

$^{179}\text{Au}$   $\alpha$  decay 2004Ra28,1986Ke03,1968Si01

Type	Author	History Citation	Literature Cutoff Date
Update	M. S. Basunia		31-Jan-2005

Parent:  $^{179}\text{Au}$ :  $E=0.0$ ;  $J^\pi=(5/2^-)$ ;  $T_{1/2}=7.1$  s 3;  $Q(\alpha)=6052$  18;  $\% \alpha$  decay=22.0 9

$^{179}\text{Au}$ - $\% \alpha$  decay:  $\% \alpha=22.0$  9 from 1986Ke03.

Other: 1968De01.

2004Ra28: Activity produced by  $^{183}\text{Tl}$   $\alpha$  decay. Detector: Silicon. strip detector. Measured  $E\alpha$ .

1986Ke03: Activity produced by  $^{90}\text{Zr}$  on  $^{90}\text{Zr}$ ,  $^{92}\text{Zr}$ , and  $^{89}\text{Y}$ . Measured  $E\alpha$ ,  $I\alpha$ . Determined  $\% \alpha$  branching. Detector: Surface Barrier Silicon Detector.

1968Si01: Activity produced by  $^{168}\text{Yb}$ ( $^{19}\text{F}$ ,8n),  $^{169}\text{Tm}$ ( $^{20}\text{Ne}$ ,10n). Measured  $E\alpha$ . Detector: Surface Barrier Silicon Detector.

1968De01: Activity produced by  $^{147}\text{Sm}$ ( $^{40}\text{Ar}$ ,8n). Measured  $E\alpha$ . Detector: Surface Barrier Silicon Detector.

 $^{175}\text{Ir}$  Levels

<u>E(level)</u>	<u><math>J^\pi</math><sup>†</sup></u>
0.0	(5/2 <sup>-</sup> )
49	(9/2 <sup>-</sup> )

<sup>†</sup> From Adopted Levels.

 $\alpha$  radiations

<u><math>E\alpha</math></u>	<u>E(level)</u>	<u>Comments</u>
5848 5	49	$E\alpha$ : From 1968Si01. Other value: 5824 16 (1968De01). $E\alpha$ leads to a Q value of 5982 5 for $^{179}\text{Au}$ , the reason for the difference with the 6052 18 (2003Au03) is unknown.
5810 15		$E\alpha$ : From 2004Ra28. 5810 $\alpha$ decaying to the 49 keV level leads to a Q value of 5991 15 for $^{179}\text{Au}$ , the reason for the difference with the 6052 18 (2003Au03) is unknown.