^{90}Zr IT decay (809.2 ms) 1990Me15

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, E. A. Mccutchan	NDS 165,1 (2020)	1-Mar-2020

Parent: ^{90}Zr: E=2319.000 *9*; $J^{\pi}=5^-$; $T_{1/2}$=809.2 ms *20*; %IT decay=100

α: Additional information 1.

^{90}Zr Levels

E(level)†	Jπ†	$T_{1/2}$†
0.0	0^+	stable
1760.74 *15*	0^+	61.3 ns *25*
2186.265 *19*	2^+	88 fs *3*
2319.000 *9*	5^-	809.2 ms *20*

† From the Adopted Levels.

^{90}Zr IT decay (809.2 ms) 1990Me15 (continued)

γ(^{90}Zr)

Iγ normalization: From ΣI(γ+ce)(to g.s.)=100. A sum of Iγ=ce out of the 2319-keV level gives a normalization of 0.0836, with larger uncertainty due to possibility of M4 admixture in the 132.7γ.

E_γ †	I_γ †‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.†	δ†	α	$I_{(\gamma+ce)}$ ‡	Comments
132.716 *18*	50.4 *5*	2319.000	5^-	2186.265	2^+	E3(+M4)	<0.07	2.97 *11*		α(K)=2.20 *8*; α(L)=0.644 *23*; α(M)=0.115 *5*; α(N)=0.0146 *6*; α(O)=0.000359 *24*
425.5 *2*	0.06 *1*	2186.265	2^+	1760.74	0^+	E2		0.00688		α(K)=0.00602 *9*; α(L)=0.000713 *10*; α(M)=0.0001239 *18*; α(N)=1.732×10^{-5} *25* α(O)=1.117×10^{-6} *16*
1760.70 *20*		1760.74	0^+	0.0	0^+	E0			0.060 *10*	$I_{(\gamma+ce)}$: from transition intensity balance.
2186.242 *25*	219 *2*	2186.265	2^+	0.0	0^+	E2		5.36×10^{-4}		α(K)=0.0001223 *18*; α(L)=1.325×10^{-5} *19*; α(M)=2.29×10^{-6} *4*; α(N)=3.27×10^{-7} *5*; α(O)=2.34×10^{-8} *4*
2318.959 *25*	1000 *2*	2319.000	5^-	0.0	0^+	E5		4.64×10^{-4}		α(K)=0.000408 *6*; α(L)=4.63×10^{-5} *7*; α(M)=8.04×10^{-6} *12*; α(N)=1.141×10^{-6} *16*; α(O)=7.97×10^{-8} *12*

† From ^{90}Nb ε decay.
‡ For absolute intensity per 100 decays, multiply by 0.0820 *4*.

$^{90}_{40}Zr_{50}$-2

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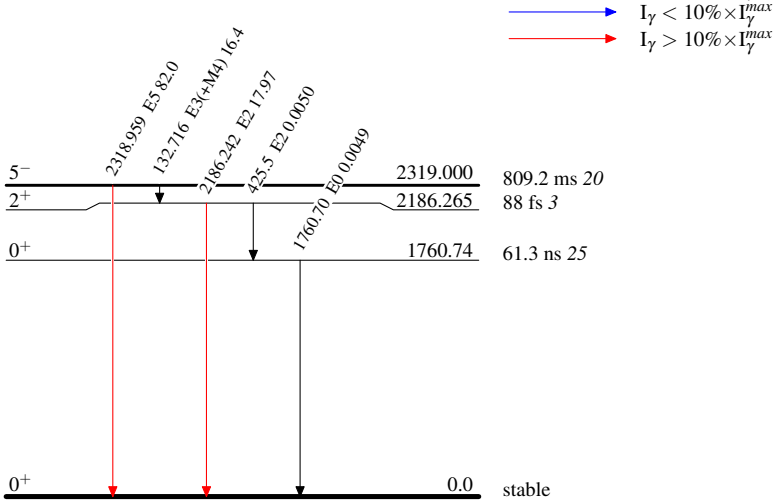
Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

%IT=100



$^{90}_{40}Zr_{50}$