Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 141, 327 (2017)	22-Mar-2017

Q(β^-)=−150 *SY*; S(n)=5840 *SY*; S(p)=7340 *CA*; Q(α)=5560 *SY* 2017Wa10,1997Mo25
S(p) from theory (1997Mo25), other values from 2017Wa10.
Estimated uncertainties (2017Wa10): 330 for Q(β^-), 370 for S(n), 100 for Q(α).
S(2n)=10440 *320* (syst,2017Wa10). S(2p)=13240 (theory,1997Mo25).
1980Ho04 (also 1978Wi12): ^{256}Cf identified in ^{254}Cf(t,p),E=16 MeV reaction, followed by the observation of SF activity, whereas assignment was based on the production cross section and the known SF properties of other nuclei that could be produced in this reaction.
Additional information 1.
Theoretical calculations: consult the Nuclear Science References (NSR) database for about 40 theory references.
2012Jo05: level energies and configurations of 2^+ γ-vibrational states using quasiparticle-phonon model.

^{256}Cf Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	0^+	12.3 min *12*	%SF=100; %α<1×10^{-6} $T_{1/2}$: measured by 1980Ho04. Only SF-decay mode has been observed. Possible α decay branch can be estimated by various methods: 1. by requiring HF(α to g.s. of ^{252}Cm)=1.0, Iα=5.0×10^{-7}% *20* is deduced using r_0(^{252}Cm)=1.533 fm *20* from local r_0 trend given in 1998Ak04, and Q(α)(^{256}Cf)=5560 *100* (2017Wa10). The estimated intensity of 0.80 *20* per α decay for the α to g.s. gives %α=6.2×10^{-7} *30*. 2. from semiempirical Geiger-Nuttal formula, 1997Po18 calculated $T_{1/2}(\alpha)$=9×10^3 y, from which %α=2.6×10^{-7} is obtained. 3. theoretical calculations of 1997Mo25 yield $T_{1/2}(\alpha)$=1×10^{12} s which corresponds to %α=7.8×10^{-8}.