

Be($^{208}\text{Pb},\text{X}\gamma$) 2005Ca02,2011St21

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

2005Ca02: Projectile fragmentation of ^{208}Pb beam at 1 GeV/A on a 1.6 g/cm² Be target. Fragment Recoil Separator at GSI. Measured E_γ , I_γ , $\gamma\gamma$, $\gamma\gamma(t)$ using four ‘‘Clover’’ type Ge detectors (providing 16 independent Ge crystals). Others (same collaboration): [2001Ca13](#), [2002Po15](#), [2003Po14](#), [2001MaZV](#), [2000PoZY](#).

2011St21: in-flight fragmentation of ^{208}Pb beam at 1 GeV/A on a 2.526 g/cm² Be target, backed by 0.223 g/cm²-thick ^{93}Nb foil. Fragment Recoil Separator at GSI. Measured E_γ , I_γ , $\gamma\gamma$, $\gamma\gamma(t)$ using the RISING γ -ray spectrometer. Other: [2008StZY](#).

^{201}Pt Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0.0	(5/2 ⁻)	2.46 min 9	$J^\pi, T_{1/2}$: From Adopted Levels. configuration: $\nu f_{5/2}^{-1}$.
374.2 10	(9/2 ⁻)		configuration: $\nu (f_{5/2}^{-1})\otimes 2^+$. The assignment is tentative.
1101.4 15	(13/2 ⁻)		configuration: $\nu (f_{5/2}^{-1})\otimes 4^+$. The assignment is tentative.
1455.5 18	(15/2 ⁺)		
1455.5+x	(19/2 ⁺)	18.4 ns 13	Additional information 1. E(level): $x < 90$ keV in both 2005Ca02 and 2011St21 . Direct γ -ray decay to the 1455.5 keV level was not observed. $T_{1/2}$: from $\gamma(t)$ in 2011St21 . Other: 21 ns 3 from $\gamma(t)$ in 2005Ca02 . configuration: $\nu (f_{5/2}^{-1}) \pi (d_{3/2}^{-1}, h_{11/2}^{-1})$. The assignment is tentative. Experimental isomeric state population ratio $\geq 32\%$ (2005Ca02) and $\geq 4\%$ 2 (2011St21).

[†] From E_γ in [2011St21](#).

[‡] From [2005Ca02](#), based on systematics and shell model predictions. Different J^π values are proposed in [2011St21](#), where the observed γ -ray cascade is placed above an expected, but not yet observed, $J^\pi=13/2^+$ state. This alternative was also discussed in [2005Ca02](#), but was not adopted due to the resulting large measured isomeric ratio, which would exceed the sharp-cutoff model value.

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

E_γ [†]	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
353.6 5	76 6	1455.5	(15/2 ⁺)	1101.4	(13/2 ⁻)	E_γ, I_γ : $E_\gamma=354.1$ keV 2, $I_\gamma=95$ 6 in 2005Ca02 .
373.9 5	80 5	374.2	(9/2 ⁻)	0.0	(5/2 ⁻)	E_γ, I_γ : $E_\gamma=374.4$ keV 2, $I_\gamma=100$ 6 in 2005Ca02 .
726.9 5	100 6	1101.4	(13/2 ⁻)	374.2	(9/2 ⁻)	E_γ, I_γ : $E_\gamma=727.2$ keV 2, $I_\gamma=90$ 7 in 2005Ca02 .

[†] From [2011St21](#). ΔE_γ were estimated by the evaluator.

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Legend

- $I_\gamma < 2\% \times I_\gamma^{\max}$
- $I_\gamma < 10\% \times I_\gamma^{\max}$
- $I_\gamma > 10\% \times I_\gamma^{\max}$

