

$^{236}\text{Am}$   $\alpha$  decay [2004Sa05](#),[2002As08](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. Browne	NDS 107, 2579 (2006)	1-Nov-2004

Parent:  $^{236}\text{Am}$ :  $E=0$ ;  $J^\pi=(5^-)$ ;  $T_{1/2}=3.6$  min 2;  $Q(\alpha)=6400$  SY;  $\% \alpha$  decay=0.0040 10

$^{236}\text{Am}$ - $T_{1/2}$ : [2002As08](#) identified two  $^{236}\text{Am}$  activities decaying with  $T_{1/2}=3.6$  min 2 and  $T_{1/2}=2.9$  min 2, the latter is possibly from a  $^{236}\text{Am}$  isomer with  $J^\pi=(1^-)$ . Other values:  $T_{1/2}=4.4$  min 8 ([1998Ts02](#)),  $T_{1/2}=3.73$  min 28 ([1989HaZO](#)).

$^{236}\text{Am}$ - $\% \alpha$  decay: From  $I_\alpha(6150$  keV) and Pu Kx-ray intensities in [2004Sa05](#).

Activity produced in the  $^{235}\text{U}(^6\text{Li},5n)^{236}\text{Am}$  reaction using 51-MeV projectiles. The reaction products were mass separated using the on-line isotope separator JAERI-isol. Measured alpha particles, Pu x-rays in singles,  $\alpha\gamma$  coin,  $\gamma\gamma$  coin, and  $\gamma\gamma$  delayed coincidences. Others: [2003Na10](#), [1987Ma21](#).

 $^{232}\text{Np}$  Levels

It has not been established whether the 6157-keV alpha-particle group is emitted in the decay of the 3.6-min. ( $J^\pi=(5^-)$ ), or the 2.9-min. ( $J^\pi=(1^-)$ )  $^{236}\text{Am}$  activity. Thus the level populated in  $^{232}\text{Np}$  could be the g.s. ( $J^\pi=(4^+)$ ), or a possible isomer with  $E(\text{lev}) < 100$  keV, and  $J^\pi=(1^+)$ .

<u>E(level)</u>	<u><math>J^\pi</math></u>	<u><math>T_{1/2}</math></u>
0	(4 <sup>+</sup> )	14.7 min 3

 $\alpha$  radiations

<u><math>E_\alpha</math></u>	<u>E(level)</u>	<u>Comments</u>
6157	0	From <a href="#">2002As08</a> and <a href="#">2004Sa05</a> . Other value: $E_\alpha=6410$ keV, $I_\alpha=0.042$ % 6 ( <a href="#">1989HaZO</a> ). <a href="#">2002As08</a> and <a href="#">2004Sa05</a> did not detect a 6410-keV alpha-particle group ( $I_\alpha < 0.002\%$ ).