^{140}Te β^- decay 2017Mo19

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 154, 1 (2018)	20-Nov-2018

Parent: ^{140}Te: E=0.0; $J^\pi=0^+$; $T_{1/2}$=348 ms *5*; Q(β^-)=7030 *60*; %β^- decay=100.0
^{140}Te-$T_{1/2}$: Adopted value.
^{140}Te-Q(β^-): From 2017Wa10. 2017Mo19 used 7240 keV *180*.
2017Mo19 compiled for XUNDL compilation by B. Singh (McMaster).
2017Mo19: ^{140}Te produced in ^{9}Be(^{238}U,F) per nucleon using BigRIPS and Zero-Degree spectrometers at RIBF-RIKEN facility. Measured reaction products using WAS3ABi system of Si detectors, Eγ, Iγ, $\beta\gamma$- and $\gamma\gamma$-coin, and half-life of ^{140}Te decay using EURICA, HPGe cluster array. Shell-model calculations for level energies and J^π values.
First level structure of ^{140}I proposed in this work. All data are from 2017Mo19 unless noted otherwise.
Additional information 1.

^{140}I Levels

E(level)†	J^π‡	Comments
0.0+x	(2$^-$)	E(level),J^π: based on beta-decay feeding from ^{140}Te parent 0$^+$ g.s. and γ transitions from the levels populated by β^- decay, 2017Mo19 propose this level with J^π=(2$^-$), different from the known (4$^-$) ^{140}I g.s. with half-life of 0.86 s. Energy and half-life of the (2$^-$) state are not given by 2017Mo19, but the authors refer about this state to a private communication (their reference 17). Consequently this level is assumed at higher energy than the (4$^-$) g.s. (hence this level scheme is built on the 0.0+x level).
5.47+x *15*	(1$^-$)	
43.25+x *13*	(1$^-$,2$^-$)	
51.48+x *10*	(1$^-$,2$^-$)	
107.47+x *11*	(0$^-$,1$^-$,2$^-$)	
120.94+x *9*	(1$^-$,2$^-$)	
142.31+x *13*	(1$^-$,2$^-$)	
185.68+x *11*	(1$^-$,2$^-$)	
234.94+x *13*	(0$^-$,1$^-$,2$^-$)	
342.07+x *13*	(0$^-$,1$^-$)	
459.37+x *23*	(1$^-$,2$^-$)	
490.21+x *13*	(1$^-$,2$^-$)	
639.31+x *16*	(0$^-$,1$^-$,2$^-$)	
727.70+x *13*	(0$^-$,1$^-$,2$^-$)	
842.12+x *12*	(0$^-$,1$^-$,2$^-$)	
881.46+x *17*	(0$^-$,1$^-$,2$^-$)	
925.44+x *10*	(1$^+$)	Proposed configuration=π3/2[541]$\otimes\nu$1/2[541] (2017Mo19).
1188.00+x *12*	(1$^+$)	
1786.91+x *13*	(1$^+$)	

† From a least-squares fit to Eγ values, assuming 0.2 keV uncertainty for Eγ when not stated, except 0.5 keV for 875.0γ as it is fitted poorly in the level scheme. Values given by 2017Mo19 are fairly close to those listed here, but with uncertainties that are generally higher by a factor of 2-5.
‡ Assigned by 2017Mo19 based on their shell-model calculations, and partly based on log *ft* values.

^{140}Te β^- decay 2017Mo19 (continued)

β^- radiations

E(decay)	E(level)	Iβ^- [†#]	Log *ft* [†]	Comments
(3×10^3 [@] *3*)	1786.91+x	1.25 [‡] *21*	5.88 *8*	av Eβ=2292 *29*
(3×10^3 [@] *3*)	1188.00+x	8.5 [‡] *5*	5.25 *4*	av Eβ=2575 *29*
(3×10^3 [@] *3*)	925.44+x	30.1 [‡] *14*	4.79 *3*	av Eβ=2699 *29*
(3×10^3 [@] *3*)	881.46+x	2.48 *23*	5.89 *5*	av Eβ=2720 *29*
(3×10^3 [@] *3*)	842.12+x	2.3 *5*	5.93 *10*	av Eβ=2738 *29*
(3×10^3 [@] *3*)	639.31+x	0.69 *13*	6.52 *9*	av Eβ=2834 *29*
(3×10^3 [@] *3*)	459.37+x	3.2 *3*	5.90 *5*	av Eβ=2919 *29*
(3×10^3 [@] *3*)	342.07+x	13.1 *8*	5.33 *4*	av Eβ=2974 *29*
(3×10^3 [@] *4*)	234.94+x	0.9 *5*	6.52 *25*	av Eβ=3024 *29*
(3×10^3 [@] *4*)	142.31+x	1.3 *4*	6.39 *14*	av Eβ=3068 *29*
(3×10^3 [@] *4*)	120.94+x	6.5 *16*	5.69 *11*	av Eβ=3078 *29*
(3×10^3 [@] *4*)	107.47+x	7.1 *18*	5.66 *12*	av Eβ=3084 *29*
(3×10^3 [@] *4*)	43.25+x	4.3 *25*	5.9 *3*	av Eβ=3115 *29*

† Obtained by evaluator and in close agreement with the values of 2017Mo19 (except for ΔIβ where 2017Mo19 values are sensibly smaller, typically by a factor of 10). The decay scheme normalization procedure is not clearly stated in 2017Mo19. Note that total β feeding adds to 82% *4* (81% *1* in 2017Mo19). No experimental information exists about %β^-n decay of ^{140}Te, although, five γ rays of approximate energies of 99, 105, 130, 145 and 210 keV are labeled as belonging to ^{139}I from ^{140}Te decay in spectral Fig. 1 of 2017Mo19.

‡ Proposed by 2017Mo19 as a Gamow-Teller transition.

\# Absolute intensity per 100 decays.

@ Estimated for a range of levels.

$\gamma(^{140}I)$

Iγ normalization: From equating Iβ=30.1% *4* with summed I(γ+ce)=114 *3* for 925.5 level, both values from 2017Mo19, although it is not clear to the evaluator how the %Iβ feedings given in Fig. 4 of 2017Mo19 were determined from Iγ values. Note that total β feeding adds to 82% *4*.

E_γ	I_γ ‡	E_i(level)	J^π_i	E_f	J^π_f	Mult.	α †	$I_{(\gamma+ce)}$ ‡	Comments
44.0 *10*	7.1 *10*	43.25+x	(1⁻,2⁻)	0.0+x	(2⁻)	[M1]	8.0 *6*	64.2 *74*	ce(K)/(γ+ce)=0.76 *3*; ce(L)/(γ+ce)=0.101 *9*; ce(M)/(γ+ce)=0.0204 *20* ce(N)/(γ+ce)=0.0041 *4*; ce(O)/(γ+ce)=0.00048 *5* α(K)=6.9 *5*; α(L)=0.91 *7*; α(M)=0.184 *14* α(N)=0.037 *3*; α(O)=0.0043 *3*
51.4	16.4 *10*	51.48+x	(1⁻,2⁻)	0.0+x	(2⁻)	[M1]	5.10	100 *6*	ce(K)/(γ+ce)=0.718 *6*; ce(L)/(γ+ce)=0.0949 *17*; ce(M)/(γ+ce)=0.0191 *4* ce(N)/(γ+ce)=0.00387 *7*; ce(O)/(γ+ce)=0.000451 *9* α(K)=4.38 *7*; α(L)=0.579 *9*; α(M)=0.1167 *17* α(N)=0.0236 *4*; α(O)=0.00275 *4*
56.0 *1*	6.8 *10*	107.47+x	(0⁻,1⁻,2⁻)	51.48+x	(1⁻,2⁻)	[M1]	3.97	33.6 *50*	ce(K)/(γ+ce)=0.686 *6*; ce(L)/(γ+ce)=0.0905 *17*; ce(M)/(γ+ce)=0.0182 *4* ce(N)/(γ+ce)=0.00369 *7*; ce(O)/(γ+ce)=0.000431 *9* α(K)=3.41 *5*; α(L)=0.450 *7*; α(M)=0.0908 *14* α(N)=0.0184 *3*; α(O)=0.00214 *4*
77.7 *1*	18.9 *22*	120.94+x	(1⁻,2⁻)	43.25+x	(1⁻,2⁻)	[M1]	1.539	47.9 *55*	ce(K)/(γ+ce)=0.521 *5*; ce(L)/(γ+ce)=0.0684 *11*; ce(M)/(γ+ce)=0.01379 *24* ce(N)/(γ+ce)=0.00279 *5*; ce(O)/(γ+ce)=0.000326 *6* α(K)=1.322 *20*; α(L)=0.174 *3*; α(M)=0.0350 *5* α(N)=0.00708 *11*; α(O)=0.000828 *12*
102.0	30.7 *20*	107.47+x	(0⁻,1⁻,2⁻)	5.47+x	(1⁻)	[M1]	0.707	52.4 *34*	ce(K)/(γ+ce)=0.356 *4*; ce(L)/(γ+ce)=0.0466 *7*; ce(M)/(γ+ce)=0.00939 *15* ce(N)/(γ+ce)=0.00190 *3*; ce(O)/(γ+ce)=0.000222 *4* α(K)=0.608 *9*; α(L)=0.0795 *12*; α(M)=0.01603 *23* α(N)=0.00324 *5*; α(O)=0.000379 *6*
113.8 *2*	5.5 *8*	234.94+x	(0⁻,1⁻,2⁻)	120.94+x	(1⁻,2⁻)	[M1]	0.518	8.4 *12*	ce(K)/(γ+ce)=0.294 *4*; ce(L)/(γ+ce)=0.0384 *6*; ce(M)/(γ+ce)=0.00773 *12* ce(N)/(γ+ce)=0.001564 *25*; ce(O)/(γ+ce)=0.000183 *3* α(K)=0.446 *7*; α(L)=0.0582 *9*; α(M)=0.01174 *18* α(N)=0.00238 *4*; α(O)=0.000278 *5*
120.9 *1*	4.29 *49*	120.94+x	(1⁻,2⁻)	0.0+x	(2⁻)	[M1]	0.437	6.17 *71*	ce(K)/(γ+ce)=0.262 *3*; ce(L)/(γ+ce)=0.0341 *5*; ce(M)/(γ+ce)=0.00688 *11* ce(N)/(γ+ce)=0.001393 *21*; ce(O)/(γ+ce)=0.0001630 *25* α(K)=0.376 *6*; α(L)=0.0491 *7*; α(M)=0.00989 *14* α(N)=0.00200 *3*; α(O)=0.000234 *4*
134.2 *1*	10.2 *8*	185.68+x	(1⁻,2⁻)	51.48+x	(1⁻,2⁻)	[M1]	0.327	13.6 *11*	ce(K)/(γ+ce)=0.2118 *24*; ce(L)/(γ+ce)=0.0276 *4*; ce(M)/(γ+ce)=0.00556 *8* ce(N)/(γ+ce)=0.001125 *17*; ce(O)/(γ+ce)=0.0001317 *20*

From ENSDF

$\gamma(^{140}I)$ (continued)

E_γ	I_γ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α†	$I_{(\gamma+ce)}$‡	Comments
142.4	12.4 *9*	142.31+x	(1^-,2^-)	0.0+x	(2^-)	[M1]	0.277	15.8 *12*	α(K)=0.281 *4*; α(L)=0.0366 *6*; α(M)=0.00737 *11* α(N)=0.001492 *22*; α(O)=0.0001747 *25* ce(K)/(γ+ce)=0.1866 *22*; ce(L)/(γ+ce)=0.0243 *4*; ce(M)/(γ+ce)=0.00489 *7* ce(N)/(γ+ce)=0.000990 *15*; ce(O)/(γ+ce)=0.0001159 *17*
185.6	12.3 *10*	185.68+x	(1^-,2^-)	0.0+x	(2^-)	[M1]	0.1338	13.9 *11*	α(K)=0.238 *4*; α(L)=0.0310 *5*; α(M)=0.00624 *9* α(N)=0.001264 *18*; α(O)=0.0001480 *21* ce(K)/(γ+ce)=0.1016 *13*; ce(L)/(γ+ce)=0.01313 *19*; ce(M)/(γ+ce)=0.00264 *4* ce(N)/(γ+ce)=0.000535 *8*; ce(O)/(γ+ce)=6.28×10^{-5} *9*
198.1	21.1 *16*	925.44+x	(1^+)	727.70+x	(0^-,1^-,2^-)	[E1]	0.0303	21.7 *16*	α(K)=0.1152 *17*; α(L)=0.01488 *21*; α(M)=0.00300 *5* α(N)=0.000607 *9*; α(O)=7.11×10^{-5} *10* ce(K)/(γ+ce)=0.0254 *4*; ce(L)/(γ+ce)=0.00321 *5*; ce(M)/(γ+ce)=0.000641 *9* ce(N)/(γ+ce)=0.0001286 *18*; ce(O)/(γ+ce)=1.466×10^{-5} *21*
229.4	6.02 *59*	234.94+x	(0^-,1^-,2^-)	5.47+x	(1^-)	[M1]	0.0756	6.47 *63*	α(K)=0.0262 *4*; α(L)=0.00330 *5*; α(M)=0.000661 *10* α(N)=0.0001325 *19*; α(O)=1.510×10^{-5} *22* ce(K)/(γ+ce)=0.0606 *8*; ce(L)/(γ+ce)=0.00778 *11*; ce(M)/(γ+ce)=0.001566 *22* ce(N)/(γ+ce)=0.000317 *5*; ce(O)/(γ+ce)=3.72×10^{-5} *6*
234.5	23.2 *15*	342.07+x	(0^-,1^-)	107.47+x	(0^-,1^-,2^-)	[M1]	0.0713	24.9 *16*	α(K)=0.0652 *10*; α(L)=0.00837 *12*; α(M)=0.001684 *24* α(N)=0.000341 *5*; α(O)=4.00×10^{-5} *6* ce(K)/(γ+ce)=0.0574 *8*; ce(L)/(γ+ce)=0.00737 *11*; ce(M)/(γ+ce)=0.001482 *21* ce(N)/(γ+ce)=0.000300 *5*; ce(O)/(γ+ce)=3.52×10^{-5} *5*
342.1	26.1 *16*	342.07+x	(0^-,1^-)	0.0+x	(2^-)	[M1]	0.0266	26.8 *16*	α(K)=0.0615 *9*; α(L)=0.00789 *11*; α(M)=0.001588 *23* α(N)=0.000322 *5*; α(O)=3.77×10^{-5} *6* ce(K)/(γ+ce)=0.0224 *3*; ce(L)/(γ+ce)=0.00284 *4*; ce(M)/(γ+ce)=0.000570 *8* ce(N)/(γ+ce)=0.0001154 *17*; ce(O)/(γ+ce)=1.358×10^{-5} *19*
351.9	12.0 *9*	459.37+x	(1^-,2^-)	107.47+x	(0^-,1^-,2^-)	[M1]	0.0247	12.3 *9*	α(K)=0.0230 *4*; α(L)=0.00291 *4*; α(M)=0.000585 *9* α(N)=0.0001185 *17*; α(O)=1.394×10^{-5} *20* ce(K)/(γ+ce)=0.0208 *3*; ce(L)/(γ+ce)=0.00264 *4*; ce(M)/(γ+ce)=0.000531 *8* ce(N)/(γ+ce)=0.0001075 *15*; ce(O)/(γ+ce)=1.264×10^{-5} *18*
382.6	3.03 *19*	490.21+x	(1^-,2^-)	107.47+x	(0^-,1^-,2^-)	[M1]	0.0200	3.09 *19*	α(K)=0.0214 *3*; α(L)=0.00271 *4*; α(M)=0.000544 *8* α(N)=0.0001102 *16*; α(O)=1.296×10^{-5} *19* ce(K)/(γ+ce)=0.01693 *24*; ce(L)/(γ+ce)=0.00214 *3*; ce(M)/(γ+ce)=0.000430 *6* ce(N)/(γ+ce)=8.71×10^{-5} *13*; ce(O)/(γ+ce)=1.024×10^{-5} *15*
									α(K)=0.01727 *25*; α(L)=0.00218 *3*; α(M)=0.000438 *7* α(N)=8.88×10^{-5} *13*; α(O)=1.045×10^{-5} *15*

γ(^{140}I) (continued)

E_γ	I_γ‡	E_i(level)	J^π_i	E_f	J^π_f	Mult.	α†	Comments
435.2 *1*	2.34 *51*	925.44+x	(1$^+$)	490.21+x	(1$^-$,2$^-$)	[E1]	0.00389	α(K)=0.00337 *5*; α(L)=0.000415 *6*; α(M)=8.30×10^{-5} *12* α(N)=1.675×10^{-5} *24*; α(O)=1.95×10^{-6} *3*
497.0 *1*	2.59 *47*	639.31+x	(0$^-$,1$^-$,2$^-$)	142.31+x	(1$^-$,2$^-$)	[M1]	0.01039	α(K)=0.00899 *13*; α(L)=0.001126 *16*; α(M)=0.000226 *4* α(N)=4.58×10^{-5} *7*; α(O)=5.40×10^{-6} *8*
583.3 *2*	2.15 *53*	925.44+x	(1$^+$)	342.07+x	(0$^-$,1$^-$)	[E1]	0.00197	α(K)=0.001708 *24*; α(L)=0.000208 *3*; α(M)=4.16×10^{-5} *6* α(N)=8.41×10^{-6} *12*; α(O)=9.82×10^{-7} *14*
620.3 *1*	7.58 *87*	727.70+x	(0$^-$,1$^-$,2$^-$)	107.47+x	(0$^-$,1$^-$,2$^-$)	[M1]	0.00606	α(K)=0.00525 *8*; α(L)=0.000652 *10*; α(M)=0.0001307 *19* α(N)=2.65×10^{-5} *4*; α(O)=3.13×10^{-6} *5*
646.5 *2*	2.47 *51*	881.46+x	(0$^-$,1$^-$,2$^-$)	234.94+x	(0$^-$,1$^-$,2$^-$)	[M1]	0.00548	α(K)=0.00475 *7*; α(L)=0.000590 *9*; α(M)=0.0001182 *17* α(N)=2.40×10^{-5} *4*; α(O)=2.83×10^{-6} *4*
722.3	10.7 *7*	727.70+x	(0$^-$,1$^-$,2$^-$)	5.47+x	(1$^-$)	[M1]	0.00421	α(K)=0.00365 *6*; α(L)=0.000451 *7*; α(M)=9.05×10^{-5} *13* α(N)=1.83×10^{-5} *3*; α(O)=2.17×10^{-6} *3*
734.7 *1*	3.5 *17*	842.12+x	(0$^-$,1$^-$,2$^-$)	107.47+x	(0$^-$,1$^-$,2$^-$)	[M1]	0.00405	α(K)=0.00351 *5*; α(L)=0.000433 *6*; α(M)=8.69×10^{-5} *13* α(N)=1.761×10^{-5} *25*; α(O)=2.08×10^{-6} *3*
739.8	29.1 *17*	925.44+x	(1$^+$)	185.68+x	(1$^-$,2$^-$)	[E1]	1.18×10^{-3}	α(K)=0.001024 *15*; α(L)=0.0001240 *18*; α(M)=2.48×10^{-5} *4* α(N)=5.01×10^{-6} *7*; α(O)=5.87×10^{-7} *9*
783.3	6.31 *56*	925.44+x	(1$^+$)	142.31+x	(1$^-$,2$^-$)	[E1]	1.05×10^{-3}	α(K)=0.000910 *13*; α(L)=0.0001100 *16*; α(M)=2.20×10^{-5} *3* α(N)=4.44×10^{-6} *7*; α(O)=5.21×10^{-7} *8*
790.6 *1*	5.16 *51*	842.12+x	(0$^-$,1$^-$,2$^-$)	51.48+x	(1$^-$,2$^-$)	[M1]	0.00341	α(K)=0.00295 *5*; α(L)=0.000364 *5*; α(M)=7.30×10^{-5} *11* α(N)=1.479×10^{-5} *21*; α(O)=1.747×10^{-6} *25*
804.5 *2*	14.9 *17*	925.44+x	(1$^+$)	120.94+x	(1$^-$,2$^-$)	[E1]	9.92×10^{-4}	α(K)=0.000862 *12*; α(L)=0.0001041 *15*; α(M)=2.08×10^{-5} *3* α(N)=4.21×10^{-6} *6*; α(O)=4.93×10^{-7} *7*
817.8	7.54 *69*	925.44+x	(1$^+$)	107.47+x	(0$^-$,1$^-$,2$^-$)	[E1]	9.60×10^{-4}	α(K)=0.000834 *12*; α(L)=0.0001007 *14*; α(M)=2.01×10^{-5} *3* α(N)=4.07×10^{-6} *6*; α(O)=4.77×10^{-7} *7*
830.0	6.90 *61*	881.46+x	(0$^-$,1$^-$,2$^-$)	51.48+x	(1$^-$,2$^-$)	[M1]	0.00304	α(K)=0.00264 *4*; α(L)=0.000325 *5*; α(M)=6.50×10^{-5} *10* α(N)=1.319×10^{-5} *19*; α(O)=1.558×10^{-6} *22*
875.0	25.5 *16*	925.44+x	(1$^+$)	51.48+x	(1$^-$,2$^-$)	[E1]	8.39×10^{-4}	α(K)=0.000729 *11*; α(L)=8.78×10^{-5} *13*; α(M)=1.753×10^{-5} *25* α(N)=3.55×10^{-6} *5*; α(O)=4.17×10^{-7} *6* E_γ: poor fit in the level scheme. Level-energy difference=874.0 *1*.
925.1 *2*	4.55 *94*	925.44+x	(1$^+$)	0.0+x	(2$^-$)	[E1]	7.52×10^{-4}	α(K)=0.000654 *10*; α(L)=7.86×10^{-5} *11*; α(M)=1.570×10^{-5} *22* α(N)=3.18×10^{-6} *5*; α(O)=3.73×10^{-7} *6*
952.9	8.27 *73*	1188.00+x	(1$^+$)	234.94+x	(0$^-$,1$^-$,2$^-$)	[E1]	7.10×10^{-4}	α(K)=0.000618 *9*; α(L)=7.42×10^{-5} *11*; α(M)=1.481×10^{-5} *21* α(N)=3.00×10^{-6} *5*; α(O)=3.52×10^{-7} *5*
1045.7 *3*	0.90 *45*	1188.00+x	(1$^+$)	142.31+x	(1$^-$,2$^-$)	[E1]	5.95×10^{-4}	α(K)=0.000518 *8*; α(L)=6.21×10^{-5} *9*; α(M)=1.239×10^{-5} *18* α(N)=2.51×10^{-6} *4*; α(O)=2.95×10^{-7} *5*
1067.1	6.21 *58*	1188.00+x	(1$^+$)	120.94+x	(1$^-$,2$^-$)	[E1]	5.73×10^{-4}	α(K)=0.000499 *7*; α(L)=5.97×10^{-5} *9*; α(M)=1.192×10^{-5} *17* α(N)=2.41×10^{-6} *4*; α(O)=2.84×10^{-7} *4*
1136.4	14.4 *9*	1188.00+x	(1$^+$)	51.48+x	(1$^-$,2$^-$)	[E1]	5.20×10^{-4}	α(K)=0.000444 *7*; α(L)=5.31×10^{-5} *8*; α(M)=1.060×10^{-5} *15* α(N)=2.15×10^{-6} *3*; α(O)=2.53×10^{-7} *4*; α(IPF)=9.05×10^{-6} *13*
1188.5 *3*	2.41 *72*	1188.00+x	(1$^+$)	0.0+x	(2$^-$)	[E1]	4.98×10^{-4}	α(K)=0.000410 *6*; α(L)=4.89×10^{-5} *7*; α(M)=9.76×10^{-6} *14* α(N)=1.98×10^{-6} *3*; α(O)=2.33×10^{-7} *4*; α(IPF)=2.69×10^{-5} *4*

$\gamma(^{140}I)$ (continued)

E_γ	I_γ[‡]	E_i(level)	J^π_i	E_f	J^π_f	Mult.	α[†]	Comments
1551.6 *4*	0.64 *41*	1786.91+x	(1^+)	234.94+x	$(0^-,1^-,2^-)$	[E1]	5.61×10^{-4}	α(K)=0.000259 *4*; α(L)=3.07×10^{-5} *5*; α(M)=6.11×10^{-6} *9* α(N)=1.238×10^{-6} *18*; α(O)=1.462×10^{-7} *21*; α(IPF)=0.000264 *4*
1601.1 *2*	2.11 *39*	1786.91+x	(1^+)	185.68+x	$(1^-,2^-)$	[E1]	5.83×10^{-4}	α(K)=0.000245 *4*; α(L)=2.91×10^{-5} *4*; α(M)=5.80×10^{-6} *9* α(N)=1.174×10^{-6} *17*; α(O)=1.387×10^{-7} *20*; α(IPF)=0.000301 *5*
1644.5 *2*	1.09 *43*	1786.91+x	(1^+)	142.31+x	$(1^-,2^-)$	[E1]	6.04×10^{-4}	α(K)=0.000235 *4*; α(L)=2.78×10^{-5} *4*; α(M)=5.54×10^{-6} *8* α(N)=1.123×10^{-6} *16*; α(O)=1.327×10^{-7} *19*; α(IPF)=0.000334 *5*
1787.2 *2*	0.91 *29*	1786.91+x	(1^+)	0.0+x	(2^-)	[E1]	6.78×10^{-4}	α(K)=0.000205 *3*; α(L)=2.42×10^{-5} *4*; α(M)=4.83×10^{-6} *7* α(N)=9.79×10^{-7} *14*; α(O)=1.157×10^{-7} *17*; α(IPF)=0.000442 *7*

[†] Additional information 2.
[‡] For absolute intensity per 100 decays, multiply by 0.264 *8*.

$^{140}_{53}I_{87}$-6

^{140}Te β^- decay 2017Mo19

Decay Scheme

Intensities: Relative I_γ