Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Y. A. Akovali	NDS 87,301 (1999)	1-Oct-1998

Q(β^-)=9.×10^2 *syst*; S(n)=5.1×10^3 *syst*; S(p)=4.4×10^3 *syst*; Q(α)=6.9×10^3 *syst* 2012Wa38

Note: Current evaluation has used the following Q record 940 syst 5144 syst 4442 syst 6940 syst 1995Au04.

Assignment: ^{254}Es(105-MeV ^{18}O,x), ^{254}Es(126-MeV ^{22}Ne,x); mass separated (1986Lo16). Isotope assignment was made by 1986Lo16 from cross-section results and from known and predicted decay properties for possible isotopes with A=260: the measured cross sections were consistent with production of ^{260}No, ^{260}Md or ^{260}Lr; since ^{260}Lr is a 180-s α emitter, ^{260}No has a half-life of 106 ms, the observed 31.8-d SF activity was not from ^{260}Lr or ^{260}No.

Possibility of observed fission activity being from ^{260}No following β^- decay was ruled out by 1986Lo16 by measuring time correlations between β^- and SF activities.

Possibility of the observed fission activities being from ^{256}Fm (following α decay of ^{260}Md to ^{256}Es which β^- decays to ^{256}Fm) was also considered by 1986Lo16. The mass and total kinetic energy distributions of fission fragments were found to be very different than those for ^{256}Fm, indicating that most of the observed fission activities were not from ^{256}Fm.

^{260}Md Levels

E(level)	$T_{1/2}$	Comments
0.0	31.8 d *5*	%SF≥42; %α≤25; %β^-≤10; %ε≤23 $T_{1/2}$: measured by 1986Lo16. An upper limit of 25% α branching was deduced by 1986Lo16 by fitting the fission distributions for mass 260 with a previously known distribution for ^{256}Fm; an upper limit of 10% was deduced for β^- decay from correlation counts for β^- and SF events. Upper limits for K and L captures were obtained by 1989Hu09 as 10% each by time-correlation measurements of Fm x-rays with possible SF events from ^{260}Fm, provided that $T_{1/2}(^{260}Fm)$<100 ms. Inclusion of M+N+ shells yields %ε<23. From their theoretical calculations 1997Mo25 obtained 9.1×10^4 d for the partial α half-life of ^{260}Md. See 1994Mo31 for calculated α, β and spontaneous fission half-lives. See also 1989Mo03.