Adopted Levels

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

Q(β^-)=−4500 *SY*; S(n)=6710 *SY*; S(p)=790 *SY*; Q(α)=10670 *SY* 2017Wa10
Estimated uncertainties (2017Wa10): ΔQ(β^-)=380, ΔS(n)=550, ΔS(p)=250, ΔQ(α)=150.
S(2n)=14950 *390*, S(2p)=3530 *280* (syst,2017Wa10).
Q(α): from Eα=10329 keV *35* (2004Mo26, unweighted average from 12 events).
^{268}Mt produced as α-daughter of ^{272}Rg, the latter produced in the bombardment of ^{243}Am target with ^{48}Ca beam.
See ^{272}Rg Adopted Levels for production and half-life at three laboratories: GSI (1995Ho04,2002Ho11); Berkeley (2004Fo08) and RIKEN (2004Mo26).
For theoretical studies, consult Nuclear Science References (NSR) database at NNDC, BNL for 39 primary references dealing with the half-lives and other aspects of nuclear structure in this mass region.

^{268}Mt Levels

Cross Reference (XREF) Flags

A ^{272}Rg α decay (3.8 ms)

E(level)	$T_{1/2}$	XREF	Comments
0	21 ms +*8*−*5*	A	%α≈100 Only the α decay mode has been observed. E(level): the reported activity is assumed to belong to the g.s. of ^{268}Mt. J$^\pi$: 2017Au03 suggest 5^+,6^+ based on systematics. 5^-,6^- from Ω(proton)=11/2$^-$; Ω(neutron)=1/2$^+$ (1997Mo25, theory). $T_{1/2}$: from 2004Mo26 (unweighted average of all 14 events; t_2=30 ms). Others: 42 ms +*29*−*12* (2002Ho11); 27 ms +*8*−*5* from average t_2=38.2 ms (21 events. Evaluators). 2002Ho11 do not exclude the presence of isomeric states, for example 171 ms. 2004Mo26 tentatively assigned all of the decays to one state since the decay time distribution exhibited no clear peculiarities. 2004Mo26 note that 1995Ho04 observed one fairly long-lived α-decay (171 ms) with an energy 0.16 MeV lower than the other two events. 2004Mo26 also observed a 122-ms event but the α escaped. These two decays may indicate an isomeric state in ^{268}Mt and, if excluded, the results of 2002Ho11 and 2004Mo26 are consistent within uncertainties. %α: 21 α-decay events observed in four experiments; no SF decay reported.