

$^{197}\text{Au}(^{207}\text{Pb},\text{X}\gamma)$ 2019Ro12

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 196,342 (2024)	1-Sep-2023

2019Ro12: ^{207}Pb beam with $E(^{207}\text{Pb})=1430$ MeV was produced from the ATLAS accelerator at ANL. Target: ≈ 50 mg/cm² ^{197}Au . γ rays were detected with the Gammasphere array of 100 HPGe detectors. Measured: $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin, $\gamma\gamma(t)$. Deduced: level scheme, $T_{1/2}$.

 ^{202}Pb Levels

E(level) [†]	J^{π} [†]	$T_{1/2}$ [‡]	Comments
2170	9 ⁻	3.54 h 2	$T_{1/2}$: From Adopted Levels.
3058	11 ⁻		
3238	12 ⁺	23.5 ns 6	$T_{1/2}$: From 853 γ -888 $\gamma(\Delta t)$ in 2019Ro12.
4091	14 ⁺		
4091+x	16 ⁺	93 ns 4	$T_{1/2}$: From 797 γ -853 $\gamma(\Delta t)$ and 354 γ -853 $\gamma(\Delta t)$ in 2019Ro12.
4445+x	16 ⁺		
5242+x	17 ⁻		
5242+y	19 ⁻	113 ns 6	$T_{1/2}$: From 797 γ -(689 γ +841 γ)(Δt) and 354 γ -(689 γ +841 γ)(Δt) in 2019Ro12.
5931+y	(20 ⁻)		
6083+y	21 ⁻		

[†] From 2019Ro12.

[‡] From $\gamma\gamma(t)$ in 2019Ro12, unless otherwise noted.

 $\gamma(^{202}\text{Pb})$

E_{γ} [†]	$E_i(\text{level})$	J^{π}_i	E_f	J^{π}_f
180	3238	12 ⁺	3058	11 ⁻
354	4445+x	16 ⁺	4091+x	16 ⁺
689	5931+y	(20 ⁻)	5242+y	19 ⁻
797	5242+x	17 ⁻	4445+x	16 ⁺
841	6083+y	21 ⁻	5242+x	17 ⁻
853	4091	14 ⁺	3238	12 ⁺
888	3058	11 ⁻	2170	9 ⁻
1151	5242+x	17 ⁻	4091+x	16 ⁺

[†] From 2019Ro12.

$^{197}\text{Au}(^{207}\text{Pb},\text{X}\gamma)$ **2019Ro12**

Level Scheme

