

Adopted Levels

<u>Type</u>	<u>Author</u>	<u>History Citation</u>	<u>Literature Cutoff Date</u>
Full Evaluation	C. Morse	NDS 182, 167 (2022)	14-Sep-2021

$Q(\beta^-)=-2084$  SY;  $S(n)=6376$  SY;  $S(p)=2466$  SY;  $Q(\alpha)=9900$  SY [2021Wa16](#)

$\Delta Q(\beta^-)=770$ ,  $\Delta S(n)=850$ ,  $\Delta S(p)=979$ ,  $\Delta Q(\alpha)=100$  ([2021WA16](#)).

$S(2n)=11901$  SY 767,  $S(2p)=7350$  SY 894 ([2021WA16](#)).

$^{277}\text{Mt}$  has been observed as the  $\alpha$ -decay daughter of  $^{281}\text{Rg}$  at JINR ([2013OG04](#)) and GSI ([2019KH04](#)). Events were identified by the observation of chains of correlated  $\alpha$ -decays terminated by spontaneous fission. Individual decays were assigned to specific nuclei by comparing the properties of the observed chains to those previously observed in the literature.

Both [2013OG04](#) and [2019KH04](#) note that it is possible that  $^{277}\text{Mt}$  undergoes electron-capture or  $\beta^+$  decay, in which case the observed spontaneous-fission activity would be due to  $^{277}\text{Hs}$ .

Half-lives, branching ratios, and  $\alpha$ -decay energies in this evaluation have been computed from the individual events listed in the references above. Half-life uncertainties have been computed according to the method of [1984SC13](#). An additional 10 keV systematic uncertainty is assumed for the  $\alpha$ -decay energies, which is added in quadrature to the averaged statistical uncertainty.

 $^{277}\text{Mt}$  LevelsCross Reference (XREF) Flags

**A**  $^{281}\text{Rg}$   $\alpha$  decay (15 s)

<u>E(level)</u>	<u><math>T_{1/2}</math></u>	<u>XREF</u>	<u>Comments</u>
0	4 ms +4-1	<b>A</b>	%SF=100; % $\alpha$ ≤20 E(level): Assumed ground state. $T_{1/2}$ : From four events.