

$^{198}\text{Pt}(n,\gamma)$ E=2,24 keV:arc 1983Ca04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 108, 79 (2007)	15-Oct-2006

1983Ca04: average resonance capture measured at E(n)=2 keV and 24 keV, three-crystal pair spectrometer.

Others:

1990Pi08: E(n)=fast, measured delayed x rays.

1968Sa13: E(n)=95.8 eV, time of flight.

[Additional information 1.](#)

 ^{199}Pt Levels

E(level) [†]	J^{π} [‡]	Comments
0	5/2 ⁻	E(level): questionable observation at 24 keV res only.
35.5	3/2 ⁻	[I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV]=1.
42.0	1/2 ⁻ , 3/2 ⁻	[I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV]=1.44.
88.1	3/2 ⁻	[I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV]=2.44.
132.5	1/2 ⁻ , 3/2 ⁻	J^{π} : 1/2 ⁻ In 'Adopted Levels'. [I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV]=0.73.
383.5	1/2 ⁻ , 3/2 ⁻	J^{π} : 3/2 ⁻ In 'Adopted Levels'. [I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV]=1.30.
474.6	1/2 ⁻ , 3/2 ⁻	J^{π} : 3/2 ⁻ In 'Adopted Levels'. [I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV]=2.81.
647.1	5/2, (1/2 ⁺ , 3/2 ⁺)	E(level): observed only at 24 keV res. J^{π} : (1/2 ⁻ , 3/2 ⁻) In 'Adopted Levels'. [I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV] $\approx$ 0.66.
887.9	1/2, 3/2	[I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV]=0.54.
909.5	1/2, 3/2	[I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV]=1.50.
937.9	1/2 ⁻ , 3/2 ⁻	[I γ /E γ^5 , 2 keV]/[I γ /E γ^5 , 24 keV]=1.30.
960.7	1/2 ⁻ , 3/2 ⁻	E(level): 5558.0, S(n)=5556.0 5 (2003Au03).
(S(n)+2)	(1/2 ⁺)	J^{π} : at 2 keV, s-wave capture predominates (capturing state $J^{\pi}=1/2^+$).
(S(n)+24)	(1/2, 3/2 ⁻)	E(level): 5580.0, S(n)=5556.0 5 (2003Au03). 1983Ca04 give S(n)=5556.1 5. J^{π} : at 24 keV, both s-wave and p-wave captures contribute, but the latter contributing more strongly (capturing states $J^{\pi}=1/2^-, 3/2^-$ and 1/2 ⁺).

[†] Observed at both resonances, unless otherwise noted.

[‡] From 1983Ca04 based on the following criterion for reduced gamma-ray intensities: 1/2⁻, 3/2⁻ if I(reduced) at 2 keV > 100 and I(reduced) ratio (2 keV/24 keV) > 0.7; 1/2, 3/2 if I(reduced) at 2 keV is 1-100 and I(reduced) ratio (2 keV/24 keV) $\leq$ 0.7; 5/2(1/2⁺, 3/2⁺) if level is populated at 24 keV, not at 2 keV.

 $\gamma(^{199}\text{Pt})$

E γ	I γ /E γ^5	E $_i$ (level)	J^{π}_i	E $_f$	J^{π}_f
4597.4 4	190 25	(S(n)+2)	(1/2 ⁺)	960.7	1/2 ⁻ , 3/2 ⁻
4619 [†]	146 37	(S(n)+24)	(1/2, 3/2 ⁻)	960.7	1/2 ⁻ , 3/2 ⁻
4620.2 4	301 25	(S(n)+2)	(1/2 ⁺)	937.9	1/2 ⁻ , 3/2 ⁻
4642 [†]	200 40	(S(n)+24)	(1/2, 3/2 ⁻)	937.9	1/2 ⁻ , 3/2 ⁻
4648.6 5	99 22	(S(n)+2)	(1/2 ⁺)	909.5	1/2, 3/2
4670.2 7	83 18	(S(n)+2)	(1/2 ⁺)	887.9	1/2, 3/2
4671 [†]	185 37	(S(n)+24)	(1/2, 3/2 ⁻)	909.5	1/2, 3/2
4692 [†]	$\approx$ 125	(S(n)+24)	(1/2, 3/2 ⁻)	887.9	1/2, 3/2
4933 [†]	103 29	(S(n)+24)	(1/2, 3/2 ⁻)	647.1	5/2, (1/2 ⁺ , 3/2 ⁺)

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$^{198}\text{Pt}(n,\gamma) E=2,24 \text{ keV:arc}$ **1983Ca04 (continued)** $\gamma(^{199}\text{Pt})$ (continued)

E_γ	I_γ/E_γ^5	$E_i(\text{level})$	J_i^π	E_f	J_f^π
5083.5 4	362 21	(S(n)+2)	(1/2 ⁺)	474.6	1/2 ⁻ , 3/2 ⁻
5105 [†]	129 26	(S(n)+24)	(1/2, 3/2 ⁻)	474.6	1/2 ⁻ , 3/2 ⁻
5174.6 3	375 20	(S(n)+2)	(1/2 ⁺)	383.5	1/2 ⁻ , 3/2 ⁻
5197 [†]	287 26	(S(n)+24)	(1/2, 3/2 ⁻)	383.5	1/2 ⁻ , 3/2 ⁻
5425.6 3	173 13	(S(n)+2)	(1/2 ⁺)	132.5	1/2 ⁻ , 3/2 ⁻
5448 [†]	236 20	(S(n)+24)	(1/2, 3/2 ⁻)	132.5	1/2 ⁻ , 3/2 ⁻
5470.0 3	676 30	(S(n)+2)	(1/2 ⁺)	88.1	3/2 ⁻
5492 [†]	277 20	(S(n)+24)	(1/2, 3/2 ⁻)	88.1	3/2 ⁻
5516.1 3	205 15	(S(n)+2)	(1/2 ⁺)	42.0	1/2 ⁻ , 3/2 ⁻
5522.6 4	100 5	(S(n)+2)	(1/2 ⁺)	35.5	3/2 ⁻
5538 [†]	142 18	(S(n)+24)	(1/2, 3/2 ⁻)	42.0	1/2 ⁻ , 3/2 ⁻
5545.6	100	(S(n)+24)	(1/2, 3/2 ⁻)	35.5	3/2 ⁻
5580 ^{†‡}	85 22	(S(n)+24)	(1/2, 3/2 ⁻)	0	5/2 ⁻

[†] From level energy difference (evaluator).[‡] Placement of transition in the level scheme is uncertain.

