

$^{197}\text{Au}(^{209}\text{Bi}, \text{X}\gamma)$ 2015Ta25

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh		NDS 177, 1 (2021)	3-Sep-2021

2015Ta25: $E(^{209}\text{Bi})=1450$ MeV. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$ using Gammasphere array of 100 Compton-suppressed HPGe detectors at ATLAS-ANL facility. ^{194}Pt populated through 1-proton and 2-neutron transfer reaction on ^{197}Au target with ^{209}Bi beam. The $\gamma\gamma$ coincident data were sorted in various histograms to extract timing information and DCO ratios. Deduced high-spin levels, bands, isomer half-lives. Comparison with cranking model calculations.

In reference 20, authors stated that details of the gamma-ray data from this experiment will be presented elsewhere, but no further paper seems to have appeared as of September 2021.

 ^{194}Pt Levels

$E(\text{level})^\dagger$	J^π	$T_{1/2}$	Comments
0.0 ‡	0 $^+$		
328.0 ‡ 10	2 $^+$		
811.0 ‡ 15	4 $^+$		
1374.0 $^\#$ 17	5 $^-$		
1411.0 ‡ 17	6 $^+$		
1485.0 $^\#$ 19	7 $^-$	3.45 ns 12	$T_{1/2}$: from the Adopted Levels.
2047.0 $^\#$ 20	9 $^-$		
2099.0 ‡ 19	8 $^+$		
2438.0 ‡ 20	10 $^+$		
2451.0 $@$ 22	12 $^+$	6.6 ns 6	$T_{1/2}$: listed in Fig. 1 of 2015Ta25, with no data shown. Other: 5.9 ns 8 in the Adopted Levels.
2700.0 $^\#$ 22	11 $^-$		
2842.0 $@$ 24	(14 $^+$)		
3500 $@$ 3	(16 $^+$)		
3755 $@$ 3	(18 $^+$)		
3938 $@$ 3	(20 $^+$)		
4530 $@$ 4	(22 $^+$)		
4542 $@$ 4	(22 $^+$)		
4897 $@$ 4	(24 $^+$)		
5337 $@$ 4	(26 $^+$)		

† From $E\gamma$ data, assuming 1 keV uncertainty for each γ ray.

‡ Band(A): Yrast cascade.

$^\#$ Band(B): Band based on 5 $^-$.

$@$ Band(C): γ cascade based on 12 $^+$.

 $\gamma(^{194}\text{Pt})$

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
(13)	2451.0	12 $^+$	2438.0	10 $^+$	355	4897	(24 $^+$)	4542	(22 $^+$)
111	1485.0	7 $^-$	1374.0	5 $^-$	391	2438.0	10 $^+$	2047.0	9 $^-$
183	3938	(20 $^+$)	3755	(18 $^+$)	391	2842.0	(14 $^+$)	2451.0	12 $^+$
255.0	3755	(18 $^+$)	3500	(16 $^+$)	440	5337	(26 $^+$)	4897	(24 $^+$)
328	328.0	2 $^+$	0.0	0 $^+$	483	811.0	4 $^+$	328.0	2 $^+$
339	2438.0	10 $^+$	2099.0	8 $^+$	562	2047.0	9 $^-$	1485.0	7 $^-$

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¹⁹⁷Au(²⁰⁹Bi,Xγ) **2015Ta25** (continued)

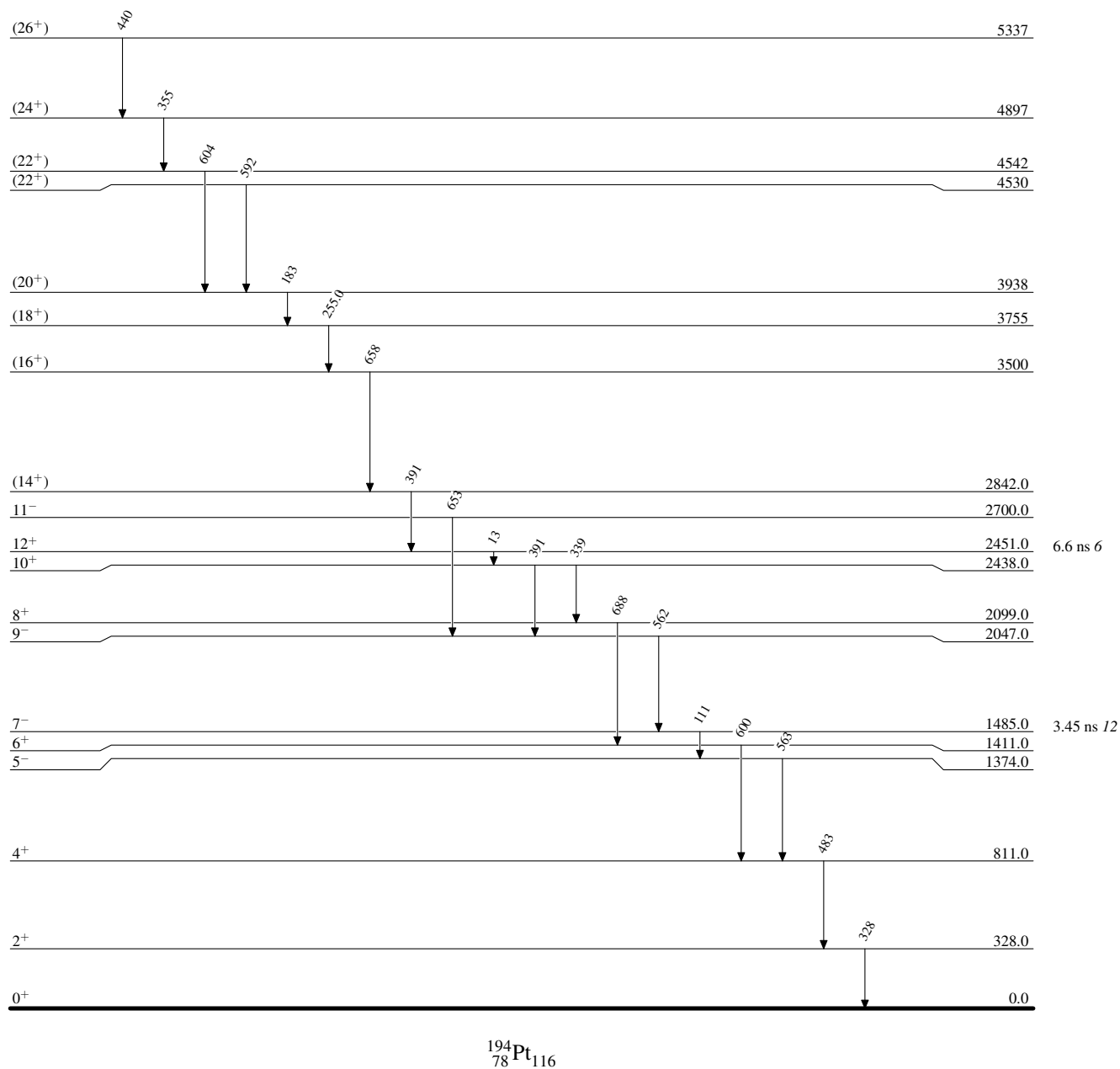
γ(¹⁹⁴Pt) (continued)

<u>E_γ</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>E_γ</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>
563	1374.0	5 ⁻	811.0	4 ⁺	653	2700.0	11 ⁻	2047.0	9 ⁻
592	4530	(22 ⁺)	3938	(20 ⁺)	658	3500	(16 ⁺)	2842.0	(14 ⁺)
600	1411.0	6 ⁺	811.0	4 ⁺	688	2099.0	8 ⁺	1411.0	6 ⁺
604	4542	(22 ⁺)	3938	(20 ⁺)					

Legend

Level Scheme

-----► γ Decay (Uncertain)



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