

Adopted Levels

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Balraj Singh	ENSDF	14-May-2009

$Q(\beta^-)=2.96\times 10^3$  syst;  $S(n)=5.10\times 10^3$  syst;  $S(p)=1.01\times 10^4$  syst;  $Q(\alpha)=-1.4\times 10^3$  syst    [2012Wa38](#)

Note: Current evaluation has used the following Q record \$ 2830    calc 5190    calc 10040    calc -1340    calc    [1997Mo25](#).

No Q values are available from [2009AuZZ](#) or [2003Au03](#).

[2003Xu08](#):  $^{197}\text{Os}$  formed in Pt(n,2p) reaction at E(n)=14 MeV and natural Pt target. Measured  $\gamma$  rays in singles and coincidence from decay of  $^{197}\text{Os}$ . Ten  $\gamma$  rays were reported to populate levels in  $^{197}\text{Ir}$ . Since no mass or chemical separation was attempted in the experiment by [2003Xu08](#), the evaluator treats the identification and half-life measurement as tentative.

[2008St20](#), [2008StZY](#):  $^{197}\text{Os}$  formed by fragmentation of  $^{208}\text{Pb}$  beam at 1 GeV/nucleon from SIS accelerator at GSI facility. Nuclei of interest were separated using FRS. The transmitted ions were slowed in Al degraders and stopped in a plastic catcher. The catcher was surrounded by RISING  $\gamma$ -ray spectrometer to measure  $\gamma$  rays correlated with fragments. Many events were assigned to  $^{197}\text{Os}$  in the fragment yield distribution shown by [2008St04](#).

 $^{197}\text{Os}$  LevelsCross Reference (XREF) Flags

A     $^9\text{Be}(^{208}\text{Pb},X\gamma)$

<u>E(level)</u>	<u>T<sub>1/2</sub></u>	<u>XREF</u>	<u>Comments</u>
0	2.8 min 6		$\% \beta^- = 100$ Only $\beta^-$ decay mode is possible and has possibly been observed by <a href="#">2003Xu08</a> . The fragments assigned by <a href="#">2008St04</a> are assumed to correspond to the ground state of $^{197}\text{Os}$ . T <sub>1/2</sub> : from timing of $\gamma$ rays ( <a href="#">2003Xu08</a> ). In the opinion of the evaluator this half-life should be considered as tentative since the activity formed in Pt(n,2p) reaction and assigned to $^{197}\text{Os}$ was not separated by mass or chemistry. Calculated value: >100 s ( <a href="#">1997Mo25</a> ). J <sup>π</sup> : 1/2 <sup>-</sup> neutron orbital predicted by <a href="#">1997Mo25</a> .
x	78 ns 7	A	$\%IT=100$ T <sub>1/2</sub> : from (particle) $\gamma$ (t) ( <a href="#">2008StZY</a> ). Four $\gamma$ rays with almost equal intensities were reported by <a href="#">2008StZY</a> at 204, 416, 487 and 629 keV, but the level scheme was not established.