^{122}Te(α,4nγ) 1983Ku04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. Tamura	NDS 108, 455 (2007)	30-Sep-2006

The level scheme is that proposed by 1983Ku04 on the basis of $\gamma\gamma$-coincidence, excitation functions and transition intensity balance.
1983Ku04: ^{122}Te(α,4nγ) E(α)=49-55 MeV; semi γ, $\gamma\gamma$-coincidence, $\gamma(\theta)$, excitation functions.
Others: ^{115}In(^{11}B,4nγ) (1967Cl02); ^{122}Te(α,4nγ) (1965Mo10).

^{122}Xe Levels

E(level)[†]	J$^\pi$[‡]	Comments
0.0[#]	0^+	
331.27[#] *14*	2^+	
828.34[#] *20*	4^+	
843.27 *25*	(2^+)	E(level): this level is assumed as base state of γ-band in other in-beam study.
1466.66[#] *24*	6^+	
2217.3[#] *3*	8^+	
3039.3[#] *3*	10^+	
3819.4 *4*	(12^+)	E(level): this level is assumed as base state of S-band in other in-beam study.

[†] E(levels) are obtained by energy sums of E(γ's) from 1983Ku04.
[‡] Spin and parity values are those proposed in Adopted Levels.
[#] Band(A): g.s. band.

γ(^{122}Xe)

E$_\gamma$	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[‡]	Comments
331.27 *14*	100 *4*	331.27	2^+	0.0	0^+	E2	Mult.: A_2=+0.203 13, A_4=−0.041 21.
497.07 *13*	80.5 *30*	828.34	4^+	331.27	2^+	E2	Mult.: A_2=+0.228 13, A_4=−0.057 22.
512.0 *2*		843.27	(2^+)	331.27	2^+		
638.32 *13*	67.0 *26*	1466.66	6^+	828.34	4^+	E2	Mult.: A_2=+0.271 11, A_4=−0.080 18.
750.59 *13*	38.8 *17*	2217.3	8^+	1466.66	6^+	E2	Mult.: A_2=+0.294 16, A_4=−0.03 3.
780.17 *17*	10.0 *7*	3819.4	(12^+)	3039.3	10^+	Q	Mult.: A_2=+0.33 4, A_4=−0.03 9.
822.00 *13*	16.2 *10*	3039.3	10^+	2217.3	8^+	E2	Mult.: A_2=+0.31 3, A_4=−0.06 5.

[†] Relative to I(331.27γ)=100 at E(α)=55 MeV and θ=90° (1983Ku04).
[‡] Multipolarities were deduced from $A_2\approx$+0.3 and $A_4\approx$−0.05 in $\gamma(\theta)$ (1983Ku04); RUL from T(level) (Adopted Levels), except for 780γ.

^{122}Te(α,4nγ) 1983Ku04

Level Scheme

Intensities: Relative I_γ

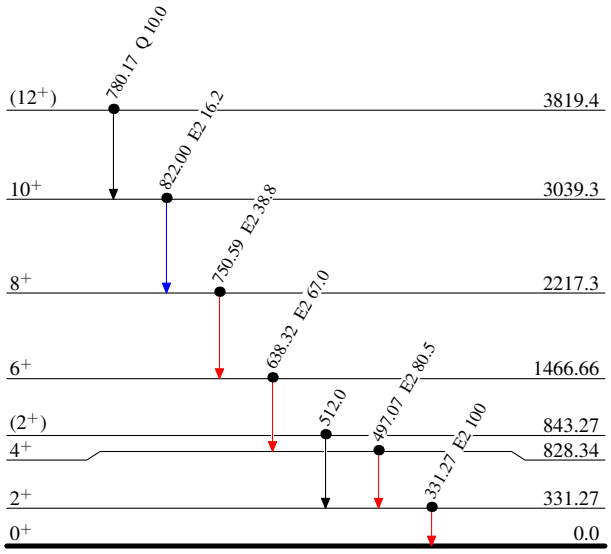
Legend

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

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

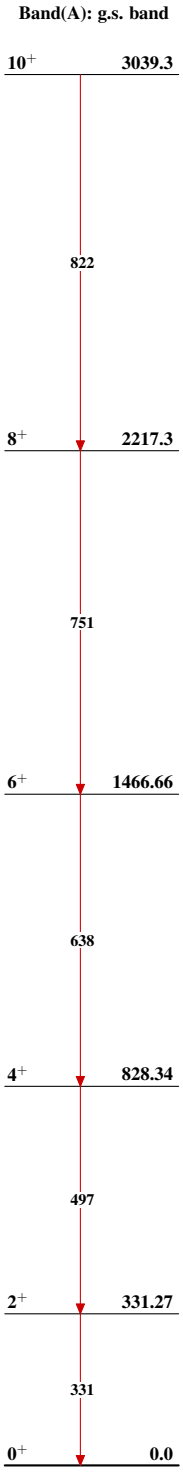
$I_\gamma > 10\% \times I_\gamma^{max}$

Coincidence



$^{122}_{54}Xe_{68}$

^{122}Te(α,4nγ) 1983Ku04



$^{122}_{54}Xe_{68}$