

$^{197}\text{Au}(^{207}\text{Pb},\text{X}\gamma)$ **2019Ro12,2020Wa24**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 187,355 (2023)	20-Sep-2022

2019Ro12,2020Wa24: E=1430–MeV ^{207}Pb beam was produced from the ATLAS accelerator at ANL. Target was ≈ 50 mg/cm² ^{197}Au . γ rays were detected with the Gammasphere array comprising of 100 HPGe detectors. Measured: E_γ , I_γ , $\gamma\gamma(t)$. Deduced: level scheme, $T_{1/2}$.

^{201}Pb Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
629.1 3	13/2 ⁺	60.8 s 18	Additional information 1. E(level), J^π , $T_{1/2}$: From Adopted Levels.
1542.1 9	17/2 ⁺		
1546.1 9	15/2 ⁺		
1896.1 10	19/2 ⁺	3.3 ns 3	$T_{1/2}$: From $\gamma\gamma(\Delta t)$ and centroid-shift analysis in 2020Wa24 .
2497.1 15	21/2 ⁻		
2719.1 18	25/2 ⁻	63 ns 3	$T_{1/2}$: From Adopted Levels.
2719.1+x	29/2 ⁻	508 ns 5	Additional information 2. $T_{1/2}$: From Adopted Levels.
3546.0+x 10	33/2 ⁻		
3833.0+x 15	35/2 ⁻		
4561.0+x 18	37/2 ⁺		
4641.0+x 20	41/2 ⁺	52 ns 2	$T_{1/2}$: From $\gamma\gamma(\Delta t)$ in 2019Ro12 , using 902 γ -(728 γ ,827 γ) and 447 γ -(728 γ ,827 γ). configuration: Dominant ν ($p_{3/2}^{-1} f_{5/2}^{-1} i_{13/2}^{-3}$).
5088.0+x 23	43/2		
5990.0+x 25	45/2		

[†] From a least-squares fit to E_γ , unless otherwise stated.

[‡] From [2019Ro12](#), based on previous studies ([1981He07](#),[1988Ro08](#), [1995Ba70](#)), shell-model and systematics.

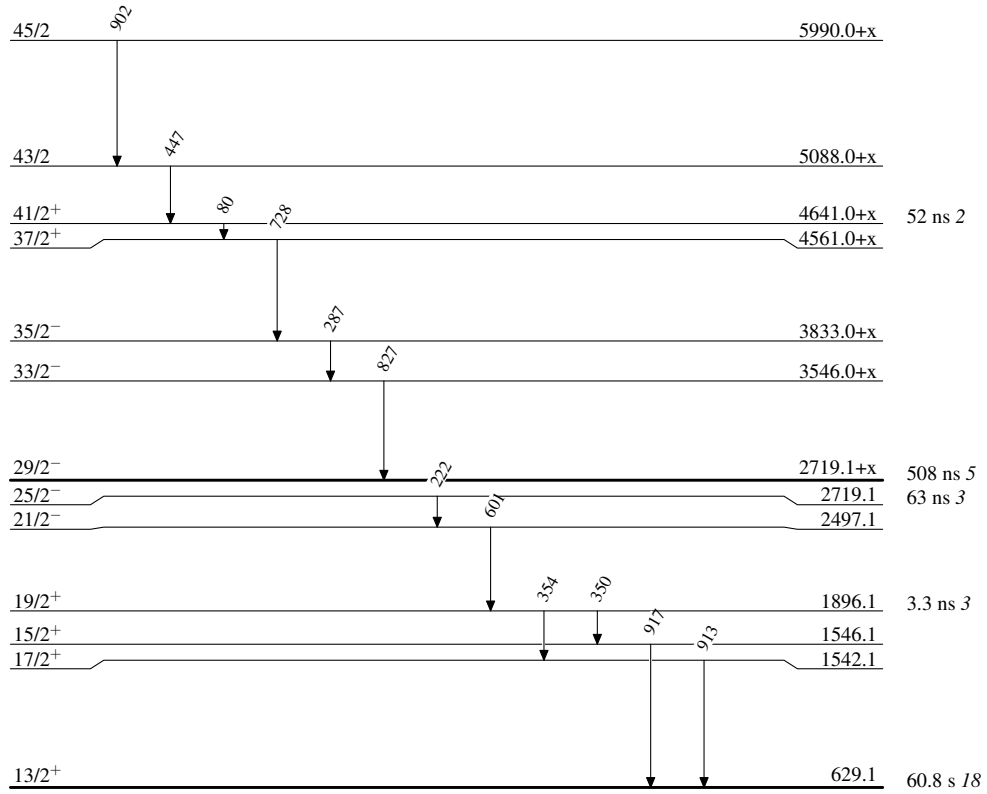
$\gamma(^{201}\text{Pb})$

E_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π
80 1	4641.0+x	41/2 ⁺	4561.0+x	37/2 ⁺	601 1	2497.1	21/2 ⁻	1896.1	19/2 ⁺
222 1	2719.1	25/2 ⁻	2497.1	21/2 ⁻	728 1	4561.0+x	37/2 ⁺	3833.0+x	35/2 ⁻
287 1	3833.0+x	35/2 ⁻	3546.0+x	33/2 ⁻	827 1	3546.0+x	33/2 ⁻	2719.1+x	29/2 ⁻
350 1	1896.1	19/2 ⁺	1546.1	15/2 ⁺	902 1	5990.0+x	45/2	5088.0+x	43/2
354 1	1896.1	19/2 ⁺	1542.1	17/2 ⁺	913 1	1542.1	17/2 ⁺	629.1	13/2 ⁺
447 1	5088.0+x	43/2	4641.0+x	41/2 ⁺	917 1	1546.1	15/2 ⁺	629.1	13/2 ⁺

[†] From [2019Ro12](#). $\Delta E_\gamma=1$ keV were estimated by the evaluator.

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Level Scheme

 $^{201}_{82}\text{Pb}_{119}$