

Adopted Levels

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli		NDS 114, 1041 (2013)	1-Nov-2011

$Q(\beta^-)=720$  SY;  $S(n)=4603$  SY;  $S(p)=6872$  SY;  $Q(\alpha)=5736$  SY [2012Wa38](#)  
 Estimated  $\Delta Q(\beta^-)=200$ ,  $\Delta S(n)=201$ ,  $\Delta S(p)=359$ ,  $\Delta Q(\alpha)=201$  ([2012Wa38](#)).

[Additional information 1](#).

Calculations, compilation:

Ground state properties: [1997Mo25](#), [1995Mo29](#).

Single-particle Nilsson levels: [2005Pa73](#), [1994Cw02](#).

[1994Cw02](#) have calculated the following single-particle level sequence: g.s.  $7/2[613]$ , 0.01 MeV,  $3/2[622]$ ; 0.02 MeV,  $11/2[725]$ , 0.06 MeV,  $1/2[620]$ ; 0.18 MeV,  $9/2[615]$ .

Assignment:  $^{254}\text{Cf}(n,\gamma)$ , parent of  $^{255}\text{Es}$  (chem), grandparent of  $^{255}\text{Fm}$  ([1981Lo15](#)).

 $^{255}\text{Cf}$  Levels

E(level)	$J^\pi$	$T_{1/2}$	Comments
0	$(7/2^+)$	85 min 18	$\% \beta^- = 100$ $J^\pi$ : configuration= $(\nu 7/2[613])$ from Nilsson model ( <a href="#">1994Cw02</a> ). Allowed, hindered $\beta^-$ decay to configuration= $(\pi 7/2[633])$ with $\log ft=5.7$ 5 is consistent with this assignment. $T_{1/2}$ : from <a href="#">1981Lo15</a> . $\% \alpha$ : calculated $T_{1/2}(\alpha) \approx 4 \times 10^{10}$ min ( <a href="#">1997Mo25</a> ) gives $\% \alpha \approx 2 \times 10^{-7}$ .