^{89}Mo IT decay (190 ms) 1980Ga16

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	30-Nov-2021

Parent: ^{89}Mo: E=387.3 *3*; J^π=(1/2$^-$); $T_{1/2}$=190 ms *15*; %IT decay=100.0

1980Ga16: ^{89}Mo formed by ^{92}Mo(p,p3n) E=60 MeV reaction. Measured Eγ, Iγ.

Energy balance: total decay energy of 353 keV *10* deduced (using RADLIST code) from proposed decay scheme is in agreement with the expected value of 387.3 keV *3*, indicating that the decay scheme is complete.

^{89}Mo Levels

E(level)†	J^π‡	$T_{1/2}$	Comments
0	(9/2$^+$)	2.11 min *10*	$T_{1/2}$: from Adopted Levels.
118.80 *20*	(7/2$^+$)		
387.3 *3*	(1/2$^-$)	190 ms *15*	$T_{1/2}$: from 119γ(t) and 269γ(t).

† From Eγ data.

‡ From Adopted Levels.

γ(^{89}Mo)

E_γ	I_γ†‡	E_i(level)	J^π_i	E_f	J^π_f	Mult.	α#	$I_{(\gamma+ce)}$‡	Comments
118.8 *2*	71 *8*	118.80	(7/2$^+$)	0	(9/2$^+$)	[M1,E2]	0.40 *15*	100	
268.5 *2*	87.0 *3*	387.3	(1/2$^-$)	118.80	(7/2$^+$)	(E3)	0.1494 *24*		α(K)=0.1222 *18*; α(L)=0.0223 *4*; α(M)=0.00407 *6*; α(N)=0.000581 *9*; α(O)=1.92×10^{-5} *3* δ: from the Adopted Levels, Gammas dataset.

† From I(γ+ce) and α.

‡ Absolute intensity per 100 decays.

Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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