

Adopted Levels

<u>Type</u>	<u>Author</u>	<u>History</u>	<u>Citation</u>	<u>Literature Cutoff Date</u>
Full Evaluation	E. Browne, J. K. Tuli		NDS 122, 293 (2014)	30-Jun-2013

$Q(\beta^-)=2760$ SY; $S(n)=5630$ SY; $S(p)=6580$ SY; $Q(\alpha)=3560$ SY [2012Wa38](#)

$\Delta Q(\beta^-)=200$, $\Delta S(n)=200$, $\Delta S(p)=340$, $\Delta Q(\alpha)=200$.

^{239}Pa activity was produced by bombarding a uranium target with 900-MeV ^{18}O projectiles. Protactinium was chemically separated and its genetic relation to its daughter nuclide ^{239}U was established. The half-life of ^{239}Pa was measured by following the growth and subsequent decay of the known 74.6-keV γ ray from ^{239}U β^- decay ([1995Yu01](#),[1996Yu06](#)).

 ^{239}Pa Levels

<u>E(level)</u>	<u>J^π</u>	<u>$T_{1/2}$</u>	<u>Comments</u>
0.0	(3/2)	1.8 h 5	$\% \beta^- = 100$ $T_{1/2}$: From 1995Yu01 , 1996Yu06 . J^π : Assigned by evaluator, based on its β^- decay to the 715- ($3/2^+$), 784- ($5/2^-$), and 815-keV ($1/2^-$) levels in ^{239}U .