^{205}Tl(^{9}Be,5nγ) 1987Dr01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Chen # and F. G. Kondev	NDS 126, 373 (2015)	30-Sep-2013

1987Dr01: E=55 MeV ^{9}Be pulsed beam was produced from the ANU 14 UD Pelletron accelerator. Target is 13 mg/cm^2 ^{205}Tl (enriched to 96.4%). γ-rays were detected with three Ge detectors. Measured Eγ, $\gamma\gamma$-coin, γ(t). Deduced levels, $T_{1/2}$.

^{209}At Levels

E(level)†	J$^\pi$‡	$T_{1/2}$	Comments
0	9/2$^-$		
577.01 *19*	11/2$^-$		
725.09 *19*	13/2$^-$		
1321.6 *3*	17/2$^-$		
1427.7 *6*	21/2$^-$		
1851.8 *6*	23/2$^-$		configuration=$\pi(1h^2_{9/2},2f^1_{7/2})^{+3}$.
2429.2 *7*	29/2$^+$	0.933 μs *11*	configuration=$\pi(1h^2_{9/2},1i^1_{13/2})^{+3}$. $T_{1/2}$: from 424γ(t), 597γ(t) and 725γ(t) (1987Dr01).

† From a least-squares fit to γ-ray energies.
‡ From 1987Dr01.

γ(^{209}At)

E$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
106.1 *5*	1427.7	21/2$^-$	1321.6	17/2$^-$
148.0 *5*	725.09	13/2$^-$	577.01	11/2$^-$
424.1 *2*	1851.8	23/2$^-$	1427.7	21/2$^-$
577.0 *2*	577.01	11/2$^-$	0	9/2$^-$
577.4 *2*	2429.2	29/2$^+$	1851.8	23/2$^-$
596.5 *2*	1321.6	17/2$^-$	725.09	13/2$^-$
725.1 *2*	725.09	13/2$^-$	0	9/2$^-$

† The evaluators have assigned uncertainties of 0.2 keV for strong γ-rays and 0.5 keV for weak γ-rays based on the γ-ray spectrum in 1987Dr01.

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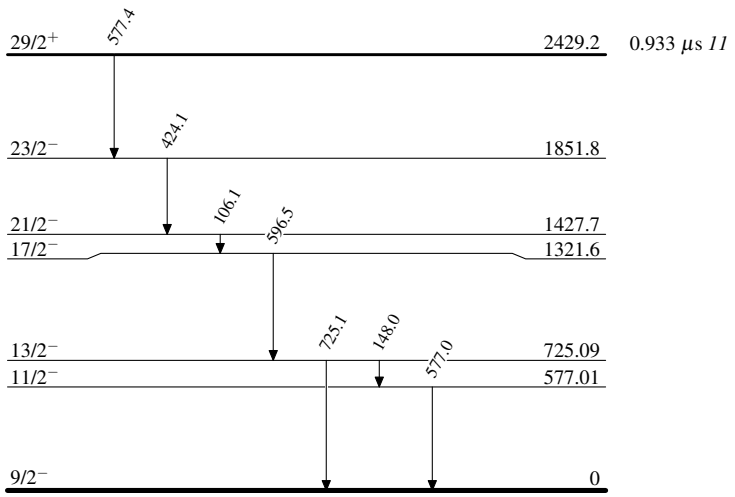
Level Scheme



$^{209}_{85}At_{124}$