

¹³²Te IT decay (3.70 μs) 1979Si18,2001Ge07

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov, A. A. Rodionov and S. Sakharov, Balraj Singh		NDS 104, 497 (2005)	10-Feb-2005

Parent: ¹³²Te: E=2722.4; J^π=(10⁺); T_{1/2}=3.70 μs 9; %IT decay=100.0

1979Si18: measured E_γ, I_γ, γγ(t).

2001Ge07: measured delayed E_γ, I_γ, ce, (fragment)γ, γγ, (ce)γ coin.

Both isomers (3.70-μs and 28.1-μs) are fed directly in fission.

¹³²Te Levels

E(level)	J ^π †	T _{1/2}	Comments
0.0	0 ⁺		
974.00 10	2 ⁺		
1670.91 15	4 ⁺		
1774.31 18	6 ⁺	145 ns 8	T _{1/2} : from 1973Mc09.
1924.99 20	(7) ⁻	28.1 μs 15	T _{1/2} : from γ(t) and βγ(t) (1979Si18).
2700.53 20	(8 ⁺)		
2722.8 8	(10 ⁺)	3.70 μs 9	T _{1/2} : from γ(t) (2001Ge07). Other: 3.9 μs 3 (1979Si18).

† From Adopted Levels.

γ(¹³²Te)

E _γ ‡	I _γ †#	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	a [@]	I _(γ+ce) †#	Comments
22 1		2722.8	(10 ⁺)	2700.53	(8 ⁺)	[E2]			E _γ : from 2001Ge07, based on ce data where L- and M- lines were seen in coin with 775.6γ and 926.2γ.
103.4 1	39.7	1774.31	6 ⁺	1670.91	4 ⁺	E2	1.52	100	ce(K)/(γ+ce)=0.425 13; ce(L)/(γ+ce)=0.142 5; ce(M)/(γ+ce)=0.0295 9; ce(N)/(γ+ce)=0.00658 20
150.7 1		1924.99	(7) ⁻	1774.31	6 ⁺	E1	0.0622		ce(K)/(γ+ce)=0.0506 16; ce(L)/(γ+ce)=0.00637 20; ce(M)/(γ+ce)=0.00126 4; ce(N)/(γ+ce)=0.00029 1
696.9 1	99.7	1670.91	4 ⁺	974.00	2 ⁺	E2	0.00341	100	α=0.00341; ce(K)/(γ+ce)=0.00289 9; ce(L)/(γ+ce)=0.00038 1
775.6 2	13 3	2700.53	(8 ⁺)	1924.99	(7) ⁻				I _γ : from 1979Si18.
798.0	2 1	2722.8	(10 ⁺)	1924.99	(7) ⁻	[E3]			I _γ : from 2001Ge07.
926.2 1	13 3	2700.53	(8 ⁺)	1774.31	6 ⁺				I _γ : from 1979Si18.
974.0 1	99.8	974.00	2 ⁺	0.0	0 ⁺	E2	0.00154	100	α=0.00154; ce(K)/(γ+ce)=0.00132 4; ce(L)/(γ+ce)=0.00017 1

† From level scheme, unless otherwise stated.

‡ Unweighted average of 1979Si18 and 2001Ge07. Uncertainties are assumed by the evaluators.

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.

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
 %IT=100.0

Legend

- $I_{\gamma} < 2\% \times I_{\gamma}^{\text{max}}$
- $I_{\gamma} < 10\% \times I_{\gamma}^{\text{max}}$
- $I_{\gamma} > 10\% \times I_{\gamma}^{\text{max}}$
- Coincidence

