

$^{190}\text{Pb}$   $\alpha$  decay (71 s) [1996Ri12](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. C. Batchelder and A. M. Hurst, M. S. Basunia		NDS 183, 1 (2022)	1-Mar-2022

Parent:  $^{190}\text{Pb}$ :  $E=0.0$ ;  $J^\pi=0^+$ ;  $T_{1/2}=71$  s *1*;  $Q(\alpha)=5698$  *5*;  $\% \alpha$  decay= $0.40$  *4*

$^{190}\text{Pb}$ - $\% \alpha$  decay: from [1992Wa14](#). Others:  $0.005$  *2* ([1996Bi17](#)),  $0.009$  *2* ([1981El03](#)),  $0.0021$  *7* ([1974Ho26](#), from  $I\alpha/I(\text{K x ray})$ ).

$^{190}\text{Pb}$  parent  $T_{1/2}$  is from [1996Ri12](#). Others:  $1.2$  min *1* ([1981El03](#)),  $1.2$  min *2* ([1974Le02](#)).

Others: [1984To09](#), [1977De32](#), [1974Ho26](#), [1974Le02](#), [1972Ga27](#).

Calculation of  $\alpha$  decay widths: [1988In03](#).

[1996Ri12](#): mass separation of products from 170-MeV  $^{16}\text{O}$  bombardment of natural W; Ge(Li), cooled Si(Li) and Si surface barrier detectors; measured  $E\alpha$ ,  $I\alpha$ ,  $T_{1/2}$ .

 $^{186}\text{Hg}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>†</sup>	$T_{1/2}$
0.0	$0^+$	1.38 min <i>10</i>
405.3 <i>1</i>	$2^+$	
523.0 <i>3</i>	$0^+$	

<sup>†</sup> From Adopted Levels.

 $\alpha$  radiations

$E\alpha$ <sup>†</sup>	E(level)	$I\alpha$ <sup>†#</sup>	HF <sup>‡</sup>	Comments
5060 <i>12</i>	523.0	0.014 <i>6</i>	15 <i>7</i>	
5181 <i>5</i>	405.3	0.084 <i>15</i>	10.9 <i>23</i>	
5577 <i>5</i>	0.0	99.902 <i>16</i>	1	$E\alpha$ : Others: 5590 ( <a href="#">1977De32</a> ), 5580 <i>10</i> ( <a href="#">1974Le02</a> ),

<sup>†</sup> From [1996Ri12](#).

<sup>‡</sup> The nuclear radius parameter  $r_0(^{186}\text{Hg})=1.492$  *6* is deduced by assuming HF=1.0 for the ground-state to ground-state alpha decay branch.

<sup>#</sup> For absolute intensity per 100 decays, multiply by 0.0040 *4*.