Adopted Levels

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

Q(β^-)=−2300 *SY*; S(n)=5840 *SY*; S(p)=1960 *SY*; Q(α)=10450 *50* 2017Wa10
Estimated uncertainties (2017Wa10): ΔQ(β^-)=930, ΔS(n)=1040, ΔS(p)=880.
S(2n)=13020 *850* (syst,2017Wa10). S(2p)=5620 (theory,1997Mo25).
Other Q(α): 10410 *40* from Eα=9.78-10.31 (2017Og01 review).
^{290}Mc produced and identified as α daughter of ^{294}Ts, the latter produced in three separate experiments, two experiments at FLNR-JINR-Dubna facility, in collaboration with several other labs, the first experiment reported in 2011Og04 and 2010Og01, and the second in 2013Og04 and 2012Og06 using ^{249}Bk(^{48}Ca,3n),E=243.7, 246.8, 251.7, 255.7 and 259.8 MeV reaction. The third experiment was performed and reported by 2014Kh04 at GSI facility using ^{249}Bk(^{48}Ca,3n), E=252.1, 254.0, 258.0 MeV reaction and Gas-filled Trans-Actinide Separator and Chemistry Apparatus (TASCA) system.
One EVR-α-SF correlated decay chain reported by 2011Og04, three by 2013Og04 and 2012Og06, and two by 2014Kh04, all starting with the decay of ^{294}Ts and ending in SF-decaying ^{270}Db nuclide in Dubna work (2013Og04, 2011Og04) and in SF-decaying ^{266}Lr in GSI work (2014Kh04). 2011Og07 and 2012OgZZ are also related reports for the Dubna work. See Adopted Levels for ^{294}Ts for details of above three studies.
For theoretical studies, consult Nuclear Science References (NSR) database at NNDC, BNL for 52 primary references dealing with the half-lives and other aspects of nuclear structure in this mass region.

^{290}Mc Levels

Cross Reference (XREF) Flags

A ^{294}Ts α decay (51 ms)

E(level)	$T_{1/2}$	XREF	Comments
0	0.65 s *+49−20*	A	%α≈100; %SF=? Only the α decay mode observed. E(level): assumed that the observed activity is associated with the g.s. of ^{290}Mc. $T_{1/2}$: from 2017Og01 and 2015Og05 reviews. Measurements: 1.3 s *+23−5* (2014Kh04, also 0.75 s *+61−23* by combining their data with those from 2013Og04); 0.24 s *+28−7* (2013Og04,2012Og06); 16 ms *+75−8* (2011Og04,2010Og01). J^π: 0^-,5^- from Ω(proton)=5/2$^-$, Ω(neutron)=5/2$^+$ (theory,1997Mo25). Eα=9.78-10.31 MeV from the decay of ^{290}Mc (2017Og01 and 2015Og05 reviews). Measurements: 10.31 MeV *4* (2014Kh04); 10.81-10.97 MeV (2013Og04,2012Og06); 9.95 MeV *40* (2011Og04,2010Og01).