Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 156,148 (2019)	31-Jan-2019

Q(β^-)=−4050 *syst*; S(n)=7010 *syst*; S(p)=4020 *syst*; Q(α)=9600 *syst* 2017Wa10

Estimated uncertainties (2017Wa10): ΔQ(β^-)=970, ΔS(n)=1010, ΔS(p)=1070, ΔQ(α)=200.

S(2n)=12570 *1040* (syst, 2017Wa10). S(2p)=7130 (theory,1997Mo25).

^{284}Cn has been identified through the α decay of ^{288}Fl; see ^{288}Fl Adopted Levels for details of correlated events of EVR, α decay, and ending in SF decay of ^{284}Cn. Main references for direct production of ^{288}Fl are: 2004Og07, 2004Og12, 2010Ei01, 2010Du06, 2011Ga19 and 2014Ya33. Also ^{288}Fl is produced as α daughter of ^{292}Lv. See ^{292}Lv Adopted Levels for the production of ^{292}Lv reported in 2004Og12, 2004OgZZ and 2012Ho12, See also 2017Og01, 2016Ho09, 2015Og07 and 2015Og05 review articles.

2017Ka66 (also 2014MoZV): three correlated events were reported in ^{248}Cm(^{48}Ca,4n),E=261.6 MeV reaction using RIKEN Linear Accelerator (RILAC) and gas-filled recoil ion separator (GARIS). Two EVR-α-α-SF correlated events and the following one tentative EVR-α-α-α-SF event were observed, all starting from ^{292}Lv, with production σ=3.1 pb *+28−18*. All three events produced ^{284}Cn. See ^{292}Lv Adopted Levels for details.

For theoretical studies, consult Nuclear Science References (NSR) database at NNDC, BNL for 118 primary references dealing with the half-lives and other aspects of nuclear structure in this mass region.

^{284}Cn Levels

Cross Reference (XREF) Flags

A ^{288}Fl α decay (0.64 s)

E(level)	J^π	$T_{1/2}$	XREF	Comments
0	0^+	108 ms *+20−14*	A	%SF=100 (2016Ho09); %$\alpha\leq$3 (2016Ho09) Only the SF decay mode has been observed. Other: 2017Ka66 estimate %α=2.9 from one of the two interpretations of Chain 3, where SF events are 32 times higher than the α events from the decay of ^{284}Cn. E(level): it is assumed that the observed activity is associated with the g.s. $T_{1/2}$: from average of 98 ms *+20−14* (2017Og01 and 2015Og05 review articles) and 118 ms *+24−17* (2016Ho09 review article). Value of 313 ms *+570−123* from 2017Ka66 is not included in the recommended value due to its large uncertainty. Its inclusion gives only a slightly different weighted average of 113 ms *+32−27*. Measurements: 101 ms *+41−22* (2004Og12, from 12 events; also 97 ms *+31−19* in 2004OgZZ and 2011Og07, from 17 events); 313 ms $^{570-123}$ (2017Ka66). Theoretical α-decay half-life=78 min (1997Mo25).