

Adopted Levels

<u>Type</u>	<u>Author</u>	<u>History Citation</u>	<u>Literature Cutoff Date</u>
Full Evaluation	Jun Chen	NDS 140, 1 (2017)	30-Sep-2015

$Q(\beta^-)=22540$ SY; $S(n)=1090$ SY; $S(p)=21590$ SY; $Q(\alpha)=-20360$ SY [2012Wa38](#)

$\Delta(Q(\beta^-))=550$, $\Delta(S(n))=710$, $\Delta(S(p))=720$, $\Delta(Q(\alpha))=780$ (syst,[2012Wa38](#)).

$S(2n)=4380$ 560, $Q(\beta^-n)=17580$ 510 (syst,[2012Wa38](#)).

First identification of ^{40}Al nuclide by [1997Sa14](#).

^{40}Al isotope identified in $^{181}\text{Ta}(^{48}\text{Ca},X)$ reaction at $E=70$ MeV/nucleon ([1997Sa14](#)). A total of 34 events were observed in this study. In [1996Sa34](#) (from the same group as [1997Sa14](#)) only one event was tentatively assigned to ^{40}Al .

Structure calculations: [2013Li39](#) (levels, $T_{1/2}$, β^- -delayed emission probabilities, $\log ft$, branching ratios), [2013Sh05](#) (binding energy, charge radii, deformation parameter).

 ^{40}Al Levels

<u>E(level)</u>	<u>$T_{1/2}$</u>	<u>Comments</u>
0.0	>260 ns	$\% \beta^- = 100$; $\% \beta^- n = ?$; $\% \beta^- 2n = ?$ Theoretical $\% \beta^- n = 15.6$, $\% \beta^- 2n = 73.8$, $\% \beta^- 3n = 8.5$ (2003Mo09). $T_{1/2}$: estimated from TOF of the experimental arrangement (1997Sa14). Calculated $T_{1/2}(\beta^- \text{ decay}) = 3.7$ ms (2003Mo09), 9.8 ms to 13.0 ms for different J^π values (2013Li39).