^{205}Rn ε decay   1975ZeZY

	Type	Author	History Citation	Literature Cutoff Date
	Full Evaluation	F. G. Kondev	NDS 166, 1 (2020)	20-Apr-2020

Parent: ^{205}Rn: E=0.0; J^π=5/2$^-$; $T_{1/2}$=170 s 4; Q(ε)=5262 16; %ε+%β^+ decay=75.4 9

1975ZeZY: a mass separated source produced after the bombardment of a thorium target with 660 MeV protons; Detectors: Ge(Li) for photons and Si(Li) for electrons; Measured: Eγ, Iγ, Ice(K), Ice(L).

Others: 1973KeZP.

^{205}At Levels

E(level)†	$J^{\pi\ddagger}$	$T_{1/2}$	Comments
0	9/2$^-$	26.9 min 8	J^π,$T_{1/2}$: From Adopted Levels.
265.05 22	(7/2)$^-$		
620.08 24	(5/2$^-$,7/2)		
729.58 24	(5/2$^-$,7/2)		
940.1? 4	(3/2$^-$,5/2,7/2)		

† From a least-squares fit to Eγ.

‡ From the Adopted Levels.

γ(^{205}At)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J^π_i	E$_f$	J^π_f	Mult.	Comments
264.9 3	100	265.05	(7/2)$^-$	0	9/2$^-$	(E2+M1)	Mult.: K/L(exp)=2.1 (1975ZeZY) implies a mixed E2+M1 with δ≈2.3.
354.9 3	3.7	620.08	(5/2$^-$,7/2)	265.05	(7/2)$^-$		
464.5 3	25	729.58	(5/2$^-$,7/2)	265.05	(7/2)$^-$		
620.2 3	25	620.08	(5/2$^-$,7/2)	0	9/2$^-$		
675.0‡ 3	20	940.1?	(3/2$^-$,5/2,7/2)	265.05	(7/2)$^-$		
729.6 3	20	729.58	(5/2$^-$,7/2)	0	9/2$^-$		

† From 1975ZeZY. ΔEγ =0.30 keV is assumed by the evaluator.

‡ Placement of transition in the level scheme is uncertain.

^{205}**Rn** ε **decay   1975ZeZY**

Legend

Decay Scheme

Intensities: Relative I$_\gamma$

I$_\gamma$ < 2%×I$_\gamma^{max}$
I$_\gamma$ < 10%×I$_\gamma^{max}$
I$_\gamma$ > 10%×I$_\gamma^{max}$
γ Decay (Uncertain)

5/2$^-$ 0.0   170 s _4_

%ε + %β^+=75.4   Q$_\varepsilon$=5262 _16_

$^{205}_{86}$Rn$_{119}$

(3/2$^-$,5/2,7/2)   940.1

(5/2$^-$,7/2)   729.58

(5/2$^-$,7/2)   620.08

(7/2)$^-$ 265.05

9/2$^-$ 0   26.9 min _8_

$^{205}_{85}$At$_{120}$

675.0 _20_
729.6 _20_
464.5 _25_
620.2 _25_
354.9 _3.7_
264.9 (E2+M1) 100