Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 156, 70 (2019)	31-Jan-2019

Q(β^-)=−4750 *SY*; S(n)=7120 *SY*; S(p)=3610 *SY*; Q(α)=10170 *SY* 2017Wa10
Estimated uncertainties (2017Wa10): ΔQ(β^-)=750, ΔS(n)=760, ΔS(p)=1040, ΔQ(α)=200.
S(2n)=12860 *880*, S(2p)=6120 *1020* (syst,2017Wa10).
^{282}Cn produced in four ways, three different α-decay chains, and directly in one correlated decay chain:

1. from α-decay chain ^{294}Og -> ^{290}Lv -> ^{286}Fl -> ^{282}Cn; ^{294}Og produced in four correlated decay chains, but only two of these decay through α decay of ^{286}Fl. See ^{294}Og Adopted Levels, and 2012Og06, 2011Og07, 2006Og05, 2004Og10 and 2004Og12 for details.
2. from α-decay chain ^{290}Lv -> ^{286}Fl -> ^{282}Cn. ^{290}Lv produced in 12 correlated decay chains, but only seven of these decay through α-decay mode of ^{286}Fl. See ^{290}Lv Adopted Levels, and 2006Og05 and 2004Og07 for details.
3. from α-decay chain ^{286}Fl -> ^{282}Cn, where ^{286}Fl is produced in 11 correlated decay chains, but only in six of these ^{286}Fl decays by α-decay mode. See ^{286}Fl Adopted Levels, and 2010El06, 2009St21, 2004Og12 and 2004Og10 for details.
4. ^{282}Cn produced in ^{238}U(^{48}Ca,4n),E=240 MeV (2004Og12,2004OgZZ), where only one SF event is observed and assigned to ^{282}Cn based on expected cross section, with energy of the evaporation residues (EVR)=10.8 MeV, energy of the SF event=222 MeV, and Δt(SF)=0.207 ms.

2018Ut02: ^{240}Pu(^{48}Ca,α2n),E=250 MeV at JINR-Dubna. Several SF decays with measured evaporation residue energy, decay time, and SF energy assigned were observed, eight of these events with 1-ms activity could belong to ^{282}Cn or ^{284}Fl, the latter through 4n-channel.
For theoretical studies, consult Nuclear Science References (NSR) database at NNDC, BNL for 134 primary references dealing with the half-lives and other aspects of nuclear structure in this mass region.

^{282}Cn Levels

Cross Reference (XREF) Flags

A ^{286}Fl α decay (166 ms)

E(level)	J^π	$T_{1/2}$	XREF	Comments
0	0^+	0.96 ms *+35−20*	A	%SF=100 (2016Ho09); %$\alpha\leq$7 (2016Ho09) Only the SF decay seen in all the 16 observed decay chains. E(level): the reported activity is assumed to belong to the g.s. of ^{282}Cn. $T_{1/2}$: from 2016Ho09 review, based on analysis of 14 events. Others: 0.91 ms *+33−19* (2017Og01 and 2015Og05 reviews); 0.82 ms *+30−18* (2011Og07, 2012Og06, 2006Og05, based on analysis of 12 events); 0.50 ms *+33−14* (2004Og12, from analysis of six events); 1.0 ms *+48−5* (2004Og07, from analysis of one event).