

$^{202}\text{Pt}$  IT decay    **2005Ca02**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. Zhu and F. G. Kondev		NDS 109, 699 (2008)	1-May-2007

Parent:  $^{202}\text{Pt}$ :  $E=1788.5$  4;  $J^\pi=(7^-)$ ;  $T_{1/2}=0.28$  ms +42-19; %IT decay=100.0

**2005Ca02**: Projectile fragmentation of  $^{208}\text{Pb}$  beam at 1 GeV on 1.6 g/cm<sup>2</sup> thick  $^9\text{Be}$  target. Fragment Recoil Separator (FRS) was used to identify  $^{202}\text{Pt}$  residues. Measured:  $E_\gamma$ ,  $I_\gamma$ , and  $\gamma\gamma$ ,  $\gamma\gamma(t)$ ; Detectors: four "Clover" type Ge detectors (providing 16 independent Ge crystals). The experimental setup also included two multi-wire proportional counters for position measurements; two scintillation detectors, providing time-of-flight and position information; and a further two scintillators and an ionization chamber (MUSIC) for energy loss measurements. For each Ge crystal, the energy and time of the first  $\gamma$ -ray event was recorded after the arrival of a heavy ion, up to a maximum time of 75  $\mu\text{s}$ .

 $^{202}\text{Pt}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>‡</sup>	$T_{1/2}$	Comments
0.0	0 <sup>+</sup>		
534.90 20	(2 <sup>+</sup> )		
1253.6 3	(4 <sup>+</sup> )		
1788.5 4	(7 <sup>-</sup> )	0.28 ms +42-19	%IT $\approx$ 100 $T_{1/2}$ : The upper limit of this isomer's half-life corresponds to an isomeric ratio of 35%. If the isomeric ratio is taken to be 100%, then the upper-limit of this isomer's half-life increases to 1.8 ms. Possible Configuration= $((\pi h_{1/2})^{-1}(\pi d_{3/2})^{-1})$ .

<sup>†</sup> From a least-square fit to  $E_\gamma$ .

<sup>‡</sup> From **2005Ca02**, based on the systematics of the even-even Pt isotopes.

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

$E_\gamma$	$I_\gamma$ <sup>‡</sup>	$E_i(\text{level})$	$J^\pi_i$	$E_f$	$J^\pi_f$
534.9 <sup>†</sup> 2	180 <sup>#</sup> 24	534.90	(2 <sup>+</sup> )	0.0	0 <sup>+</sup>
534.9 <sup>†</sup> 2	180 <sup>#</sup> 24	1788.5	(7 <sup>-</sup> )	1253.6	(4 <sup>+</sup> )
718.7 2	100	1253.6	(4 <sup>+</sup> )	534.90	(2 <sup>+</sup> )

<sup>†</sup> 534.9 $\gamma$  was suggested as a doublet by the authors, based on the relatively large width and intensity.

<sup>‡</sup> Relative  $\gamma$ -ray intensity for transitions observed within the 75  $\mu\text{s}$  time window.

<sup>#</sup> Doublets, undivided intensity is given.

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Decay Scheme

Intensities: Relative  $I_\gamma$   
%IT=100.0

Legend

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

