Adopted Levels:tentative

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

Q(β^-)=−3370 *SY*; S(n)=6680 *SY*; S(p)=4260 *SY*; Q(α)=9810 *SY* 2017Wa10

Estimated uncertainties (2017Wa10): ΔQ(β^-)=940, ΔS(n)=980, ΔS(p)=1030, ΔQ(α)=200.

S(2n)=12000 *1000* (syst,2017Wa10). S(2p)=8070 (1997Mo25, theory).

An earlier assignment of one EVR-α-α-SF correlated decay chain starting from ^{292}Lv nuclide and ending in SF decay of ^{280}Ds by the Dubna-Livermore collaboration in 2001Og01 and 2002Og09 (also 1999Og10,2000Og07, 2001Og06,2001Og11,2002Og03,2002Og09,2002Og13) by was later assigned by 2004Og07 and 2004Og12 (also 2005Og03) to 3n-reaction channel, instead, thus leading to the discovery of the ^{293}Lv nuclide, whose decay chain ended in the SF decay of ^{281}Ds.

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* for ^{292}Lv, two ending in ^{284}Cn, the third ending either in ^{284}Cn or in ^{280}Ds. Possible correlated EVR-α-α-α-SF one event led to a tentative identification of the ^{280}Ds isotope. Following is the detail of one of the two interpretations provided by 2017Ka66 for the third event, leading to tentative identification of ^{280}Ds. The second interpretation of this event is simply the ^{292}Lv → ^{288}Fl → ^{284}Cn α-decay chain, ^{284}Cn decaying by SF decay.

Chain #3 (second interpretation): Energy of EVR=15.3 MeV:

$E_{\alpha 1}$=10.66 MeV *2*, Δt_1=4.1 ms, assigned to ^{292}Lv.

$E_{\alpha 2}$=0.83 MeV escaped α, Δt_2=9.0 ms, assigned to ^{288}Fl.

$E_{\alpha 3}$=3.50 MeV escaped α, Δt_3=282 ms, assigned to ^{284}Cn.

E_{SF}=163 MeV, Δt_4=9.6 ms, assigned to ^{280}Ds: SF decay; SF decay events in coincidence with 393.1-keV γ ray.

The assignment of an 11 s *6* activity to ^{280}Ds in 2017Au03 (NUBASE-2016), based on 2001Og01, is erroneous, as 2001Og01 later reassigned the observed correlated event from ^{292}Lv to ^{293}Lv, leading to the SF-decaying ^{281}Ds, rather than ^{280}Ds.

For theoretical studies, consult Nuclear Science References (NSR) database at NNDC, BNL for 68 primary references dealing with the half-lives and other aspects of nuclear structure in this mass region.

^{280}Ds Levels

E(level)	J^π	$T_{1/2}$	Comments
0?	0^+	7 ms *+32−2*	%SF≈100 $T_{1/2}$: 6.7 ms *+319−30* (2017Ka66) from one possible correlated event.