^{232}Th(d,pnγ) 1993Ac02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. Browne	NDS 107, 2579 (2006)	1-Nov-2004

E(p)=23, 28 MeV. Measured γ rays and conversion electrons in coincidence with conversion electrons from the 4^+ to 2^+ transition of the g.s. rotational band. Used four Compton-suppressed germanium detectors for γ rays and a magnetic orange spectrometer for conversion electrons.

^{232}Th Levels

E(level)†	J$^\pi$	E(level)†	J$^\pi$	E(level)†	J$^\pi$
0.0‡	0^+	557‡ *1*	8^+	884# *1*	5^-
49.4‡ *5*	2^+	714.3# *7*	1^-	1043# *1*	7^-
162.3‡ *7*	4^+	774# *1*	3^-	1137‡ *1*	12^+
333.5‡ *8*	6^+	827‡ *1*	10^+	1250# *1*	9^-
				1499# *1*	11^-

† Deduced by evaluators from a least-squares fit to γ-ray energies using $\Delta E=0.5$ keV for all γ rays.
‡ Band(A): $K^\pi=0^+$ g.s. rotational band.
# Band(B): $K^\pi=0^-$ Octupole vibrational band.

γ(^{232}Th)

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
49.4		49.4	2^+	0.0	0^+	249.2	1.0	1499	11^-	1250	9^-
60.1		774	3^-	714.3	1^-	269.7		827	10^+	557	8^+
109.7	1.0	884	5^-	774	3^-	310.0		1137	12^+	827	10^+
112.8		162.3	4^+	49.4	2^+	362†	0.36 *10*	1499	11^-	1137	12^+
159.1	1.0	1043	7^-	884	5^-	422.7	1.54 *23*	1250	9^-	827	10^+
171.2		333.5	6^+	162.3	4^+	486.0	5.2 *10*	1043	7^-	557	8^+
206.6	1.0	1250	9^-	1043	7^-	550.4	21 *5*	884	5^-	333.5	6^+
223.6		557	8^+	333.5	6^+	(665.0)		714.3	1^-	49.4	2^+

† Placement of transition in the level scheme is uncertain.

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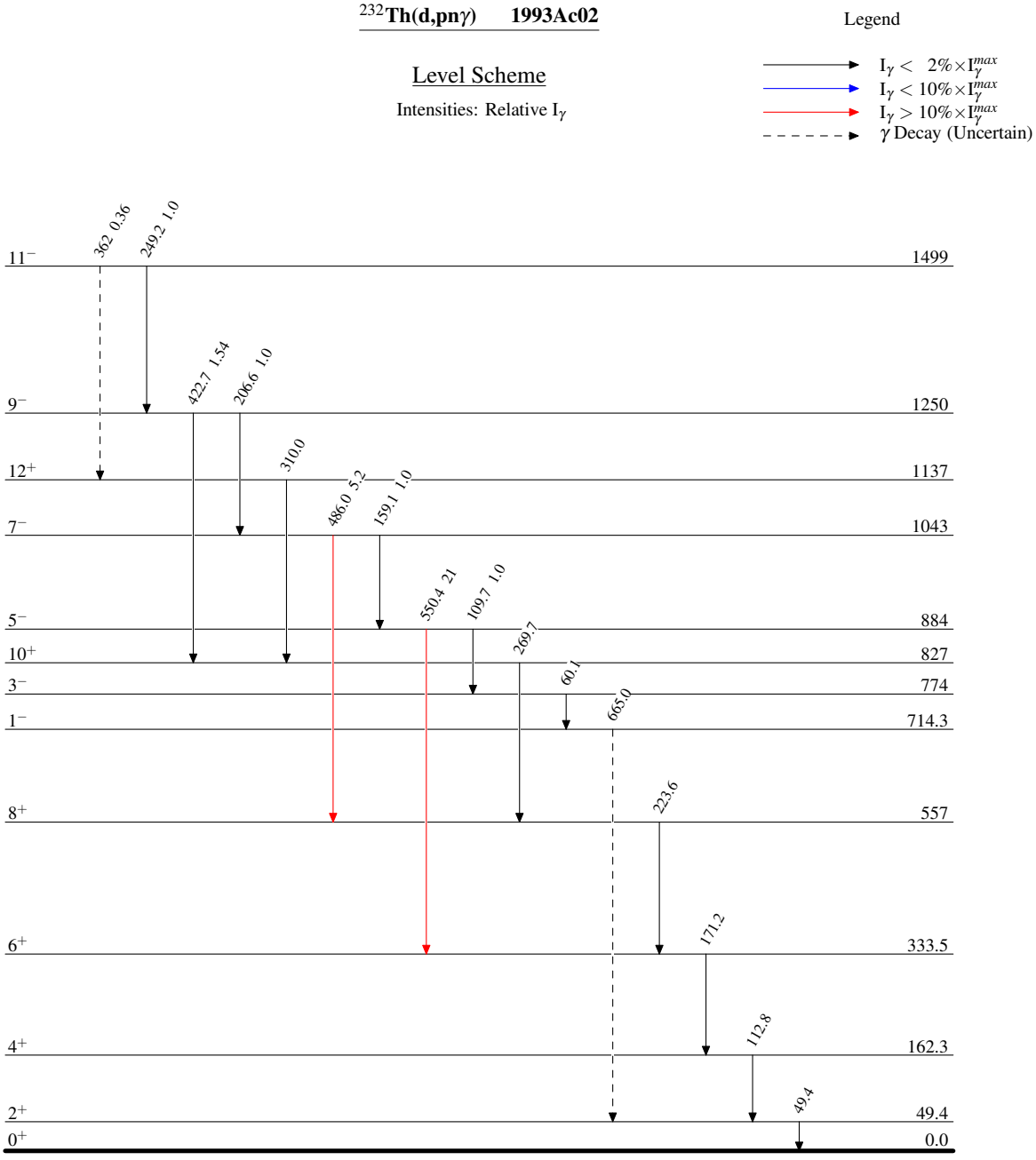
Level Scheme

Intensities: Relative I_γ



$^{232}_{90}Th_{142}$

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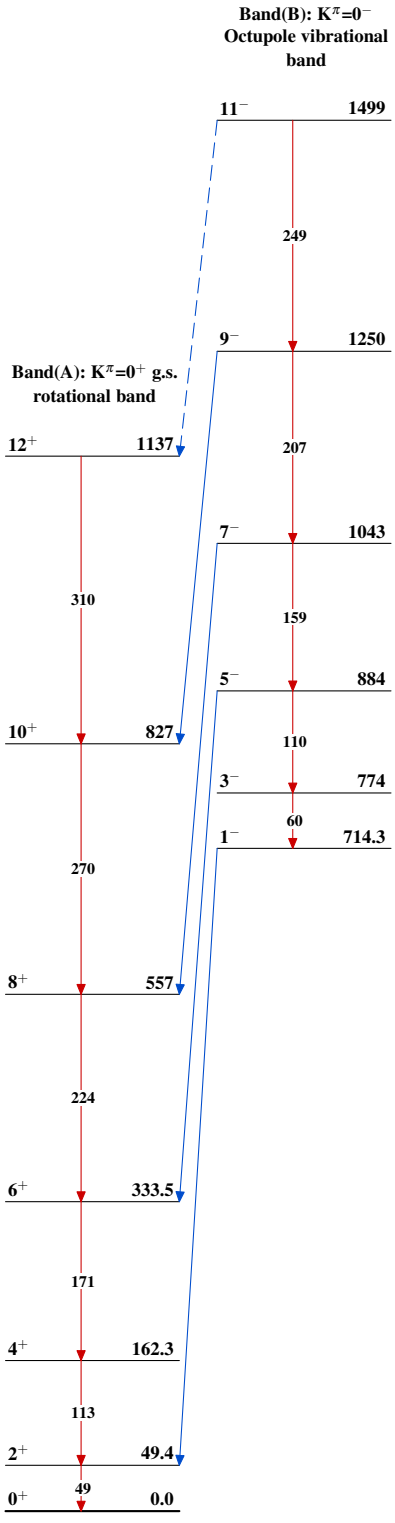

$^{232}_{90}Th_{142}$