^{99}Mo β^- decay 1992Go22

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 145, 25 (2017)	1-Jul-2017

Parent: ^{99}Mo: E=0; $J^\pi=1/2^+$; $T_{1/2}$=65.924 h *6*; Q(β^-)=1357.8 *9*; %β^- decay=100.0

Additional information 1.

The decay scheme is based on 1992Go22.

Measured: γ (1992Go22,1990Me15,1978MeZK); γ, $\gamma\gamma$, $\gamma\gamma(\theta)$ (1982Si16); γ, $\gamma\gamma$ (1969Co18); γ, $\gamma\gamma$ (1968Va14); γ (1980Di16); others: 1980Ya10, 1976Pr18, 1969Ba54 $\gamma\gamma(\theta)$ (1974Ga01,1973Bh02,1976Pr18,1972Ge04,1965An02,1970Gf01); ce, K x ray (1981Ge05,1973Le29,1971La12,1971Vo06,1971Mc02,1969Ba54,1969Ba03,1969Vu03,1969Ra01,1969Ag04, 1968Va14,1992Go22). Others: 1950Bu91, 1951Me18,1954Ca63, 1954Le53, 1954Va03, 1958Es69, 1965Cr02, 1965Cr03, 1968Az03, 2003La27.

β spectra measured by 1971Na01 using magnetic spectrometer. Deduced Eβ and shape factors. No evidence was found for a β group with endpoint higher than 1214 keV.

Differential $\beta\gamma$ directional correlation investigated by 1968Ap01.

γ Others: 1996Ci05.

^{99}Tc Levels

E(level)	J^π[†]	$T_{1/2}$	Comments
0	$9/2^+$	2.111×10^5 y *12*	$T_{1/2}$: adopted value.
140.5110 *10*	$7/2^+$	0.205 ns *4*	g=+1.280 *44* (1993Al23) E(level): From ^{99}Tc IT decay (6.0072 h). g=+1.39 *25* (1969In07, value recalculated in 1993Al23). Other: 1993Zh41. $T_{1/2}$: from 1993Al23. Other: 0.16 ns *2* ce(t) (1971Mc02); $T_{1/2}$<0.6 ns from γ(t) (1971Be73).
142.6836 *11*	$1/2^-$	6.0072 h *9*	%IT=99.9963 *6*; %β^-=0.0037 *6* $T_{1/2}$: From Adopted Levels, Gammas. E(level): From ^{99}Tc IT decay (6.0072 h).
181.0939 *10*	$5/2^+$	3.44 ns *3*	g=+1.446 *20* (1993Al23) Other values: g=+1.316 *25* (1971Wi08); +1.390 *17* (1995Hi06). $T_{1/2}$: from 1993Al23. Other value: ce(t) 3.61 ns 7 (1971Mc02). Others measured $\gamma\gamma$(t) or $\beta\gamma$(t): 3.36 ns *7* (1971Be73), 3.60 ns *9* (1971Bo13), 3.42 ns *10* (1968Ra22), 3.40 ns *10* (1968Se02), 3.59 ns *5* (1965An02), 3.45 ns *6* (1965Me08), 3.57 ns *5* (1959Bo43).
509.125 *11*	$3/2^-$		
534.44? *7*	$(3/2^+)$		
671.500 *11*	$3/2^-$		
761.950 *14*	$5/2^+$		
920.637 *10*	$1/2^+$	<0.1 ns	$T_{1/2}$: from $\beta\gamma$(t) (1968Se02). Others: <0.1 ns (1965Me08), <0.2 ns (1971Be73).
1004.075 *15*	$3/2^{(-)}$		
1072.23 *17*	$(7/2^+)$		
1129.123 *22*	$(3/2)^-$		
1141.862 *14*	$3/2^+$		
1172.22 *10*	$3/2^+$		
1198.88 *5*	$(3/2^-)$		

[†] Adopted values.

^{99}Mo β^- decay 1992Go22 (continued)

β^- radiations

E(decay)	E(level)	Iβ^-[†]	Log *ft*	Comments
(158.9 *9*)	1198.88	0.0021 *4*	8.67 *9*	av Eβ=42.9 *3*
(185.6 *9*)	1172.22	0.0019 *4*	8.93 *10*	av Eβ=50.8 *3*
(215.9 *9*)	1141.862	0.111 *3*	7.372 *14*	av Eβ=60.0 *3*
(228.7 *9*)	1129.123	0.012 *1*	8.42 *4*	av Eβ=63.9 *4* Eβ=245; Iβ=0.2 (1971Na01).
(353.7 *9*)	1004.075	0.146 *5*	7.952 *16*	av Eβ=104.4 *4*
(437.2 *9*)	920.637	16.4 *3*	6.210 *9*	av Eβ=133.2 *4* Eβ=450 keV *10*; Iβ=14 (1971Na01).
(686.3 *9*)	671.500	0.057 *3*	9.349 *23*	av Eβ=225.5 *4*
(848.7 *9*)	509.125	1.16 *2*	8.373 *8*	av Eβ=289.7 *4* Eβ=840 keV *5*; Iβ=2 (1971Na01).
(1215.1 *9*)	142.6836	82.2 *4*	7.105 *3*	av Eβ=442.9 *5* Eβ=1214 keV *1*; Iβ=84 (1971Na01). Iβ^-: The low uncertainty in Iβ is due to the covariant relation between the β^- intensity and the decay-scheme normalization factor.

[†] Absolute intensity per 100 decays.

^{99}Mo β^- decay 1992Go22 (continued)

$\gamma(^{99}Tc)$

Iγ normalization: From Σ(I(γ+ce) to g.s.)=100% if no β^- feeding to the g.s. and 140.5-keV levels, as expected from the high degree of forbiddenness; using Iγ(140.5γ)=744 (11) (in equilibrium with ^{99}Tc(6.0 h) and relative to Iγ(739γ)=100),

The large discrepancies of the measurements of γγ(θ) involving the 181 level as intermediate state are probably due to perturbations influenced by the long half-life of the 181 level. Studying this effect, 1974Ga01 obtained for the 3/2(740γ)5/2(181γ)9/2 cascade: A_2=+0.126 *4*, A_4=−0.005 *6* (cubic metal); A_2=+0.123 *3*, A_4=−0.010 *4* (dilute solution); A_2=+0.100 *4*, A_4=−0.006 *6* (original solution); A_2=+0.061 *3*, A_4=−0.004 *5* (Mo(03) powder); a similar result was obtained by 1982Si16 who studied the correlation with a solid source and two different solutions; others: 1969Ja17, 1968ZaZZ, 1959Bo43, 1958Ra16.

The influence of the chemical environment on the conversion electron spectrum has been investigated by 1983Dr15 and 1982Ge01.

Investigations of the hyperfine field by use of γγ(H,θ): 1972Ra44, 1971Wi08.

Measurements of x-rays: E(Kα_1 x ray)=18.3671, E(Kα_2 x ray)=18.2506 *6* (1968Va14) I(Kα x ray)=(78.7 *32*)×Iγ normalization, I(Kβ x ray)=(14.3 *6*)×Iγ normalization (1980Di16); I(Kα x ray)=(79.8 *25*)*NR (1992Go22). See 1981Ge05 for investigation of M x ray, xn, and Auger spectra. The influence of the chemical state on I(Kα x ray), I(Kβ x ray) has been investigated by 1981Yo08.

E_γ[†]	I_γ[‡b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[a]	α[&]	Comments
2.1726 *4*		142.6836	1/2$^-$	140.5110	7/2$^+$	E3		1.4×10^{10}	α(M)=1.211×10^{10} *17* α(N)=1.596×10^9 *23*; α(O)=3.49×10^4 *5* M2:M3:(M4+M5):(N2+N3):(N4+N5+O1)= 57.0 *18*:100:47.2 *10*:26.1 *23*:4.4 *5* (1981Ge05). M2:M3:(M4+M5):N=56.4 *20*:100:47.6 *20*:29 *5*; M4/M5=0.56 *13* (1971La12). $I_{(\gamma+ce)}$: 792 *13* in equilibrium deduced from decay-scheme intensity balance. E_γ: from ce (1981Ge05). Others: 2.17 *1* (1971La12), 2.15 *3* (1957Fr35).
40.58323 *17*	8.51 *25*	181.0939	5/2$^+$	140.5110	7/2$^+$	M1(+E2)	+0.008 *8*	3.72	α(K)=3.24 *5*; α(L)=0.394 *6*; α(M)=0.0717 *11* α(N)=0.01135 *17*; α(O)=0.000734 *11* I_γ: From Iγ=8.68 *27* (1980Di16), Iγ=8.6 *5* (1990Me15), Iγ=8.49 *25*(1992Go22), recommended in 2014Ch12. Other: 7.7 *6* (1982Si16). E_γ: Value adopted in 2000He14. Eγ=40.5845 *16* (1990Me15, 1978MeZK). Mult.: α(K)exp=3.2 *2* (1969Ra01). Other: 3.9 *5* (1969Ba54); K/L=8.3 *9* (1969Ba03). δ: from γγ(θ) (1974Ga01); ≤0.025 (1982Si16).
[x]89.4 *2* 140.511 *1*	0.025[#] *17*	140.5110	7/2$^+$	0	9/2$^+$	M1+E2	+0.129 *35*	0.113 *3*	α(K)=0.0988 *25*; α(L)=0.0120 *5*; α(M)=0.00218 *8* α(N)=0.000345 *12*; α(O)=2.22×10^{-5} *5* K/L=7.8 *3* (weighted average of 8.1 *5* (1969Ba03)

$^{99}_{43}Tc_{56}$-3

^{99}Mo β^- decay 1992Go22 (continued)

$\gamma(^{99}Tc)$ (continued)

E_γ[†]	I_γ[‡][b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[a]	α[&]	Comments
									and 7.70 *3* (1968Va14)); L1/L2=12 *4*; L1/L3=18 *7*; L2/L3=1.7 *7* (1969Ag04). E_γ: from curved-crystal measurement (1981He15); value adopted in 2000He14. Others: E=140.512 *4* (1972Ga37), 140.511 *6* (1969Co18), 140.466 *15* (1990Me15). I_γ: Eγ=140.511, Iγ=744 *11*, from Iγ=704 *45* (1969Co18), Iγ=730 (1974HeYW), Iγ=743 *19* (1978MoYU), Iγ=747 *12* (1980Di16), Iγ=759 *20* (1980Ya10), Iγ=686 *49* (1982Si16), Iγ=752 *28* (1985Ch42), Iγ=755 *26* (1990Me15), and Iγ=739 *11* (1992Go22). recommended in 2014Ch12. I_γ: Iγ(140.5)=744 *11* x 0.1220 *16*=90.8% *2*, per 100 decays of ^{99}Mo in equilibrium with ^{99}Tc(6.0 h). Uncertainty of 0.2% is due to the covariant relation between the relative γ-ray intensity (744) and the normalization factor (0.1220), the latter deduced from the decay scheme by evaluators . Additional information 2. δ: unweighted average of +0.118 *6* from $\gamma\gamma(\theta)$ (1974Ga01), 0.194 *33* from α(exp), and 0.07 *7* from α(K)exp; 0.31 *2* (1982Si16). Mult.: α(K)exp: weighted average of 0.093 *6*, 0.096 *6* (both 1971Vo06), 0.094 *8* (1969Vu03), and 0.104 *7* (1968Va14); α(exp): weighted average of 0.118 *3* (1973Le29), and 0.122 *5* (1969Vu03).
142.675 *25*		142.6836	1/2$^-$	0	9/2$^+$	M4		40.2	α(K)=29.1 *4*; α(L)=9.06 *13*; α(M)=1.774 *25* α(N)=0.269 *4*; α(O)=0.01069 *15* E_γ: From 1990Me15 and 1978MeZK. I_γ: Iγ=0.183 *11*, from Iγ=0.195 *40*(1968Va14), Iγ=0.149 *29* (1980Di16), and Iγ=189 *11*(1990Me15), recommended in 2014Ch12. I_γ: 0.15 *2* from Iγ(142.6)/Iγ(140.5)=0.00020 *2* in equilibrium deduced from K(142.6)/K(140.5)=0.075 *8* (1969Ag04) (from ^{99}Tc it decay); others: Iγ(142.6γ)/Iγ(140.5γ)=0.00025 *3* (1990Me15,1978MeZK), 0.00020 *3* (1980Di16), 0.00030 *6* (1968Va14), from γ-spectra in equilibrium. Mult.: α(K)exp=29 *3*; K/L=2.9 *5* (1969Ba03). α(K)exp: weighted average of 31 *3* (1969Ba54) and 23 *6* (1968Va14).
158.782 *15*	0.144 *6*	920.637	1/2$^+$	761.950	5/2$^+$				I_γ: From Iγ=0.10 *3* (1969Co18), Iγ=0.095 *30* (1974HeYW), Iγ=0.112 *15* (1978MoYU), Iγ=0.11 *4* (1982Si16), Iγ=0.139 *8* (1990Me15), Iγ=0.156 *6* (1992Go22), Iγ=0.146 *7* (2003La27), recommended in 2014Ch12.
162.370 *15*	0.098 *5*	671.500	3/2$^-$	509.125	3/2$^-$				I_γ: From Iγ=0.073 *22* (1974HeYW), Iγ=0.067 *15* (1978MoYU), Iγ=0.078 *13* (1982Si16), Iγ=0.097 *5* (1990Me15), Iγ=0.098 *5* (1992Go22), Iγ=0.110 *6* (2003La27), recommended in 2014Ch12.
181.068 *8*	49.6 *7*	181.0939	5/2$^+$	0	9/2$^+$	E2(+M3)	−0.002 *7*	0.1480	α(K)=0.1252 *18*; α(L)=0.0188 *3*; α(M)=0.00344 *5* α(N)=0.000523 *8*; α(O)=2.44×10^{-5} *4* I_γ: From Iγ=48.7 *23* (1968Va14), Iγ=49.9 *34* (1969Co18), Iγ=49.6 *42* (1974HeYW), Iγ=49.1 *16* (1978MoYU), Iγ=50.1 *7* (1980Di16),

$^{99}_{43}Tc_{56}$-4

^{99}Mo β^- decay 1992Go22 (continued)

$\gamma(^{99}Tc)$ (continued)

E_γ [†]	I_γ [‡ b]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	δ [a]	α [&]	Comments
									Iγ=49.8 (33) (1982Si16), Iγ=48.7 *13* (1985Ch42), Iγ=50.3 *17* (1980Me15), Iγ=49.4 *8* (1992Go22), Iγ=49.5 *21* (2003La27), recommended in 2014Ch12. δ: from $\gamma\gamma(\theta)$ (1974Ga01). Mult.: α(K)exp=0.126 *7* (weighted average of 0.140 *20* (1969Ba54), 0.130 *12* (1968Va14) and 0.12 *1* (1971Vo06)); K/L=6.8 *7* (1969Ba03).
242.29 *8*	0.021 *4*	1004.075	$3/2^{(-)}$	761.950	$5/2^+$	[E1]		0.01049	α(K)=0.00922 *13*; α(L)=0.001053 *15*; α(M)=0.000190 *3* α(N)=3.00×10^{-5} *5*; α(O)=1.92×10^{-6} *3*
249.03 *3*	0.032 *4*	920.637	$1/2^+$	671.500	$3/2^-$				
366.421 *15*	9.84 *15*	509.125	$3/2^-$	142.6836	$1/2^-$	M1		0.00902	α(K)=0.00791 *11*; α(L)=0.000914 *13*; α(M)=0.0001656 *24* α(N)=2.64×10^{-5} *4*; α(O)=1.771×10^{-6} *25* I$_\gamma$: From Iγ=10.6 *8* (1968Va14), Iγ=10.7 *6* (1969Co18), Iγ=10.0 *9* (1974HeYW), Iγ=9.8 *3* (1978MoYU), Iγ=9.52 *32* (1980Di16), Iγ=9.8 *8* (1982Si16), Iγ=9.92 *25* (1990Me15), Iγ=9.82 *15* (1992Go22), Iγ=9.8 *4* (2003La27), recommended in 2014Ch12. Mult.: α(K)exp=0.0076 *10* (1969Ba54) (note obvious misprint in 1969Ba54).
380.13 *8*	0.086 *7*	1141.862	$3/2^+$	761.950	$5/2^+$	M1+E2	1.3 *6*	0.0104 *11*	α(K)=0.0091 *9*; α(L)=0.00111 *14*; α(M)=0.000202 *25* α(N)=3.2×10^{-5} *4*; α(O)=1.94×10^{-6} *16* δ: from α(K)exp. Mult.: α(K)exp=0.009 *1* (1969Ba54).
391.7[c] *4*	0.026 *5*	534.44?	$(3/2^+)$	142.6836	$1/2^-$				E$_\gamma$: from 1992Go22. Not in 1990Me15.
410.27 *10*	0.016 *3*	1172.22	$3/2^+$	761.950	$5/2^+$	M1(+E2)	0.5 *5*	0.0073 *8*	α(K)=0.0064 *6*; α(L)=0.00075 *10*; α(M)=0.000136 *17* α(N)=2.2×10^{-5} *3*; α(O)=1.41×10^{-6} *11* I$_\gamma$: from 1990Me15. δ: from α(K)exp. Mult.: α(K)exp=0.006 *1* from 1969Ba54.
411.491 *15*	0.123 *6*	920.637	$1/2^+$	509.125	$3/2^-$	E1		0.00255	α(K)=0.00225 *4*; α(L)=0.000254 *4*; α(M)=4.59×10^{-5} *7* α(N)=7.28×10^{-6} *11*; α(O)=4.78×10^{-7} *7* I$_\gamma$: From Iγ=0.13 *8* (1969Co18), Iγ=0.134 *23* (1978MoYU), Iγ=0.14 *2* (1982Si16), Iγ=0.120 *6* (1990Me15), and Iγ=0.118 *30* (2003La27), recommended in 2014Ch12. Mult.: α(K)exp=0.003 *1* (1969Ba54).
[x]455.84 *13*	0.011[#] *5*								
457.60 *3*	0.067 *5*	1129.123	$(3/2)^-$	671.500	$3/2^-$	M1,E2		0.0059 *7*	α(K)=0.0052 *6*; α(L)=0.00062 *9*; α(M)=0.000112 *16* α(N)=1.76×10^{-5} *24*; α(O)=1.12×10^{-6} *10* Mult.: α(K)exp=0.0057 *6* from 1969Ba54.
469.63 *7*	0.022 *4*	1004.075	$3/2^{(-)}$	534.44?	$(3/2^+)$				
[x]490.53 *15*	0.009[#] *3*								
528.788 *15*	0.436 *15*	671.500	$3/2^-$	142.6836	$1/2^-$	M1,E2		0.0040 *3*	α(K)=0.00350 *24*; α(L)=0.00041 *4*; α(M)=7.5×10^{-5} *8*

^{99}Mo β^- decay 1992Go22 (continued)

$\gamma(^{99}Tc)$ (continued)

E_γ [†]	I_γ [‡ b]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	α [&]	Comments
								α(N)=1.18×10^{-5} *11*; α(O)=7.6×10^{-7} *4* I_γ: From Iγ=0.39 *5* (1968Va14), Iγ=0.49 *5* (1969Co18), Iγ=0.36 *4* (1974HeYW), Iγ=0.43 *6* (1978MoYU), Iγ=0.44 *4* (1982Si16), Iγ=0.447 *15*, Iγ=0.47 *2* (1992Go22), Iγ=0.411 *16* (2003La27), recommended in 2014Ch12. Mult.: α(K)exp=0.005 *1* (1969Ba54).
537.79 *15*	0.027 *5*	1072.23	(7/2$^+$)	534.44?	(3/2$^+$)			
580.51 *7*	0.026 *4*	761.950	5/2$^+$	181.0939	5/2$^+$			
[x]581.30 *12*	0.008[#] *4*							Mult.: M1,E2 from α(K)exp=0.0021 *4* (1969Ba54).
[x]599.6 *5*	0.017 *8*							E_γ,I_γ: from 1982Si16.
620.03 *4*	0.229 *11*	1129.123	(3/2)$^-$	509.125	3/2$^-$			I_γ: From Iγ=0.21 *3* (1968Va14), Iγ=0.217 *22* (1969Co18), Iγ=0.19 *6* (1974HeYW), Iγ=0.26 *2* (1982Si16), Iγ=0.232 *11* (1990Me15), Iγ=0.24 *4* (1992Go22), Iγ=0.222 *12* (2003La27), recommended in 2014Ch12.
621.771 *24*	0.15 *3*	761.950	5/2$^+$	140.5110	7/2$^+$			
689.6 *9*	0.0035 *15*	1198.88	(3/2$^-$)	509.125	3/2$^-$			E_γ,I_γ: from 1969Co18.
739.500 *17*	100	920.637	1/2$^+$	181.0939	5/2$^+$	E2	1.71×10^{-3}	α(K)=0.001501 *21*; α(L)=0.0001756 *25*; α(M)=3.18×10^{-5} *5* α(N)=5.03×10^{-6} *7*; α(O)=3.25×10^{-7} *5* Mult.: α(K)exp=0.0016 *3* (weighted average of 0.0017 *4* (1969Ba54) and 0.0016 *4* (1968Va14)); E2(+M1) from α(K)exp but dipole excluded by J^π.
761.77 *8*	0.0033 *3*	761.950	5/2$^+$	0	9/2$^+$			
777.921 *20*	35.3 *5*	920.637	1/2$^+$	142.6836	1/2$^-$	E1	5.85×10^{-4}	α(K)=0.000515 *8*; α(L)=5.76×10^{-5} *8*; α(M)=1.040×10^{-5} *15* α(N)=1.654×10^{-6} *24*; α(O)=1.111×10^{-7} *16* I_γ: From Iγ=35.1 *24* (1968Va14), Iγ=34.9 *20* (1969Co18), Iγ=35.8 *30* (1974HeYW), Iγ=35.5 *10* (1978MoYU), Iγ=35.8 *8* (1980Di16), Iγ=34.8 *19* (1982Si16), Iγ=35.3 *12* (1990Me15), Iγ=35.1 *5* (1992Go22), Iγ=35.13 *12* (2003La27), recommended in 2014Ch12. Mult.: α(K)exp=0.00051 (1969Ba54).
822.972 *15*	1.10 *2*	1004.075	3/2$^{(-)}$	181.0939	5/2$^+$	E1	5.21×10^{-4}	α(K)=0.000459 *7*; α(L)=5.12×10^{-5} *8*; α(M)=9.24×10^{-6} *13* α(N)=1.472×10^{-6} *21*; α(O)=9.90×10^{-8} *14* I_γ: From Iγ=1.04 *8* (1968Va14), Iγ=1.11 *8* (1969Co18), Iγ=1.09 *5* (1978MoYU), Iγ=1.09 *5* (1980Di16), Iγ=1.10 *7* (1982Si16), Iγ=1.06 *4* (1970Me15), Iγ=1.10 *2* (1992Go22), Iγ=1.12 *5* (2003La27), recommended in 2014Ch12. Mult.: α(K)exp=0.0004 *1* from 1969Ba54.
861.2 *9*	0.006 *3*	1004.075	3/2$^{(-)}$	142.6836	1/2$^-$			E_γ: from 1992Go22. Not in 1990Me15. I_γ: 0.005 *3* (1982Si16), 0.006 *2* (1969Co18).
960.754 *20*	0.78 *2*	1141.862	3/2$^+$	181.0939	5/2$^+$			
986.44 *4*	0.012 *4*	1129.123	(3/2)$^-$	142.6836	1/2$^-$			
1001.343 *18*	0.045 *4*	1141.862	3/2$^+$	140.5110	7/2$^+$			α(K)=0.00183 Mult.: M2(+E3) based on α(K)exp=0.0018 *3* from 1969Ba54 is not consistent with $\Delta\pi$.

$^{99}_{43}Tc_{56}$-6

^{99}Mo β^- decay 1992Go22 (continued)

$\gamma(^{99}Tc)$ (continued)

E_γ †	I_γ ‡ b	E_i(level)	J_i^π	E_f	J_f^π	Comments
1017.0 *5*	0.005 *2*	1198.88	$(3/2^-)$	181.0939	$5/2^+$	E_γ: from 1992Go22. Not in 1990Me15.
1056.20 *5*	0.0089 *7*	1198.88	$(3/2^-)$	142.6836	$1/2^-$	

† From 1990Me15 and 1978MeZK, if not indicated otherwise.
‡ From 1992Go22, if not indicated otherwise.
# From 1990Me15.
@ From $\gamma\gamma(\theta)$ and α(K)exp, if not noted otherwise.
& Additional information 3.
a If No value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
b For absolute intensity per 100 decays, multiply by 0.1220 *16*.
c Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

$^{99}_{43}Tc_{56}$-7

^{99}Mo β^- decay 1992Go22

Decay Scheme

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