^{134}Nd IT decay 1972Pa26

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. A. Sonzogni	NDS 103, 1 (2004)	31-Jul-2004

Parent: ^{134}Nd: E=2293.0 *4*; $J^\pi=(8)^-$; $T_{1/2}$=410 μs *30*; %IT decay=100.0
From ^{118}Sn(^{20}Ne,4n) E=82-100 MeV. Other: 1969WaZX.

^{134}Nd Levels

The level scheme is based on $\gamma\gamma$-coincidence data and systematics.

E(level)	J^π	$T_{1/2}$	Comments
0.0	0^+	8.5 min *15*	
294.2 *3*	2^+		
788.9 *5*	4^+		
1420.0 *7*	6^+		
2127.5 *8*	8^+		
2294.0 *8*	$(8)^-$	410 μs *30*	$T_{1/2}$: from 1972Pa26. Other: 500 μs *100* (1969WaZX).

$\gamma(^{134}Nd)$

Iγ normalization: From level scheme.

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[#]	$I_{(\gamma+ce)}$[‡]	Comments
166.5 *3*	90[†] *7*	2294.0	$(8)^-$	2127.5	8^+	E1	0.0646		α(K)=0.0550 *17*; α(L)=0.00754 *23*; α(M)=0.00157 *5*; α(N+..)=0.00044 *1* B(E1)(W.u.)=1.20×10^{-10} *15* Mult.: α(exp)≤0.15.
294.2 *3*		294.2	2^+	0.0	0^+	E2	0.0560	100	ce(K)/(γ+ce)=0.0418 *13*; ce(L)/(γ+ce)=0.0088 *3*; ce(M)/(γ+ce)=0.00191 *6*; ce(N)/(γ+ce)=0.00051 *2*
494.7 *4*		788.9	4^+	294.2	2^+	E2	0.0121	100	ce(K)/(γ+ce)=0.0099 *3*; ce(L)/(γ+ce)=0.00163 *5*; ce(M)/(γ+ce)=0.00035 *1*
631.1 *4*		1420.0	6^+	788.9	4^+	E2	0.00650	100	α=0.00650; ce(K)/(γ+ce)=0.00537 *17*; ce(L)/(γ+ce)=0.00082 *3*
707.5 *4*		2127.5	8^+	1420.0	6^+	E2	0.00492	100	α=0.00492; ce(K)/(γ+ce)=0.00409 *13*; ce(L)/(γ+ce)=0.00060 *2*
874	6.3[†] *19*	2294.0	$(8)^-$	1420.0	6^+	[M2]	0.0123		α(K)=0.0104 *4*; α(L)=0.00146 *5* B(M2)(W.u.)=3.6×10^{-7} *11*

[†] Iγ(874)/Iγ(166.5)=0.07 *2* (1972Pa26).
[‡] 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 multipolarities, and mixing ratios, unless otherwise specified.

^{134}Nd IT decay 1972Pa26

Decay Scheme

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

%IT=100.0

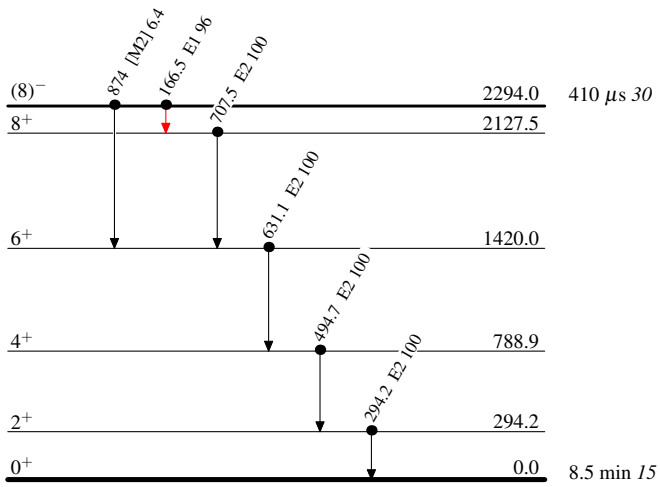
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

Coincidence



$^{134}_{60}Nd_{74}$