γ(t). Deduced T_{1/2}.

1972Jo05,1970Jo16: measured γ(t) with NaI(Tl) at National Bureau of Standard (now NIST). Deduced T_{1/2}.

1967Ab08: measured γ(t) wit NaI(Tl). Deduced T_{1/2}.

1966Pr13: measured σ.

1963Al32: measured γ(t) and σ. Deduced T_{1/2}.

1962Ha24: measured E_γ, γ(t).

1957Ha12: measured γ(t).

1957Mi01: measured half-life and K/L ratio for the 208-keV isomer in ¹⁶⁷Er from ¹⁶⁷Tm ε decay.

1949De16: measured γ(t).

¹⁶⁷Er Levels

E(level)	J ^π †	T _{1/2}	Comments
0.0	7/2 ⁺	stable	ν7/2[633] bandhead.
207.801 5	1/2 ⁻	2.269 s 6	ν1/2[521] bandhead. T _{1/2} : from 1986Ne05. Other values: 2.27 s 5 (1963Al32), 2.28 s 3 (1970Jo16,1972Jo05), 2.23 s 12 (1976Ga33), 2.5 s (1949De16), 2.5 s 1 (1957Ha12), 2.5 s (1966Pr13), 2.5 s 1 (1967Ab08).

† From the Adopted Levels.

γ(¹⁶⁷Er)

I(γ+ce) normalization: From I(γ+ce)(207.8γ)=100%.

E _γ †	I _γ ‡	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.†	α [#]	I _(γ+ce) ‡	Comments
207.801 5	42.4 7	207.801	1/2 ⁻	0.0	7/2 ⁺	E3	1.380	100	ce(K)/(γ+ce)=0.200 3; ce(L)/(γ+ce)=0.289 4; ce(M)/(γ+ce)=0.0722 11 ce(N)/(γ+ce)=0.0165 3; ce(O)/(γ+ce)=0.00196 4; ce(P)/(γ+ce)=1.154×10 ⁻⁵ 19 α(K)=0.476 7; α(L)=0.689 10; α(M)=0.1718 24 α(N)=0.0392 6; α(O)=0.00466 7; α(P)=2.75×10 ⁻⁵ 4 I _γ : deduced from I(γ+ce) and α, allowing 1.4% uncertainty in α.

† From the Adopted Gammas.

‡ Absolute intensity per 100 decays.

Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

 ^{167}Er IT decay (2.269 s) 1968Fu09,1986Ne05Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=100

