

$^{99}\text{Tc}(n,\gamma)$  E=thermal 2004Fu30,1979Pi08

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Full Evaluation	Balraj Singh and Jun Chen		NDS 172, 1 (2021)	31-Jan-2021

**2004Fu30**: thermal neutrons were produced from the Los Alamos Omega West Reactor. Target was 84.6 mg 100% pure Tc metal.  $\gamma$  rays were detected with a 30-cm<sup>3</sup> coaxial intrinsic Ge detector inside a 20-cm-diam by 30-cm-long NaI(Tl) annulus. Measured  $E\gamma$ ,  $I\gamma$  in absolute units, cross sections. Deduced levels. A total of 1086  $\gamma$  rays from 30.8 to 6593.2 keV are reported with intensities given in terms of absolute cross sections. **2005FuZY** is by the same group.

**1979Pi08** (also **1978HeZQ**): thermal neutrons were produced from the High Flux Reactor of the Institute Laue-Langevin in Grenoble. Target was metallic Tc power.  $\gamma$  rays were detected with Ge detectors and a bent-crystal spectrometer consisting of a 32-cm<sup>3</sup> Ge(Li) detector surrounded by a 50-cm-diam by 40-cm-long plastic scintillator and a 10.2-cm-diam by 15.2-cm-long NaI(Tl) detector; conversion electrons were detected with the  $\beta$ -spectrometer BILL. Measured  $E\gamma$ ,  $I\gamma$ ,  $E(\text{ce})$ ,  $I(\text{ce})$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(t)$ . Deduced levels,  $J$ ,  $\pi$ ,  $T_{1/2}$ , conversion coefficients,  $\gamma$ -ray multipolarities. Complete  $\gamma$ -ray data are given in **1978HeZQ**. Bent-crystal spectrometer used for  $\gamma$  rays below 800 keV and germanium detector for the higher energy region. Full details of  $\gamma$ -ray intensity data (per 100 neutron captures) and  $E\gamma$  data above 596 keV from **1978HeZQ** are listed under 'document' records in the ENSDF file, as are  $E\gamma$  data from **2004Fu30** below 596 keV.

There is general agreement of  $E\gamma$  and  $I\gamma$  data between the two studies: **2004Fu30** and **1979Pi08** (also **1978HeZQ**). The differences are noted either in the comments or in 'document' records in the ENSDF.

Others:

**2014Ki08**: measured  $E\gamma$ ,  $I\gamma$  at JPARC/ANNRI facility in Japan. This paper is a conference report and not followed by a regular paper. Primary  $\gamma$  rays of 5715 and 6221 were reported. Primary  $\gamma$  rays were also reported from four resonances.

**2008WeZX**: measured  $\gamma\gamma$ -coin. With gate at 299 keV  $\gamma$  ray, following  $\gamma$  rays were seen: 31, 43, 75, 99, 105, 179 and 181 keV. Authors suggested that the 299-keV  $\gamma$  may be a doublet, and that several modifications were needed in the level scheme proposed by **1979Pi08**, the authors did not compare their results with those in **2004Fu30**. **2008WeZX** is a conference paper, not followed by a journal publication.

**2005BeZV**, **2002Mo42**: E=cold neutrons. Measured prompt and delayed  $\gamma$ , deduced partial and total cross sections.

**1995Ha46**, **1972TaZM** (reported a total of 30  $\gamma$  rays from 23 to 6563 keV).

**Additional information 1.**

 $^{100}\text{Tc}$  Levels

$E(\text{level})^{\ddagger}$	$J\pi^{\dagger}$
0.0	1 <sup>+</sup>
172.1492 7	2 <sup>+</sup>
200.6659 9	(4) <sup>+</sup>
223.4682 8	(2) <sup>-</sup>
243.9554 11	(6) <sup>+</sup>
263.5569 8	(3) <sup>+</sup>
287.5160 9	(5) <sup>+</sup>
294.9233 11	(4) <sup>+</sup>
299.6554 10	(2,3) <sup>+</sup>
319.4897 11	(5) <sup>+</sup>
335.1622 18	(2,3) <sup>+</sup>
340.9795 8	(3) <sup>+</sup>
355.5753 11	(2,3) <sup>+</sup>
400.6317 11	(5) <sup>+</sup>
424.3621 13	(3,4) <sup>+</sup>
454.1983 9	(4,5) <sup>+</sup>
456.793 <sup>@</sup> 6	
458.99 <sup>@</sup> 5	(0,1,2,3) <sup>+</sup>
461.0910 12	(5) <sup>+</sup>
493.6751 11	4 <sup>+</sup> ,5 <sup>+</sup>
500.0203 14	(2,3) <sup>-</sup>
500.1466 13	(4) <sup>-</sup>

Continued on next page (footnotes at end of table)

$^{99}\text{Tc}(n,\gamma)$  E=thermal 2004Fu30,1979Pi08 (continued) $^{100}\text{Tc}$  Levels (continued)

E(level) <sup>‡</sup>	J <sup>π</sup> <sup>†</sup>	Comments
513.9202 <sup>@</sup> 17	(3 to 6) <sup>+</sup>	
539.6331 13	(4 <sup>-</sup> ,5 <sup>-</sup> )	
544.8715 11	(6) <sup>-</sup>	
552.2859 13	4 <sup>+</sup> ,5 <sup>+</sup>	
580.4086 14	(3,4,5) <sup>+</sup>	
599.7771 <sup>@</sup> 14	(2 to 7) <sup>+</sup>	
639.8186 14	(3) <sup>+</sup>	
680.478 <sup>#</sup> 3		
748.202 <sup>@</sup> 7		
821.737 <sup>@</sup> 5		
829.61 <sup>#</sup> 6	(2,3) <sup>+</sup>	
854.007 <sup>@</sup> 8	(2 to 7) <sup>+</sup>	
929.895 <sup>@</sup> 10		
952.878 <sup>@</sup> 16	(2 to 7) <sup>+</sup>	
1051.15 <sup>@</sup> 4		
(6765.08 <sup>&amp;</sup> 3)	4 <sup>+</sup> ,5 <sup>+</sup> <sup>&amp;</sup>	E(level): S(n)=6764.4 10 (2017Wa10).

<sup>†</sup> From the Adopted Levels.

<sup>‡</sup> From least-squares fit to E $\gamma$  data. The uncertainties of secondary  $\gamma$  rays were doubled in the fitting procedure since the quoted relative uncertainties result in an overall poor fit to the decay scheme with normalized  $\chi^2=110$  and 42  $\gamma$ -ray energies deviating by 3 or more standard deviations from the fitted values. The current fitting gives somewhat higher normalized  $\chi^2=6.5$  and about 15 E $\gamma$  values deviating by 3 or more standard deviations from the fitted values. The uncertainties on level energies are relative. The absolute uncertainty, taking into account the calibration uncertainty of 0.05 keV, can be obtained by adding 0.04 keV in quadrature for each level.

<sup>#</sup> Level suggested by the evaluators on the basis of (p,n $\gamma$ ) results.

<sup>@</sup> Level proposed by 2004Fu30.

<sup>&</sup> s-wave neutron capture in  $^{99}\text{Tc}$  (g.s.  $J^\pi=9/2^+$ ). 2004Fu30 give 6765.20 4, 2017Wa10 mass evaluation gives 6764.4 10.

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc)

I<sub>γ</sub> normalization: Intensities are given by 2004Fu30 in units of milli-barns, here these are given in terms of 0.1b.

$E_\gamma$ <sup>†</sup>	$I_\gamma$ <sup>‡k</sup>	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. <sup>#</sup>	$\delta$ <sup>#</sup>	$\alpha^l$	Comments
28.520 <sup>eh</sup> 2	0.84 <sup>j</sup> 9	200.6659	(4) <sup>+</sup>	172.1492	2 <sup>+</sup>	E2		112.9	$\alpha$ (K)=39.1 6; $\alpha$ (L)=60.8 9; $\alpha$ (M)=11.40 16 $\alpha$ (N)=1.591 23; $\alpha$ (O)=0.00680 10 $E_\gamma$ : from ce data. $I_\gamma$ : 0.28 3 from I( $\gamma$ +ce)=32 3 and $\alpha$ . From $\gamma$ -ray data 1978HeZQ quote 0.15. $I_{(\gamma+ce)}$ : from sum of electron intensities. Mult.: ce(L1)=1.36 16, ce(L2)=6.5 8, ce(L3)=10.9 14, ce(M1)=0.23 7, ce(M2+M3)=3.3 4, ce(N)=0.62 4. $\alpha$ (K)=6.97 13; $\alpha$ (L)=0.96 12; $\alpha$ (M)=0.175 23 $\alpha$ (N)=0.027 4; $\alpha$ (O)=0.00157 3 $E_\gamma$ =30.8 6 (2004Fu30), $I_\gamma$ =0.78 (1978HeZQ). Mult.: from $\alpha$ (L1)exp=1.01 16. $\delta$ : from RUL(E2)=300. $\delta$ =0.35 15 (from $\alpha$ (L1)exp); <0.35 (from intensity balance at 263.5 level). Additional information 12.
31.3696 10	1.02 12	294.9233	(4) <sup>+</sup>	263.5569	(3) <sup>+</sup>	M1(+E2)	<0.08	8.1 3	$\alpha$ (K)=6.97 13; $\alpha$ (L)=0.96 12; $\alpha$ (M)=0.175 23 $\alpha$ (N)=0.027 4; $\alpha$ (O)=0.00157 3 $E_\gamma$ =30.8 6 (2004Fu30), $I_\gamma$ =0.78 (1978HeZQ). Mult.: from $\alpha$ (L1)exp=1.01 16. $\delta$ : from RUL(E2)=300. $\delta$ =0.35 15 (from $\alpha$ (L1)exp); <0.35 (from intensity balance at 263.5 level). Additional information 12.
39.4889 <sup>mbn</sup> 10	0.87 <sup>m</sup> 6	493.6751	4 <sup>+</sup> ,5 <sup>+</sup>	454.1983	(4,5) <sup>+</sup>	M1		4.03	
39.4889 <sup>mhn</sup> 10	0.87 <sup>m</sup> 6	539.6331	(4 <sup>-</sup> ,5 <sup>-</sup> )	500.1466	(4) <sup>-</sup>	M1		4.03	$\alpha$ (K)=3.51 5; $\alpha$ (L)=0.427 6; $\alpha$ (M)=0.0776 11 $\alpha$ (N)=0.01228 18; $\alpha$ (O)=0.000795 12 $E_\gamma$ =39.12 5 (2004Fu30), $I_\gamma$ =0.63 (1978HeZQ). Mult.: $\alpha$ (L1)exp=0.37 8. $\delta$ : <0.2. Additional information 24.
43.2862 10	1.17 <sup>j</sup> 12	243.9554	(6) <sup>+</sup>	200.6659	(4) <sup>+</sup>	E2		25.0	$\alpha$ (K)=14.86 21; $\alpha$ (L)=8.36 12; $\alpha$ (M)=1.565 22 $\alpha$ (N)=0.221 4; $\alpha$ (O)=0.00239 4 $E_\gamma$ =43.18 3, $I_\gamma$ =2.69 7 (2004Fu30): corresponds to 43.2862 $\gamma$ + 43.562 $\gamma$ doublet in 1979Pi08. $E_\gamma$ , $I_\gamma$ : 1978HeZQ report 43.2862 ( $I_\gamma$ =0.39) and 43.5620 ( $I_\gamma$ =0.79), but 2004Fu30 report only one line at 43.18 ( $I_\gamma$ =2.69 7). Mult.: Ice(K)=7.6 12, Ice(L1)=0.82 10, Ice(L3)=2.8 3, Ice(M2+M3)=0.75 7. $I_\gamma$ =0.39 4 (1978HeZQ), 0.55 from ce data in 1979Pi08.
43.5620 <sup>eh</sup> 10	2.4 <sup>j</sup> 3	287.5160	(5) <sup>+</sup>	243.9554	(6) <sup>+</sup>	M1		3.02	$\alpha$ (K)=2.63 4; $\alpha$ (L)=0.320 5; $\alpha$ (M)=0.0581 9 $\alpha$ (N)=0.00921 13; $\alpha$ (O)=0.000597 9 Mult.: $\alpha$ (K)exp=2.9 6. $\delta$ : <0.3. Additional information 10.
46.0491 10	0.38 5	340.9795	(3) <sup>+</sup>	294.9233	(4) <sup>+</sup>	M1		2.57	$\alpha$ (K)=2.24 4; $\alpha$ (L)=0.272 4; $\alpha$ (M)=0.0494 7

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<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.#</u>	<u>α<sup>l</sup></u>	<u>Comments</u>
								α(N)=0.00783 11; α(O)=0.000507 8 E <sub>γ</sub> : level-energy difference=46.0562. E <sub>γ</sub> =45.84 8 (2004Fu30), I <sub>γ</sub> =0.19 (1978HeZQ). Mult.: α(K)exp=2.9 6, α(L1)exp=0.53 12. δ: <0.4. Additional information 15.
<sup>x</sup> 50.85 <sup>d</sup> 9	0.031 4							
<sup>x</sup> 51.70 <sup>d</sup> 9	0.038 4							
<sup>x</sup> 52.85 <sup>d</sup> 6	0.061 4							
<sup>x</sup> 53.71 <sup>d</sup> 10	0.031 4							
<sup>x</sup> 56.123 <sup>e</sup> 3	0.09 <sup>j</sup> 3							I <sub>γ</sub> =0.030 (1978HeZQ).
<sup>x</sup> 56.767 3	0.071 6							E <sub>γ</sub> =56.63 6 (2004Fu30), I <sub>γ</sub> =0.040 (1978HeZQ).
62.8887 5	3.99 12	263.5569	(3) <sup>+</sup>	200.6659	(4) <sup>+</sup>	M1	1.041	α(K)=0.908 13; α(L)=0.1098 16; α(M)=0.0200 3 α(N)=0.00316 5; α(O)=0.000206 3 E <sub>γ</sub> =62.79 3 (2004Fu30), I <sub>γ</sub> =2.22 (1978HeZQ). Mult.: α(K)exp=0.73 7, α(L1)exp=0.086 9. Additional information 7.
<sup>x</sup> 63.8531 5	1.86 9					M1	0.997	α(K)=0.869 13; α(L)=0.1051 15; α(M)=0.0191 3 α(N)=0.00303 5; α(O)=0.000197 3 Mult.: α(K)exp=0.85 10. δ: <0.2.
71.600 3	0.32 3	335.1622	(2,3) <sup>+</sup>	263.5569	(3) <sup>+</sup>	M1	0.718	E <sub>γ</sub> =63.75 4 (2004Fu30), I <sub>γ</sub> =1.00 (1978HeZQ). Ice(K)=0.85 8 (1979Pi08). α(K)=0.626 9; α(L)=0.0755 11; α(M)=0.01373 20 α(N)=0.00218 3; α(O)=0.0001420 20 Mult.: α(K)exp=0.59 15. δ: <0.2.
<sup>x</sup> 73.5317 16	0.224 24							E <sub>γ</sub> =71.62 6 (2004Fu30), I <sub>γ</sub> =0.22 (1978HeZQ). Additional information 14.
<sup>x</sup> 75.02 <sup>d</sup> 8	1.05 22							E <sub>γ</sub> =73.11 8 (2004Fu30), I <sub>γ</sub> =0.040 (1978HeZQ).
75.5330 2	3.64 22	319.4897	(5) <sup>+</sup>	243.9554	(6) <sup>+</sup>	M1	0.616	α(K)=0.538 8; α(L)=0.0648 9; α(M)=0.01178 17 α(N)=0.00187 3; α(O)=0.0001219 17 E <sub>γ</sub> : level-energy difference=75.5343. E <sub>γ</sub> =75.52 3 (2004Fu30), I <sub>γ</sub> =2.40 (1978HeZQ). Mult.: α(K)exp=0.40 5. Additional information 13.
75.780 <sup>eh</sup> 14	0.060 <sup>j</sup> 15	500.1466	(4) <sup>-</sup>	424.3621	(3,4) <sup>+</sup>			I <sub>γ</sub> =0.020 (1978HeZQ).
77.418 3	0.130 21	340.9795	(3) <sup>+</sup>	263.5569	(3) <sup>+</sup>			E <sub>γ</sub> =76.9 5 (2004Fu30), I <sub>γ</sub> =0.015 (1978HeZQ).
78.558 <sup>ehn</sup> 6	0.054 <sup>j</sup> 15	539.6331	(4 <sup>-</sup> ,5 <sup>-</sup> )	461.0910	(5) <sup>+</sup>			I <sub>γ</sub> =0.018 (1978HeZQ).
<sup>x</sup> 82.655 <sup>e</sup> 19	0.015 <sup>j</sup> 3							I <sub>γ</sub> =0.005 (1978HeZQ).
<sup>x</sup> 82.938 <sup>e</sup> 6	0.030 <sup>j</sup> 9							I <sub>γ</sub> =0.010 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

<u>γ(<sup>100</sup>Tc) (continued)</u>									
$E_\gamma$ <sup>†</sup>	$I_\gamma$ <sup>‡k</sup>	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult.#	$\delta$ <sup>#</sup>	$\alpha$ <sup>l</sup>	Comments
<sup>x</sup> 83.040 <sup>e</sup> 7	0.030 <sup>j</sup> 9								I <sub>γ</sub> =0.010 (1978HeZQ).
83.7760 <sup>eh</sup> 17	0.12 <sup>j</sup> 3	544.8715	(6) <sup>-</sup>	461.0910	(5) <sup>+</sup>				I <sub>γ</sub> =0.040 (1978HeZQ).
<sup>x</sup> 85.702 <sup>e</sup> 8	0.060 <sup>j</sup> 15								I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 85.847 <sup>e</sup> 2	0.24 <sup>j</sup> 6								I <sub>γ</sub> =0.08 (1978HeZQ).
86.8498 3	4.6 3	287.5160	(5) <sup>+</sup>	200.6659	(4) <sup>+</sup>	M1		0.415	α(K)=0.362 5; α(L)=0.0435 6; α(M)=0.00791 11 α(N)=0.001255 18; α(O)=8.21×10 <sup>-5</sup> 12 E <sub>γ</sub> =86.76 4 (2004Fu30), I <sub>γ</sub> =1.62 (1978HeZQ). Mult.: α(K)exp=0.36 4. δ: <0.2. <a href="#">Additional information 11.</a>
<sup>x</sup> 89.2031 <sup>e</sup> 6	0.15 <sup>j</sup> 4								I <sub>γ</sub> =0.050 (1978HeZQ).
<sup>x</sup> 90.6820 4	3.08 4					M1		0.367	α(K)=0.320 5; α(L)=0.0385 6; α(M)=0.00700 10 α(N)=0.001110 16; α(O)=7.27×10 <sup>-5</sup> 11 E <sub>γ</sub> =90.59 3 (2004Fu30), I <sub>γ</sub> =1.07 (1978HeZQ). Mult.: α(K)exp=0.29 10. δ: <0.3. <a href="#">Additional information 2.</a>
91.177 <sup>eh</sup> 5	0.24 <sup>j</sup> 5	552.2859	4 <sup>+</sup> ,5 <sup>+</sup>	461.0910	(5) <sup>+</sup>	M1(+E2)	<1.1	0.7 4	α(K)=0.6 3; α(L)=0.11 8; α(M)=0.020 14 α(N)=0.0031 20; α(O)=0.00012 5 I <sub>γ</sub> =0.080 (1978HeZQ). Mult.: α(K)exp=0.6 3. <a href="#">Additional information 25.</a>
91.4074 2	11.8 8	263.5569	(3) <sup>+</sup>	172.1492	2 <sup>+</sup>	M1		0.359	α(K)=0.313 5; α(L)=0.0376 6; α(M)=0.00684 10 α(N)=0.001086 16; α(O)=7.11×10 <sup>-5</sup> 10 E <sub>γ</sub> =91.32 3 (2004Fu30), I <sub>γ</sub> =3.69 (1978HeZQ). Mult.: α(K)exp=0.35 4, α(L)exp=0.041 6. δ: <0.3 from α(K)exp. <a href="#">Additional information 8.</a>
92.0183 <sup>be</sup> 4	0.60 <sup>j</sup> 6	355.5753	(2,3) <sup>+</sup>	263.5569	(3) <sup>+</sup>	M1+E2	0.6 3	0.71 25	α(K)=0.58 19; α(L)=0.10 5; α(M)=0.019 9 α(N)=0.0029 13; α(O)=0.00011 3 I <sub>γ</sub> =0.20 (1978HeZQ). Mult.,δ: α(K)exp=0.6 2. <a href="#">Additional information 17.</a>
94.251 6	0.037 3	294.9233	(4) <sup>+</sup>	200.6659	(4) <sup>+</sup>				E <sub>γ</sub> =94.58 5 (2004Fu30), I <sub>γ</sub> =0.010 (1978HeZQ). E <sub>γ</sub> ,I <sub>γ</sub> : 1978HeZQ report 94.251 (I <sub>γ</sub> =0.010) and 94.7980 (I <sub>γ</sub> =0.015), but 2004Fu30 report only one line at 94.58 (I <sub>γ</sub> =0.037).
<sup>x</sup> 94.7980 <sup>&amp;e</sup> 13	0.045 <sup>j</sup> 12								I <sub>γ</sub> =0.015 (1978HeZQ).
<sup>x</sup> 99.0939 11	1.29 3								E <sub>γ</sub> =99.02 3 (2004Fu30), I <sub>γ</sub> =0.41 (1978HeZQ).
<sup>x</sup> 99.606 <sup>e</sup> 3	0.048 <sup>j</sup> 12								I <sub>γ</sub> =0.016 (1978HeZQ).
<sup>x</sup> 102.85 <sup>d</sup> 13	0.19 3								
103.5975 <sup>bn</sup> 19	0.31 3	458.99	(0,1,2,3) <sup>+</sup>	355.5753	(2,3) <sup>+</sup>				E <sub>γ</sub> =103.80 10 (2004Fu30), I <sub>γ</sub> =0.015 (1978HeZQ).

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<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

E <sub>γ</sub> <sup>†</sup>	I <sub>γ</sub> <sup>‡k</sup>	E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>	Mult.#	α <sup>l</sup>	Comments
<sup>x</sup> 105.43 <sup>d</sup> 8	3.4 9							
105.7083 2	4.4 9	400.6317	(5) <sup>+</sup>	294.9233	(4) <sup>+</sup>	M1	0.239	α(K)=0.209 3; α(L)=0.0250 4; α(M)=0.00454 7 α(N)=0.000721 10; α(O)=4.73×10 <sup>-5</sup> 7 E <sub>γ</sub> =105.81 6 (2004Fu30), I <sub>γ</sub> =2.34 (1978HeZQ). Mult.: α(K)exp=0.23 3. δ: <0.3. Additional information 18.
<sup>x</sup> 106.103 <sup>e</sup> 3	0.021 <sup>j</sup> 7							I <sub>γ</sub> =0.007 (1978HeZQ).
<sup>x</sup> 107.154 3	0.45 <sup>j</sup> 9							E <sub>γ</sub> =107.25 15 (2004Fu30), I <sub>γ</sub> =0.014 (1978HeZQ). I <sub>γ</sub> =0.15 (1978HeZQ).
<sup>x</sup> 108.2164 <sup>e</sup> 2	0.021 <sup>j</sup> 6							I <sub>γ</sub> =0.007 (1978HeZQ).
<sup>x</sup> 110.1093 15	0.024 24							E <sub>γ</sub> =109.9 7 (2004Fu30), I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 110.7802 <sup>e</sup> 19	0.009 <sup>j</sup> 3							I <sub>γ</sub> =0.003 (1978HeZQ).
<sup>x</sup> 111.1191 <sup>e</sup> 7	0.009 <sup>j</sup> 3							I <sub>γ</sub> =0.003 (1978HeZQ).
113.2194 3	1.15 3	454.1983	(4,5) <sup>+</sup>	340.9795	(3) <sup>+</sup>			E <sub>γ</sub> =113.20 3 (2004Fu30), I <sub>γ</sub> =0.38 (1978HeZQ).
<sup>x</sup> 115.9598 7	0.065 13							E <sub>γ</sub> =115.86 14 (2004Fu30), I <sub>γ</sub> =0.020 (1978HeZQ).
118.8233 5	0.18 <sup>j</sup> 4	319.4897	(5) <sup>+</sup>	200.6659	(4) <sup>+</sup>			E <sub>γ</sub> =118.93 3 (2004Fu30), I <sub>γ</sub> =0.060 (1978HeZQ). E <sub>γ</sub> ,I <sub>γ</sub> : 1978HeZQ report 118.8233 (I <sub>γ</sub> =0.060) and 119.0423 (I <sub>γ</sub> =0.030), but 2004Fu30 report only one line at 118.93 (I <sub>γ</sub> =0.304).
<sup>x</sup> 119.0423 <sup>e</sup> 11	0.09 <sup>j</sup> 3							I <sub>γ</sub> =0.030 (1978HeZQ).
119.3093 <sup>eh</sup> 21	0.030 <sup>j</sup> 9	580.4086	(3,4,5) <sup>+</sup>	461.0910	(5) <sup>+</sup>			I <sub>γ</sub> =0.010 (1978HeZQ).
124.027 <sup>ben</sup> 3	0.030 <sup>j</sup> 9	458.99	(0,1,2,3) <sup>+</sup>	335.1622	(2,3) <sup>+</sup>			I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 124.6588 10	0.089 12							E <sub>γ</sub> =124.66 11 (2004Fu30), I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 125.184 <sup>e</sup> 3	0.018 <sup>j</sup> 6							I <sub>γ</sub> =0.006 (1978HeZQ).
<sup>x</sup> 125.893 <sup>e</sup> 3	0.021 <sup>j</sup> 6							I <sub>γ</sub> =0.007 (1978HeZQ).
127.5061 3	0.88 7	299.6554	(2,3) <sup>+</sup>	172.1492	2 <sup>+</sup>			E <sub>γ</sub> =127.47 4 (2004Fu30), I <sub>γ</sub> =0.22 (1978HeZQ).
127.9233 5	0.35 6	552.2859	4 <sup>+</sup> ,5 <sup>+</sup>	424.3621	(3,4) <sup>+</sup>			E <sub>γ</sub> =128.08 12 (2004Fu30), I <sub>γ</sub> =0.070 (1978HeZQ).
<sup>x</sup> 128.5855 <sup>e</sup> 9	0.12 <sup>j</sup> 3							I <sub>γ</sub> =0.040 (1978HeZQ).
129.4322 11	0.208 16	424.3621	(3,4) <sup>+</sup>	294.9233	(4) <sup>+</sup>			E <sub>γ</sub> =129.24 7 (2004Fu30), I <sub>γ</sub> =0.050 (1978HeZQ).
<sup>x</sup> 132.909 2	0.050 6							E <sub>γ</sub> =132.88 9 (2004Fu30), I <sub>γ</sub> =0.012 (1978HeZQ).
<sup>x</sup> 133.721 <sup>e</sup> 8	0.015 <sup>j</sup> 3							I <sub>γ</sub> =0.005 (1978HeZQ).
<sup>x</sup> 134.980 3	0.017 7							E <sub>γ</sub> =134.84 25 (2004Fu30), I <sub>γ</sub> =0.008 (1978HeZQ).
<sup>x</sup> 138.0033 <sup>e</sup> 18	0.030 <sup>j</sup> 9							I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 139.0056 5	0.27 3							E <sub>γ</sub> =139.05 11 (2004Fu30), I <sub>γ</sub> =0.070 (1978HeZQ).
139.634 <sup>eh</sup> 11	0.012 <sup>j</sup> 3	639.8186	(3) <sup>+</sup>	500.1466	(4) <sup>-</sup>			I <sub>γ</sub> =0.004 (1978HeZQ).
140.3152 3	0.90 4	340.9795	(3) <sup>+</sup>	200.6659	(4) <sup>+</sup>			E <sub>γ</sub> =140.34 5 (2004Fu30), I <sub>γ</sub> =0.20 (1978HeZQ).
<sup>x</sup> 140.9717 <sup>e</sup> 12	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 141.128 <sup>e</sup> 4	0.030 <sup>j</sup> 9							I <sub>γ</sub> =0.010 (1978HeZQ).
141.5882 <sup>ahn</sup> 6	0.15 <sup>j</sup> 2	461.0910	(5) <sup>+</sup>	319.4897	(5) <sup>+</sup>			E <sub>γ</sub> : level energy difference=141.6011. E <sub>γ</sub> =141.49 10 (2004Fu30), I <sub>γ</sub> =0.050 (1978HeZQ).

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<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.#</u>	<u>α<sup>l</sup></u>	<u>Comments</u>
<sup>x</sup> 143.5739 <sup>e</sup> 16 144.2378 3	0.060 <sup>j</sup> 15 1.96 5	544.8715	(6) <sup>-</sup>	400.6317	(5) <sup>+</sup>			E <sub>γ</sub> ,I <sub>γ</sub> : 1978HeZQ report three γ rays near this energy with total I <sub>γ</sub> =0.080 but 2004Fu30 report only one line with I <sub>γ</sub> =0.32. I <sub>γ</sub> =0.020 (1978HeZQ). E <sub>γ</sub> : level-energy difference=144.2397. E <sub>γ</sub> =144.27 3 (2004Fu30), I <sub>γ</sub> =0.56 (1978HeZQ).
<sup>x</sup> 144.468 <sup>e</sup> 5 145.5786 <sup>g</sup> 5 146.1502 <sup>eh</sup> 15	0.030 <sup>j</sup> 9 0.58 4 0.15 <sup>j</sup> 4	599.7771 639.8186	(2 to 7) <sup>+</sup> (3) <sup>+</sup>	454.1983 493.6751	(4,5) <sup>+</sup> 4 <sup>+</sup> ,5 <sup>+</sup>			I <sub>γ</sub> =0.010 (1978HeZQ). E <sub>γ</sub> =145.73 5 (2004Fu30), I <sub>γ</sub> =0.16 (1978HeZQ). I <sub>γ</sub> =0.050 (1978HeZQ).
<sup>x</sup> 146.572 <sup>e</sup> 5 <sup>x</sup> 148.655 <sup>e</sup> 5	0.060 <sup>j</sup> 15 0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ). I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 151.335 <sup>e</sup> 3 <sup>x</sup> 151.738 <sup>e</sup> 18 152.7012 <sup>a</sup> 6	0.18 <sup>j</sup> 4 0.027 <sup>j</sup> 6 0.787 11	493.6751	4 <sup>+</sup> ,5 <sup>+</sup>	340.9795	(3) <sup>+</sup>			I <sub>γ</sub> =0.060 (1978HeZQ). I <sub>γ</sub> =0.009 (1978HeZQ). E <sub>γ</sub> =152.74 3 (2004Fu30), I <sub>γ</sub> =0.28 (1978HeZQ). E <sub>γ</sub> : level energy difference=152.6955.
<sup>x</sup> 153.874 <sup>e</sup> 5 <sup>x</sup> 154.424 <sup>e</sup> 6 <sup>x</sup> 159.082 <sup>e</sup> 4 159.175 3	0.024 <sup>j</sup> 6 0.060 <sup>j</sup> 15 0.09 <sup>j</sup> 3 0.483 18	500.1466	(4) <sup>-</sup>	340.9795	(3) <sup>+</sup>			I <sub>γ</sub> =0.008 (1978HeZQ). I <sub>γ</sub> =0.020 (1978HeZQ). I <sub>γ</sub> =0.030 (1978HeZQ). E <sub>γ</sub> =159.22 3 (2004Fu30), I <sub>γ</sub> =0.180 (1978HeZQ).
<sup>x</sup> 159.303 <sup>e</sup> 2 160.8004 16 163.0105 9	0.21 <sup>j</sup> 4 0.045 12 0.295 22	424.3621 335.1622	(3,4) <sup>+</sup> (2,3) <sup>+</sup>	263.5569 172.1492	(3) <sup>+</sup> 2 <sup>+</sup>			I <sub>γ</sub> =0.070 (1978HeZQ). E <sub>γ</sub> =160.81 18 (2004Fu30), I <sub>γ</sub> =0.050 (1978HeZQ). E <sub>γ</sub> =163.12 5 (2004Fu30), I <sub>γ</sub> =0.19 (1978HeZQ).
<sup>x</sup> 163.476 <sup>e</sup> 8 <sup>x</sup> 164.6316 <sup>e</sup> 12 <sup>x</sup> 164.894 <sup>e</sup> 2 <sup>x</sup> 165.470 <sup>e</sup> 4 166.1707 <sup>h</sup> 4	0.060 <sup>j</sup> 15 0.51 <sup>j</sup> 5 0.12 <sup>j</sup> 3 0.12 <sup>j</sup> 3 1.4 <sup>j</sup> 2	461.0910	(5) <sup>+</sup>	294.9233	(4) <sup>+</sup>			I <sub>γ</sub> =0.020 (1978HeZQ). I <sub>γ</sub> =0.170 (1978HeZQ). I <sub>γ</sub> =0.040 (1978HeZQ). I <sub>γ</sub> =0.040 (1978HeZQ). E <sub>γ</sub> : level-energy difference=166.1675.
166.6825 3	3.5 3	454.1983	(4,5) <sup>+</sup>	287.5160	(5) <sup>+</sup>	M1	0.0688	E <sub>γ</sub> ,I <sub>γ</sub> : 1978HeZQ report 166.1707 (I <sub>γ</sub> =0.48) and 166.6825 (I <sub>γ</sub> =1.23) but 2004Fu30 report only 166.58 with I <sub>γ</sub> =3.55. α(K)=0.0602 9; α(L)=0.00712 10; α(M)=0.001292 18 α(N)=0.000205 3; α(O)=1.358×10 <sup>-5</sup> 19 E <sub>γ</sub> =166.58 6 (2004Fu30), I <sub>γ</sub> =1.23 (1978HeZQ). Mult.: α(K)exp=0.048 12. Additional information 19.
<sup>x</sup> 168.347 <sup>e</sup> 3 168.8302 2	0.09 <sup>j</sup> 3 5.0 5	340.9795	(3) <sup>+</sup>	172.1492	2 <sup>+</sup>	M1	0.0665	I <sub>γ</sub> =0.030 (1978HeZQ). α(K)=0.0581 9; α(L)=0.00687 10; α(M)=0.001248 18 α(N)=0.000198 3; α(O)=1.312×10 <sup>-5</sup> 19 E <sub>γ</sub> =168.87 8 (2004Fu30), I <sub>γ</sub> =1.80 (1978HeZQ). Mult.: α(K)exp=0.059 8. δ: <0.3. Additional information 16.
<sup>x</sup> 169.29 <sup>e</sup> 3	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).

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<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

E <sub>γ</sub> †	I <sub>γ</sub> ‡k	E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>	Mult.#	δ#	α <sup>l</sup>	Comments
<sup>x</sup> 169.95 <sup>d</sup> 18	2.6 4								
<sup>x</sup> 170.42 <sup>e</sup> 3	0.060 <sup>j</sup> 15								I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 171.2660 <sup>e</sup> 9	0.21 <sup>j</sup> 5								I <sub>γ</sub> =0.070 (1978HeZQ).
172.1484 4	167 5	172.1492	2 <sup>+</sup>	0.0	1 <sup>+</sup>	M1+E2	0.5 1	0.086 8	α(K)=0.074 7; α(L)=0.0098 11; α(M)=0.00178 20 α(N)=0.00028 3; α(O)=1.58×10 <sup>-5</sup> 11 E <sub>γ</sub> =172.21 3 (2004Fu30), I <sub>γ</sub> =48.8 (1978HeZQ). Mult.,δ: α(K)exp=0.072 4, α(L1)exp=0.0086 6, α(L2)exp+α(L3)exp<0.00090, α(M)exp=0.0018 2. Additional information 5.
173.564 <sup>eh</sup> 13	0.021 <sup>j</sup> 6	461.0910	(5) <sup>+</sup>	287.5160	(5) <sup>+</sup>				I <sub>γ</sub> =0.007 2 (1978HeZQ).
<sup>x</sup> 174.226 <sup>e</sup> 6	0.030 <sup>j</sup> 9								I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 176.4476 5	0.294 16								E <sub>γ</sub> =176.51 4 (2004Fu30), I <sub>γ</sub> =0.130 (1978HeZQ).
<sup>x</sup> 178.225 <sup>e</sup> 4	0.060 <sup>j</sup> 15								I <sub>γ</sub> =0.020 (1978HeZQ).
179.7982 <sup>a</sup> 11	0.52 8	580.4086	(3,4,5) <sup>+</sup>	400.6317	(5) <sup>+</sup>				E <sub>γ</sub> =179.77 9 (2004Fu30), I <sub>γ</sub> =0.19 (1978HeZQ). E <sub>γ</sub> : level energy difference=179.7767.
180.3316 <sup>bn</sup> 13	1.12 9	680.478?		500.1466	(4) <sup>-</sup>				E <sub>γ</sub> =180.36 4 (2004Fu30), I <sub>γ</sub> =0.28 (1978HeZQ).
180.668 <sup>eh</sup> 15	0.015 <sup>j</sup> 3	500.1466	(4) <sup>-</sup>	319.4897	(5) <sup>+</sup>				I <sub>γ</sub> =0.005 (1978HeZQ).
<sup>x</sup> 182.935 3	0.047 16								E <sub>γ</sub> =182.98 21 (2004Fu30), I <sub>γ</sub> =0.020 (1978HeZQ).
185.6197 <sup>h</sup> 6	0.573 12	639.8186	(3) <sup>+</sup>	454.1983	(4,5) <sup>+</sup>				E <sub>γ</sub> =185.67 3 (2004Fu30), I <sub>γ</sub> =0.20 (1978HeZQ).
<sup>x</sup> 185.896 <sup>e</sup> 7	0.030 <sup>j</sup> 9								I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 188.717 <sup>e</sup> 4	0.030 <sup>j</sup> 9								I <sub>γ</sub> =0.010 (1978HeZQ).
190.6374 <sup>h</sup> 6	0.379 10	454.1983	(4,5) <sup>+</sup>	263.5569	(3) <sup>+</sup>				E <sub>γ</sub> : level-energy difference=190.6412. E <sub>γ</sub> =190.70 3 (2004Fu30), I <sub>γ</sub> =0.150 (1978HeZQ).
<sup>x</sup> 191.5456 <sup>e</sup> 12	0.030 <sup>j</sup> 9								I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 194.4351 6	0.58 3								E <sub>γ</sub> =194.44 4 (2004Fu30), I <sub>γ</sub> =0.170 (1978HeZQ).
<sup>x</sup> 195.436 <sup>e</sup> 9	0.030 <sup>j</sup> 9								I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 196.4402 5	4.64 6					M1+E2	0.5 3	0.058 13	α(K)=0.050 11; α(L)=0.0064 18; α(M)=0.0012 4 α(N)=0.00018 5; α(O)=1.07×10 <sup>-5</sup> 19 Mult.: α(K)exp=0.049 7. E <sub>γ</sub> =196.47 3 (2004Fu30), I <sub>γ</sub> =1.50 (1978HeZQ). Additional information 3.
<sup>x</sup> 197.001 <sup>e</sup> 8	0.060 <sup>j</sup> 15								I <sub>γ</sub> =0.020 (1978HeZQ).
197.530 <sup>eh</sup> 10	0.060 <sup>j</sup> 15	461.0910	(5) <sup>+</sup>	263.5569	(3) <sup>+</sup>				I <sub>γ</sub> =0.020 5 (1978HeZQ).
198.753 <sup>eh</sup> 10	0.030 <sup>j</sup> 9	493.6751	4 <sup>+</sup> ,5 <sup>+</sup>	294.9233	(4) <sup>+</sup>				I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 199.251 2	0.13 7								E <sub>γ</sub> =199.3 4 (2004Fu30), I <sub>γ</sub> =0.040 (1978HeZQ).
199.9647 7	0.44 7	400.6317	(5) <sup>+</sup>	200.6659	(4) <sup>+</sup>				E <sub>γ</sub> =199.98 11 (2004Fu30), I <sub>γ</sub> =0.15 (1978HeZQ).
<sup>x</sup> 202.642 8	0.09 5								E <sub>γ</sub> =202.9 5 (2004Fu30), I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 203.308 6	0.06 5								E <sub>γ</sub> =203.7 8 (2004Fu30), I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 205.270 <sup>e</sup> 14	0.030 <sup>j</sup> 9								I <sub>γ</sub> =0.010 (1978HeZQ).
206.1568 5	3.02 6	493.6751	4 <sup>+</sup> ,5 <sup>+</sup>	287.5160	(5) <sup>+</sup>	M1+E2	0.6 4	0.053 13	α(K)=0.046 11; α(L)=0.0060 18; α(M)=0.0011 4 α(N)=0.00017 5; α(O)=9.8×10 <sup>-6</sup> 19



<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

<u>γ(<sup>100</sup>Tc) (continued)</u>								
<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.#</u>	<u>α<sup>l</sup></u>	<u>Comments</u>
								Mult.: α(K)exp=0.047 10. E <sub>γ</sub> =206.17 3 (2004Fu30), I <sub>γ</sub> =0.90 (1978HeZQ). Additional information 21.
<sup>x</sup> 209.6033 8	0.47 4							E <sub>γ</sub> =209.64 6 (2004Fu30), I <sub>γ</sub> =0.130 (1978HeZQ).
211.3101 <sup>h</sup> 8	0.76 4	552.2859	4 <sup>+</sup> ,5 <sup>+</sup>	340.9795	(3) <sup>+</sup>			E <sub>γ</sub> =211.31 5 (2004Fu30), I <sub>γ</sub> =0.22 (1978HeZQ).
<sup>x</sup> 212.150 <sup>e</sup> 9	0.030 <sup>j</sup> 9							I <sub>γ</sub> =0.010 (1978HeZQ).
<sup>x</sup> 213.2006 4	5.17 9					M1	0.0358	α(K)exp=0.035 5 α(K)=0.0314 5; α(L)=0.00368 6; α(M)=0.000668 10 α(N)=0.0001062 15; α(O)=7.06×10 <sup>-6</sup> 10 E <sub>γ</sub> =213.24 3 (2004Fu30), I <sub>γ</sub> =1.76 (1978HeZQ). Additional information 4.
<sup>x</sup> 213.720 <sup>e</sup> 18	0.42 <sup>j</sup> 4							I <sub>γ</sub> =0.140 (1978HeZQ).
<sup>x</sup> 214.156 <sup>e</sup> 14	0.12 <sup>j</sup> 3							I <sub>γ</sub> =0.040 (1978HeZQ).
<sup>x</sup> 216.53 <sup>e</sup> 6	0.030 <sup>j</sup> 9							I <sub>γ</sub> =0.010 (1978HeZQ).
217.1398 <sup>h</sup> 6	4.39 10	461.0910	(5) <sup>+</sup>	243.9554	(6) <sup>+</sup>	M1	0.0341	α(K)=0.0299 5; α(L)=0.00351 5; α(M)=0.000637 9 α(N)=0.0001012 15; α(O)=6.73×10 <sup>-6</sup> 10 Mult.: α(K)exp=0.030 6. δ: <0.5. E <sub>γ</sub> : level-energy difference=217.1353. E <sub>γ</sub> =217.17 3 (2004Fu30), I <sub>γ</sub> =1.49 (1978HeZQ). Additional information 20.
<sup>x</sup> 218.426 <sup>e</sup> 9	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 219.757 <sup>e</sup> 16	0.064 <sup>j</sup> 16							I <sub>γ</sub> =0.016 (1978HeZQ).
220.1428 <sup>h</sup> 5	2.06 6	539.6331	(4 <sup>-</sup> ,5 <sup>-</sup> )	319.4897	(5) <sup>+</sup>			E <sub>γ</sub> =220.18 3 (2004Fu30), I <sub>γ</sub> =0.64 (1978HeZQ).
<sup>x</sup> 221.428 <sup>e</sup> 7	0.09 <sup>j</sup> 3							I <sub>γ</sub> =0.030 (1978HeZQ).
<sup>x</sup> 221.9867 8	1.32 7							E <sub>γ</sub> =221.87 5 (2004Fu30), I <sub>γ</sub> =0.39 (1978HeZQ).
<sup>x</sup> 222.6616 <sup>e</sup> 16	0.30 <sup>j</sup> 3							I <sub>γ</sub> =0.100 (1978HeZQ).
223.4682 4	15.11 24	223.4682	(2) <sup>-</sup>	0.0	1 <sup>+</sup>	E1	0.01316	α(K)=0.01156 17; α(L)=0.001321 19; α(M)=0.000238 4 α(N)=3.76×10 <sup>-5</sup> 6; α(O)=2.39×10 <sup>-6</sup> 4 E <sub>γ</sub> =223.48 3 (2004Fu30), I <sub>γ</sub> =4.91 (1978HeZQ). Mult.: α(K)exp=0.0120 18. δ: <0.1. Additional information 6.
223.716 <sup>ehn</sup> 7	0.30 <sup>j</sup> 9	424.3621	(3,4) <sup>+</sup>	200.6659	(4) <sup>+</sup>			I <sub>γ</sub> =0.10 (1978HeZQ).
<sup>x</sup> 224.08 <sup>e</sup> 2	0.09 <sup>j</sup> 3							I <sub>γ</sub> =0.030 (1978HeZQ).
225.3835 <sup>h</sup> 5	6.56 18	544.8715	(6) <sup>-</sup>	319.4897	(5) <sup>+</sup>			E <sub>γ</sub> =225.38 3 (2004Fu30), I <sub>γ</sub> =2.24 (1978HeZQ). Mult.: suggested as E1 by 1979Pi08, probably because no electron line corresponding to this γ ray was detected.
226.4041 <sup>g</sup> 7	3.04 14	513.9202	(3 to 6) <sup>+</sup>	287.5160	(5) <sup>+</sup>			E <sub>γ</sub> =226.42 4 (2004Fu30), I <sub>γ</sub> =0.88 (1978HeZQ).
<sup>x</sup> 227.955 <sup>e</sup> 9	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 228.511 <sup>e</sup> 8	0.024 <sup>j</sup> 6							I <sub>γ</sub> =0.008 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

$E_\gamma^\dagger$	$I_\gamma^{\ddagger k}$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
230.1148 8	0.93 3	493.6751	4 <sup>+</sup> ,5 <sup>+</sup>	263.5569	(3) <sup>+</sup>	$E_\gamma=230.25$ 3 (2004Fu30), $I_\gamma=0.24$ (1978HeZQ).
<sup>x</sup> 230.782 <sup>e</sup> 4	0.12 <sup>j</sup> 3					$I_\gamma=0.040$ (1978HeZQ).
<sup>x</sup> 230.995 3	0.24 <sup>j</sup> 6					$I_\gamma=0.08$ (1978HeZQ).
						$E_\gamma=231.35$ 6, $I_\gamma=0.46$ 3 (2004Fu30) probably corresponds to doublet: 230.995γ+231.647γ In 1978HeZQ.
<sup>x</sup> 231.647 2	0.21 <sup>j</sup> 5					$I_\gamma=0.070$ (1978HeZQ).
						$E_\gamma=231.35$ 6, $I_\gamma=0.46$ 3 (2004Fu30) probably corresponds to doublet: 230.995γ+231.647γ In 1978HeZQ.
232.772 <sup>ehn</sup> 8	0.030 <sup>j</sup> 9	552.2859	4 <sup>+</sup> ,5 <sup>+</sup>	319.4897	(5) <sup>+</sup>	$I_\gamma=0.010$ (1978HeZQ).
233.325 <sup>g</sup> 3	0.165 20	456.793		223.4682	(2) <sup>-</sup>	$E_\gamma=233.22$ 10 (2004Fu30), $I_\gamma=0.050$ (1978HeZQ).
<sup>x</sup> 234.984 <sup>e</sup> 9	0.030 <sup>j</sup> 9					$I_\gamma=0.010$ (1978HeZQ).
236.4601 13	0.366 20	500.0203	(2,3) <sup>-</sup>	263.5569	(3) <sup>+</sup>	$E_\gamma=236.47$ 5 (2004Fu30), $I_\gamma=0.120$ (1978HeZQ).
<sup>x</sup> 238.194 5	0.09 <sup>j</sup> 3					$I_\gamma=0.030$ (1978HeZQ).
						$E_\gamma=238.66$ 11, $I_\gamma=0.35$ 5 (2004Fu30) probably corresponds to triplet: 238.194γ+238.31γ+238.696γ In 1978HeZQ.
<sup>x</sup> 238.31 3	0.060 <sup>j</sup> 15					$I_\gamma=0.020$ (1978HeZQ).
						$E_\gamma=238.66$ 11, $I_\gamma=0.35$ 5 (2004Fu30) probably corresponds to triplet: 238.194γ+238.31γ+238.696γ In 1978HeZQ.
<sup>x</sup> 238.696 3	0.15 <sup>j</sup> 4					$I_\gamma=0.050$ (1978HeZQ).
						$E_\gamma=238.66$ 11, $I_\gamma=0.35$ 5 (2004Fu30) probably corresponds to triplet: 238.194γ+238.31γ+238.696γ In 1978HeZQ.
239.169 <sup>eh</sup> 5	0.12 <sup>j</sup> 3	639.8186	(3) <sup>+</sup>	400.6317	(5) <sup>+</sup>	$I_\gamma=0.04$ (1978HeZQ).
239.4184 <sup>ah</sup> 8	0.91 5	580.4086	(3,4,5) <sup>+</sup>	340.9795	(3) <sup>+</sup>	$E_\gamma=239.52$ 4 (2004Fu30), $I_\gamma=0.25$ (1978HeZQ). $E_\gamma$ : level energy difference is 239.4288.
<sup>x</sup> 240.262 <sup>e</sup> 10	0.18 <sup>j</sup> 5					$I_\gamma=0.060$ (1978HeZQ).
<sup>x</sup> 241.207 <sup>e</sup> 11	0.09 <sup>j</sup> 3					$I_\gamma=0.030$ (1978HeZQ).
244.705 3	0.21 3	539.6331	(4 <sup>-</sup> ,5 <sup>-</sup> )	294.9233	(4) <sup>+</sup>	$E_\gamma=244.68$ 12 (2004Fu30), $I_\gamma=0.110$ (1978HeZQ).
<sup>x</sup> 245.492 <sup>e</sup> 13	0.09 <sup>j</sup> 3					$I_\gamma=0.030$ (1978HeZQ).
<sup>x</sup> 246.561 <sup>e</sup> 9	0.09 <sup>j</sup> 3					$I_\gamma=0.030$ (1978HeZQ).
<sup>x</sup> 246.96 <sup>e</sup> 5	0.030 <sup>j</sup> 9					$I_\gamma=0.010$ (1978HeZQ).
<sup>x</sup> 247.159 6	0.16 3					$E_\gamma=247.15$ 16 (2004Fu30), $I_\gamma=0.070$ (1978HeZQ).
<sup>x</sup> 247.566 <sup>e</sup> 9	0.09 <sup>j</sup> 3					$I_\gamma=0.030$ (1978HeZQ).
<sup>x</sup> 249.15 <sup>e</sup> 2	0.030 <sup>j</sup> 9					$I_\gamma=0.010$ (1978HeZQ).
<sup>x</sup> 250.697 <sup>e</sup> 7	0.12 <sup>j</sup> 3					$I_\gamma=0.040$ (1978HeZQ).
252.2159 <sup>h</sup> 8	3.32 7	424.3621	(3,4 <sup>+</sup> )	172.1492	2 <sup>+</sup>	$E_\gamma=252.26$ 3 (2004Fu30), $I_\gamma=1.26$ (1978HeZQ).
<sup>x</sup> 252.616 <sup>e</sup> 13	0.15 <sup>j</sup> 4					$I_\gamma=0.050$ (1978HeZQ).
<sup>x</sup> 252.902 <sup>e</sup> 7	0.30 <sup>j</sup> 3					$I_\gamma=0.100$ (1978HeZQ).
<sup>x</sup> 253.29 6	0.060 <sup>j</sup> 15					$I_\gamma=0.020$ (1978HeZQ).
						$E_\gamma=253.56$ 5, $I_\gamma=0.96$ 5 (2004Fu30) probably corresponds to triplet: 253.29γ+253.532γ+253.876γ In 1978HeZQ.
253.532 3	0.69 <sup>j</sup> 7	454.1983	(4,5) <sup>+</sup>	200.6659	(4) <sup>+</sup>	$E_\gamma=253.56$ 5 (2004Fu30), $I_\gamma=0.23$ (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.#</u>	<u>α<sup>l</sup></u>	<u>Comments</u>
								E <sub>γ</sub> ,I <sub>γ</sub> : 1978HeZQ report 253.532 (I <sub>γ</sub> =0.23) and 253.876 (I <sub>γ</sub> =0.130), but 2004Fu30 report only one line at 253.56 (I <sub>γ</sub> =0.96). E <sub>γ</sub> =253.56 5, I <sub>γ</sub> =0.96 5 (2004Fu30) probably corresponds to triplet: 253.29γ+253.532γ+253.876γ In 1978HeZQ.
<sup>x</sup> 253.876 5	0.39 <sup>j</sup> 4							I <sub>γ</sub> =0.130 (1978HeZQ). E <sub>γ</sub> =253.56 5, I <sub>γ</sub> =0.96 5 (2004Fu30) probably corresponds to triplet: 253.29γ+253.532γ+253.876γ In 1978HeZQ.
<sup>x</sup> 255.41 <sup>e</sup> 5	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 255.72 <sup>e</sup> 7	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
257.3564 22	0.51 3	552.2859	4 <sup>+</sup> ,5 <sup>+</sup>	294.9233	(4) <sup>+</sup>			E <sub>γ</sub> =257.46 6 (2004Fu30), I <sub>γ</sub> =0.20 (1978HeZQ).
<sup>x</sup> 257.703 <sup>e</sup> 5	0.24 <sup>j</sup> 6							I <sub>γ</sub> =0.08 (1978HeZQ).
<sup>x</sup> 259.69 <sup>e</sup> 3	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
260.441 <sup>e</sup> 11	0.15 4	461.0910	(5) <sup>+</sup>	200.6659	(4) <sup>+</sup>			E <sub>γ</sub> : based on the least-squares fit procedure, the 260.441γ fits better from 461 level, as proposed by 1979Pi08, than the 260.9136γ as seems proposed by 2004Fu30 who reported a single line at 260.97. I <sub>γ</sub> =0.05 (1978HeZQ).
260.9136 <sup>h</sup> 11	1.39 <sup>j</sup> 4	580.4086	(3,4,5) <sup>+</sup>	319.4897	(5) <sup>+</sup>			E <sub>γ</sub> =260.97 3 (2004Fu30), I <sub>γ</sub> =0.35 (1978HeZQ). E <sub>γ</sub> : see comment for 260.441γ.
<sup>x</sup> 261.875 <sup>e</sup> 3	0.30 <sup>j</sup> 3							I <sub>γ</sub> =0.100 (1978HeZQ).
263.5554 9	14.53 18	263.5569	(3) <sup>+</sup>	0.0	1 <sup>+</sup>	E2	0.0396	α(K)=0.0341 5; α(L)=0.00459 7; α(M)=0.000836 12 α(N)=0.0001292 18; α(O)=6.92×10 <sup>-6</sup> 10 E <sub>γ</sub> =263.58 3 (2004Fu30), I <sub>γ</sub> =5.2 (1978HeZQ). Mult.: α(K)exp=0.034 3. δ: >2. Additional information 9.
264.767 <sup>eh</sup> 22	0.12 <sup>j</sup> 3	552.2859	4 <sup>+</sup> ,5 <sup>+</sup>	287.5160	(5) <sup>+</sup>			I <sub>γ</sub> =0.040 (1978HeZQ).
<sup>x</sup> 266.501 <sup>e</sup> 4	0.36 <sup>j</sup> 4							I <sub>γ</sub> =0.120 (1978HeZQ).
<sup>x</sup> 267.41 <sup>e</sup> 3	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 268.964 3	0.38 6							E <sub>γ</sub> =269.15 13 (2004Fu30), I <sub>γ</sub> =0.120 (1978HeZQ).
<sup>x</sup> 269.9624 10	1.50 7							E <sub>γ</sub> =270.04 4 (2004Fu30), I <sub>γ</sub> =0.53 (1978HeZQ).
<sup>x</sup> 270.618 <sup>e</sup> 11	0.12 <sup>j</sup> 3							I <sub>γ</sub> =0.040 (1978HeZQ).
<sup>x</sup> 271.180 <sup>e</sup> 12	0.27 <sup>j</sup> 6							I <sub>γ</sub> =0.09 (1978HeZQ).
<sup>x</sup> 274.83 <sup>d@</sup> 22	0.14 3							
<sup>x</sup> 275.498 <sup>e</sup> 11	0.27 <sup>j</sup> 6							I <sub>γ</sub> =0.09 (1978HeZQ).
<sup>x</sup> 275.96 <sup>e</sup> 2	0.12 <sup>j</sup> 3							I <sub>γ</sub> =0.040 (1978HeZQ).
276.5525 7	8.49 10	500.0203	(2,3) <sup>-</sup>	223.4682	(2) <sup>-</sup>	M1	0.0183	α(K)=0.01602 23; α(L)=0.00187 3; α(M)=0.000338 5 α(N)=5.38×10 <sup>-5</sup> 8; α(O)=3.60×10 <sup>-6</sup> 5 E <sub>γ</sub> =276.55 3 (2004Fu30), I <sub>γ</sub> =3.10 (1978HeZQ). Mult.: α(K)exp=0.015 3. δ: <0.4. Additional information 22.
<sup>x</sup> 277.01 <sup>e</sup> 4	0.09 <sup>j</sup> 3							I <sub>γ</sub> =0.030 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

<u>γ(<sup>100</sup>Tc) (continued)</u>								
<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.#</u>	<u>α<sup>l</sup></u>	<u>Comments</u>
<sup>x</sup> 277.797 <sup>e</sup> 11	0.33 <sup>j</sup> 3							I <sub>γ</sub> =0.110 (1978HeZQ).
<sup>x</sup> 278.602 <sup>e</sup> 19	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 279.331 <sup>e</sup> 3	0.72 <sup>j</sup> 9							I <sub>γ</sub> =0.24 (1978HeZQ).
<sup>x</sup> 280.281 9	0.103 10							E <sub>γ</sub> =280.48 8 (2004Fu30), I <sub>γ</sub> =0.040 (1978HeZQ).
<sup>x</sup> 280.85 <sup>e</sup> 3	0.09 <sup>j</sup> 3							I <sub>γ</sub> =0.030 (1978HeZQ).
<sup>x</sup> 281.382 <sup>e</sup> 10	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 281.999 4	0.579 12							E <sub>γ</sub> =281.98 3 (2004Fu30), I <sub>γ</sub> =0.20 (1978HeZQ).
<sup>x</sup> 283.21 <sup>d@</sup> 9	0.108 11							
<sup>x</sup> 285.03 <sup>d@</sup> 7	0.109 9							
286.83 <sup>8i</sup> 3	0.312 11	458.99	(0,1,2,3 <sup>+</sup> )	172.1492	2 <sup>+</sup>			E <sub>γ</sub> =286.80 13, I <sub>γ</sub> =0.061 (1978HeZQ).
288.7234 15	0.803 14	552.2859	4 <sup>+</sup> ,5 <sup>+</sup>	263.5569	(3) <sup>+</sup>			E <sub>γ</sub> =288.74 3 (2004Fu30), I <sub>γ</sub> =0.25 (1978HeZQ).
<sup>x</sup> 290.928 <sup>e</sup> 7	0.24 <sup>j</sup> 5							I <sub>γ</sub> =0.060 (1978HeZQ).
<sup>x</sup> 291.422 5	0.22 4							E <sub>γ</sub> =291.20 14 (2004Fu30), I <sub>γ</sub> =0.09 (1978HeZQ).
292.9062 <sup>a</sup> 18	0.98 4	580.4086	(3,4,5) <sup>+</sup>	287.5160	(5) <sup>+</sup>			E <sub>γ</sub> =292.94 4 (2004Fu30), I <sub>γ</sub> =0.41 (1978HeZQ). E <sub>γ</sub> : level energy difference is 292.8922.
<sup>x</sup> 295.323 3	0.94 4							E <sub>γ</sub> =295.43 4 (2004Fu30), I <sub>γ</sub> =0.27 (1978HeZQ).
<sup>x</sup> 295.87 <sup>e</sup> 3	0.060 <sup>j</sup> 15							I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 297.10 <sup>d@</sup> 7	0.62 4							
<sup>x</sup> 297.836 <sup>e</sup> 12	0.39 <sup>j</sup> 4							I <sub>γ</sub> =0.130 (1978HeZQ).
<sup>x</sup> 298.92 <sup>e</sup> 2	0.38 <sup>j</sup> 4							I <sub>γ</sub> =0.128 (1978HeZQ).
299.4805 5	30.9 4	500.1466	(4) <sup>-</sup>	200.6659	(4) <sup>+</sup>	E1	0.00587	α(K)=0.00516 8; α(L)=0.000587 9; α(M)=0.0001059 15 α(N)=1.676×10 <sup>-5</sup> 24; α(O)=1.083×10 <sup>-6</sup> 16 E <sub>γ</sub> =299.48 3 (2004Fu30), I <sub>γ</sub> =11.5 (1978HeZQ). Mult.: α(K)exp=0.0052 10. δ: <0.14. <a href="#">Additional information 23.</a>
300.9302 <sup>ah</sup> 10	5.9 3	544.8715	(6) <sup>-</sup>	243.9554	(6) <sup>+</sup>			E <sub>γ</sub> =300.92 7 (2004Fu30), I <sub>γ</sub> =2.12 (1978HeZQ). E <sub>γ</sub> : level energy difference=300.9156.
301.721 <sup>8</sup> 4	1.3 4	854.007	(2 to 7) <sup>+</sup>	552.2859	4 <sup>+</sup> ,5 <sup>+</sup>			E <sub>γ</sub> =301.65 15 (2004Fu30), I <sub>γ</sub> =0.38 (1978HeZQ).
<sup>x</sup> 304.844 14	0.252 18							E <sub>γ</sub> =304.83 7 (2004Fu30), I <sub>γ</sub> =0.060 (1978HeZQ).
<sup>x</sup> 305.88 2	0.030 <sup>j</sup> 9							I <sub>γ</sub> =0.010 (1978HeZQ). E <sub>γ</sub> =306.09 12, I <sub>γ</sub> =0.133 17 (2004Fu30) probably corresponds to doublet: 305.88γ+306.698γ In 1978HeZQ.
<sup>x</sup> 306.698 18	0.09 <sup>j</sup> 3							I <sub>γ</sub> =0.030 (1978HeZQ). E <sub>γ</sub> =306.09 12, I <sub>γ</sub> =0.133 17 (2004Fu30) probably corresponds to doublet: 305.88γ+306.698γ In 1978HeZQ.
<sup>x</sup> 308.7478 18	0.703 18							E <sub>γ</sub> =308.74 3 (2004Fu30), I <sub>γ</sub> =0.25 (1978HeZQ).
<sup>x</sup> 312.285 3	0.748 23							E <sub>γ</sub> =312.30 3 (2004Fu30), I <sub>γ</sub> =0.33 (1978HeZQ).
313.237 <sup>8</sup> 8	0.248 20	513.9202	(3 to 6) <sup>+</sup>	200.6659	(4) <sup>+</sup>			E <sub>γ</sub> =313.45 9 (2004Fu30), I <sub>γ</sub> =0.110 (1978HeZQ).
<sup>x</sup> 313.86 <sup>e</sup> 4	0.09 <sup>j</sup> 3							I <sub>γ</sub> =0.030 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

$E_\gamma$ †	$I_\gamma$ ‡k	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
<sup>x</sup> 317.498 7	0.74 17					$E_\gamma=317.48$ 20 (2004Fu30), $I_\gamma=0.21$ (1978HeZQ).
<sup>x</sup> 317.876 <sup>e</sup> 6	0.69 <sup>j</sup> 7					$I_\gamma=0.23$ (1978HeZQ).
<sup>x</sup> 318.430 6	0.72 17					$E_\gamma=318.39$ 20 (2004Fu30), $I_\gamma=0.21$ (1978HeZQ).
320.341 <sup>eh</sup> 14	0.39 <sup>j</sup> 4	639.8186	(3) <sup>+</sup>	319.4897	(5) <sup>+</sup>	$I_\gamma=0.130$ (1978HeZQ).
<sup>x</sup> 320.968 <sup>e</sup> 14	0.21 <sup>j</sup> 5					$I_\gamma=0.070$ (1978HeZQ).
321.590 <sup>g</sup> 2	1.44 9	821.737		500.1466	(4) <sup>-</sup>	$E_\gamma=321.58$ 6 (2004Fu30), $I_\gamma=0.58$ (1978HeZQ).
<sup>x</sup> 322.245 <sup>e</sup> 9	0.30 <sup>j</sup> 3					$I_\gamma=0.100$ (1978HeZQ).
<sup>x</sup> 322.815 <sup>e</sup> 3	0.21 <sup>j</sup> 5					$I_\gamma=0.070$ (1978HeZQ).
<sup>x</sup> 323.54 <sup>e</sup> 4	0.30 <sup>j</sup> 3					$I_\gamma=0.100$ (1978HeZQ).
323.841 <sup>g</sup> 3	1.49 10	748.202		424.3621	(3,4) <sup>+</sup>	$E_\gamma=323.78$ 6 (2004Fu30), $I_\gamma=0.64$ (1978HeZQ).
<sup>x</sup> 326.975 <sup>e</sup> 19	0.15 <sup>j</sup> 4					$I_\gamma=0.050$ (1978HeZQ).
327.92 <sup>h</sup> 3	0.106 21	500.0203	(2,3) <sup>-</sup>	172.1492	2 <sup>+</sup>	$E_\gamma=327.45$ 17 (2004Fu30), $I_\gamma=0.050$ (1978HeZQ).
<sup>x</sup> 329.413 4	0.670 24					$E_\gamma=329.43$ 3 (2004Fu30), $I_\gamma=0.210$ (1978HeZQ).
<sup>x</sup> 330.71 <sup>e</sup> 3	0.09 <sup>j</sup> 3					$I_\gamma=0.030$ (1978HeZQ).
<sup>x</sup> 332.527 5	0.135 19					$E_\gamma=332.41$ 13 (2004Fu30), $I_\gamma=0.040$ (1978HeZQ).
335.193 <sup>b</sup> 3	0.471 22	335.1622	(2,3) <sup>+</sup>	0.0	1 <sup>+</sup>	$E_\gamma$ : level-energy difference=335.162. $E_\gamma=335.29$ 4 (2004Fu30), $I_\gamma=0.14$ (1978HeZQ).
<sup>x</sup> 338.61 <sup>e</sup> 3	0.33 <sup>j</sup> 3					$I_\gamma=0.110$ (1978HeZQ).
338.9634 17	6.61 7	539.6331	(4 <sup>-</sup> ,5 <sup>-</sup> )	200.6659	(4) <sup>+</sup>	$E_\gamma=338.95$ 3 (2004Fu30), $I_\gamma=2.51$ (1978HeZQ).
340.981 3	1.52 3	340.9795	(3) <sup>+</sup>	0.0	1 <sup>+</sup>	$E_\gamma=340.99$ 3 (2004Fu30), $I_\gamma=0.77$ (1978HeZQ).
344.884 4	2.50 5	639.8186	(3) <sup>+</sup>	294.9233	(4) <sup>+</sup>	$E_\gamma=344.89$ 3 (2004Fu30), $I_\gamma=1.23$ (1978HeZQ).
<sup>x</sup> 346.449 4	1.5 6					$E_\gamma=346.36$ 17 (2004Fu30), $I_\gamma=0.70$ (1978HeZQ).
<sup>x</sup> 346.790 13	1.1 6					$E_\gamma=346.83$ 20 (2004Fu30), $I_\gamma=0.96$ (1978HeZQ).
<sup>x</sup> 348.914 3	1.66 3					$E_\gamma=348.89$ 3 (2004Fu30), $I_\gamma=0.65$ (1978HeZQ).
<sup>x</sup> 352.20 3	0.287 24					$E_\gamma=352.00$ 7 (2004Fu30), $I_\gamma=0.060$ (1978HeZQ).
<sup>x</sup> 354.30 <sup>e</sup> 4	0.21 <sup>j</sup> 5					$I_\gamma=0.070$ (1978HeZQ).
355.575 <sup>g</sup> 9	0.474 19	355.5753	(2,3) <sup>+</sup>	0.0	1 <sup>+</sup>	$E_\gamma=355.67$ 4 (2004Fu30), $I_\gamma=0.32$ (1978HeZQ).
<sup>x</sup> 356.90 <sup>e</sup> 2	0.15 <sup>j</sup> 4					$I_\gamma=0.050$ (1978HeZQ).
<sup>x</sup> 357.450 6	1.11 4					$E_\gamma=357.37$ 4 (2004Fu30), $I_\gamma=0.58$ (1978HeZQ).
<sup>x</sup> 358.108 14	0.70 4					$E_\gamma=358.31$ 5 (2004Fu30), $I_\gamma=0.24$ (1978HeZQ).
<sup>x</sup> 358.603 <sup>e</sup> 16	0.66 <sup>j</sup> 6					$I_\gamma=0.22$ (1978HeZQ).
<sup>x</sup> 360.49 <sup>d@</sup> 8	0.172 16					
<sup>x</sup> 362.966 10	0.133 19					$E_\gamma=363.32$ 12 (2004Fu30), $I_\gamma=0.060$ (1978HeZQ).
<sup>x</sup> 364.811 6	0.323 18					$E_\gamma=364.84$ 6 (2004Fu30), $I_\gamma=0.20$ (1978HeZQ).
<sup>x</sup> 366.354 6	0.607 18					$E_\gamma=366.32$ 3 (2004Fu30), $I_\gamma=0.23$ (1978HeZQ).
<sup>x</sup> 370.407 4	0.606 9					$E_\gamma=370.42$ 3 (2004Fu30), $I_\gamma=0.22$ (1978HeZQ).
372.467 <sup>g</sup> 8	0.149 8	952.878	(2 to 7) <sup>+</sup>	580.4086	(3,4,5) <sup>+</sup>	$E_\gamma=372.33$ 5 (2004Fu30), $I_\gamma=0.050$ (1978HeZQ).
<sup>x</sup> 374.286 10	0.171 1					$E_\gamma=374.32$ 4 (2004Fu30), $I_\gamma=0.100$ (1978HeZQ).
<sup>x</sup> 375.61 <sup>e</sup> 3	0.12 <sup>j</sup> 3					$I_\gamma=0.040$ (1978HeZQ).
376.255 17	0.105 12	639.8186	(3) <sup>+</sup>	263.5569	(3) <sup>+</sup>	$E_\gamma=376.10$ 8 (2004Fu30), $I_\gamma=0.050$ (1978HeZQ).
<sup>x</sup> 378.056 14	0.24 4					$E_\gamma=378.01$ 10 (2004Fu30), $I_\gamma=0.070$ (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Comments</u>
379.758 11	0.32 3	580.4086	(3,4,5) <sup>+</sup>	200.6659	(4) <sup>+</sup>	E <sub>γ</sub> =379.61 8 (2004Fu30), I <sub>γ</sub> =0.14 (1978HeZQ).
<sup>x</sup> 381.869 4	0.69 3					E <sub>γ</sub> =381.86 4 (2004Fu30), I <sub>γ</sub> =0.190 (1978HeZQ).
<sup>x</sup> 384.995 3	2.89 5					E <sub>γ</sub> =385.00 3 (2004Fu30), I <sub>γ</sub> =1.05 (1978HeZQ).
<sup>x</sup> 386.652 5	0.93 3					E <sub>γ</sub> =386.62 4 (2004Fu30), I <sub>γ</sub> =0.29 (1978HeZQ).
<sup>x</sup> 388.27 <sup>e</sup> 13	0.060 <sup>j</sup> 15					I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 389.89 2	1.11 <sup>j</sup> 11					I <sub>γ</sub> =0.37 (1978HeZQ).
						E <sub>γ</sub> =390.04 3, I <sub>γ</sub> =2.41 5 (2004Fu30) probably corresponds to doublet: 389.89γ+390.24γ In 1978heq.
<sup>x</sup> 390.24 2	1.35 <sup>j</sup> 14					I <sub>γ</sub> =0.45 (1978HeZQ).
						E <sub>γ</sub> =390.04 3, I <sub>γ</sub> =2.41 5 (2004Fu30) probably corresponds to doublet: 389.89γ+390.24γ In 1978heq.
<sup>x</sup> 392.20 <sup>e</sup> 2	0.24 <sup>j</sup> 6					I <sub>γ</sub> =0.08 (1978HeZQ).
<sup>x</sup> 393.210 5	0.76 3					E <sub>γ</sub> =393.07 4 (2004Fu30), I <sub>γ</sub> =0.39 (1978HeZQ).
<sup>x</sup> 396.223 9	0.60 3					E <sub>γ</sub> =396.00 5 (2004Fu30), I <sub>γ</sub> =0.22 (1978HeZQ).
<sup>x</sup> 397.975 5	1.42 7					E <sub>γ</sub> =398.00 5 (2004Fu30), I <sub>γ</sub> =0.53 (1978HeZQ).
<sup>x</sup> 399.150 3	2.75 7					E <sub>γ</sub> =399.17 3 (2004Fu30), I <sub>γ</sub> =1.11 (1978HeZQ).
<sup>x</sup> 401.562 7	0.99 4					E <sub>γ</sub> =401.50 3 (2004Fu30), I <sub>γ</sub> =0.39 (1978HeZQ).
<sup>x</sup> 404.321 16	0.059 15					E <sub>γ</sub> =404.53 25 (2004Fu30), I <sub>γ</sub> =0.030 (1978HeZQ).
<sup>x</sup> 405.91 <sup>@</sup> 13	0.115 14					E <sub>γ</sub> =405.80 11, I <sub>γ</sub> =0.056 (1978HeZQ).
<sup>x</sup> 409.32 <sup>@</sup> 19	0.061 11					E <sub>γ</sub> =408.9 3, I <sub>γ</sub> =0.017 (1978HeZQ).
411.35 <sup>g</sup> 3	0.205 12	1051.15		639.8186	(3) <sup>+</sup>	E <sub>γ</sub> =411.20 6 (2004Fu30), I <sub>γ</sub> =0.070 (1978HeZQ).
<sup>x</sup> 413.876 5	1.314 19					E <sub>γ</sub> =413.83 3 (2004Fu30), I <sub>γ</sub> =0.49 (1978HeZQ).
<sup>x</sup> 420.161 14	0.107 21					E <sub>γ</sub> =419.97 23 (2004Fu30), I <sub>γ</sub> =0.060 (1978HeZQ).
<sup>x</sup> 421.796 9	0.50 3					E <sub>γ</sub> =421.73 6 (2004Fu30), I <sub>γ</sub> =0.21 (1978HeZQ).
<sup>x</sup> 423.38 3	0.347 23					E <sub>γ</sub> =423.78 8 (2004Fu30), I <sub>γ</sub> =0.090 (1978HeZQ).
<sup>x</sup> 424.03 <sup>e</sup> 4	0.16 <sup>j</sup> 4					I <sub>γ</sub> =0.08 (1978HeZQ).
<sup>x</sup> 424.71 <sup>e</sup> 17	0.040 <sup>j</sup> 10					I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 426.096 18	0.315 23					E <sub>γ</sub> =426.10 8 (2004Fu30), I <sub>γ</sub> =0.120 (1978HeZQ).
<sup>x</sup> 428.57 <sup>e</sup> 3	0.14 <sup>j</sup> 4					I <sub>γ</sub> =0.070 (1978HeZQ).
429.748 <sup>g</sup> 5	1.48 8	929.895		500.1466	(4) <sup>-</sup>	E <sub>γ</sub> =429.54 5 (2004Fu30), I <sub>γ</sub> =0.54 (1978HeZQ).
<sup>x</sup> 430.848 19	0.56 8					E <sub>γ</sub> =430.50 12 (2004Fu30), I <sub>γ</sub> =0.32 (1978HeZQ).
<sup>x</sup> 433.456 11	0.472 25					E <sub>γ</sub> =433.45 6 (2004Fu30), I <sub>γ</sub> =0.220 (1978HeZQ).
<sup>x</sup> 437.55 3	0.209 9					E <sub>γ</sub> =437.55 4 (2004Fu30), I <sub>γ</sub> =0.070 (1978HeZQ).
<sup>x</sup> 439.29 <sup>e</sup> 4	0.422 <sup>j</sup> 18					I <sub>γ</sub> =0.211 (1978HeZQ).
<sup>x</sup> 439.77 18	0.070 9					E <sub>γ</sub> =440.71 14 (2004Fu30), I <sub>γ</sub> =0.030 (1978HeZQ).
<sup>x</sup> 443.61 7	0.097 7					E <sub>γ</sub> =443.60 7 (2004Fu30), I <sub>γ</sub> =0.020 (1978HeZQ).
<sup>x</sup> 445.66 <sup>@</sup> 8	0.084 7					E <sub>γ</sub> =445.8 4, I <sub>γ</sub> =0.017 4 (1978HeZQ).
<sup>x</sup> 448.20 5	0.181 8					E <sub>γ</sub> =448.06 4 (2004Fu30), I <sub>γ</sub> =0.050 (1978HeZQ).
<sup>x</sup> 452.827 16	0.538 23					E <sub>γ</sub> =452.87 4 (2004Fu30), I <sub>γ</sub> =0.210 (1978HeZQ).
<sup>x</sup> 455.03 5	0.300 21					E <sub>γ</sub> =454.81 8 (2004Fu30), I <sub>γ</sub> =0.120 (1978HeZQ).
<sup>x</sup> 457.040 12	0.89 3					E <sub>γ</sub> =456.99 3 (2004Fu30), I <sub>γ</sub> =0.35 (1978HeZQ).
459.01 <sup>g</sup> 4	0.398 23	458.99	(0,1,2,3 <sup>+</sup> )	0.0	1 <sup>+</sup>	E <sub>γ</sub> =458.7 3 (2004Fu30), I <sub>γ</sub> =0.190 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Comments</u>
<sup>x</sup> 460.481 15	0.75 3					Eγ=460.40 4 (2004Fu30), Iγ=0.28 (1978HeZQ).
<sup>x</sup> 463.727 5	1.62 3					Eγ=463.69 3 (2004Fu30), Iγ=0.66 (1978HeZQ).
<sup>x</sup> 465.95@ 11	0.200 21					Eγ=466.09 4, Iγ=0.114 (1978HeZQ).
<sup>x</sup> 470.676 5	2.65 5					Eγ=470.64 3 (2004Fu30), Iγ=1.04 (1978HeZQ).
<sup>x</sup> 472.1 <sup>d</sup> 4	0.14 3					
<sup>x</sup> 473.5 <sup>d</sup> 6	0.18 8					
<sup>x</sup> 474.4 <sup>d</sup> 6	0.20 7					
<sup>x</sup> 475.66 6	0.33 5					Eγ=475.61 17 (2004Fu30), Iγ=0.170 (1978HeZQ).
<sup>x</sup> 479.91 14	0.36 3					Eγ=479.41 9 (2004Fu30), Iγ=0.190 (1978HeZQ).
<sup>x</sup> 480.81 9	0.41 3					Eγ=480.91 9 (2004Fu30), Iγ=0.22 (1978HeZQ).
<sup>x</sup> 482.46 <sup>d</sup> 17	0.19 3					
<sup>x</sup> 484.546 11	1.66 3					Eγ=484.43 3 (2004Fu30), Iγ=0.62 (1978HeZQ).
<sup>x</sup> 486.555 19	0.78 3					Eγ=486.45 4 (2004Fu30), Iγ=0.43 (1978HeZQ).
<sup>x</sup> 488.95 2	0.73 3					Eγ=488.79 3 (2004Fu30), Iγ=0.27 (1978HeZQ).
<sup>x</sup> 491.30 <sup>d</sup> 5	0.42 3					
<sup>x</sup> 493.92 14	0.158 17					Eγ=493.76 9 (2004Fu30), Iγ=0.030 (1978HeZQ).
<sup>x</sup> 495.90 <sup>d</sup> 9	0.33 3					
<sup>x</sup> 496.25 6	0.25 3					Eγ=496.99 14 (2004Fu30), Iγ=0.150 (1978HeZQ).
498.69 <sup>g</sup> 3	0.476 17	952.878	(2 to 7) <sup>+</sup>	454.1983	(4,5) <sup>+</sup>	Eγ=498.50 4 (2004Fu30), Iγ=0.180 (1978HeZQ).
<sup>x</sup> 503.438 12	0.781 15					Eγ=503.32 3 (2004Fu30), Iγ=0.28 (1978HeZQ).
<sup>x</sup> 515.03 4	0.810 23					Eγ=514.93 3 (2004Fu30), Iγ=0.35 (1978HeZQ).
<sup>x</sup> 516.73@ 9	0.151 24					Eγ=517.73 6, Iγ=0.127 6 (1978HeZQ) for 516.73γ+518.42γ In 2004Fu30.
<sup>x</sup> 518.42@ 5	0.122 6					Eγ=517.73 6, Iγ=0.127 6 (1978HeZQ) for 516.73γ+518.42γ In 2004Fu30.
<sup>x</sup> 520.8 2	0.26 3					Eγ=520.62 7 (2004Fu30), Iγ=0.110 (1978HeZQ).
<sup>x</sup> 523.372 11	1.67 3					Eγ=523.34 3 (2004Fu30), Iγ=0.67 (1978HeZQ).
<sup>x</sup> 528.51 7	0.1110 15					Eγ=528.42 13 (2004Fu30), Iγ=0.050 (1978HeZQ).
<sup>x</sup> 531.9 2	0.155 16					Eγ=531.85 10 (2004Fu30), Iγ=0.08 (1978HeZQ).
<sup>x</sup> 536.63 7	0.44 7					Eγ=536.67 6 (2004Fu30), Iγ=0.15 (1978HeZQ).
<sup>x</sup> 540.31 <sup>e</sup> 12	0.44 <sup>j</sup> 4					Iγ=0.22 (1978HeZQ).
<sup>x</sup> 544.27 4	0.98 5					Eγ=544.32 5 (2004Fu30), Iγ=0.21 (1978HeZQ).
<sup>x</sup> 544.98 6	0.42 4					Eγ=545.41 14 (2004Fu30), Iγ=0.33 (1978HeZQ).
547.23 <sup>g</sup> 5	0.41 3	748.202		200.6659	(4) <sup>+</sup>	Eγ=546.97 10 (2004Fu30), Iγ=0.100 (1978HeZQ). Eγ: level-energy difference=547.53.
<sup>x</sup> 548.29 <sup>d</sup> 18	0.164 24					
551.14 <sup>g</sup> 3	0.775 21	1051.15		500.0203	(2,3) <sup>-</sup>	Eγ=550.96 3 (2004Fu30), Iγ=0.26 (1978HeZQ).
<sup>x</sup> 553.16 19	0.215 18					Eγ=552.78 10 (2004Fu30), Iγ=0.060 (1978HeZQ).
<sup>x</sup> 555.25 6	0.502 20					Eγ=550.01 4 (2004Fu30), Iγ=0.17 (1978HeZQ).
<sup>x</sup> 558.14 5	0.495 23					Eγ=558.20 4 (2004Fu30), Iγ=0.120 (1978HeZQ).
<sup>x</sup> 562.47 4	0.491 18					Eγ=562.34 4 (2004Fu30), Iγ=0.20 (1978HeZQ).
<sup>x</sup> 565.26 4	0.596 17					Eγ=565.21 3 (2004Fu30), Iγ=0.22 (1978HeZQ).
<sup>x</sup> 568.16 3	0.714 19					Eγ=568.04 3 (2004Fu30), Iγ=0.28 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

$E_\gamma$ †	$I_\gamma$ ‡k	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
<sup>x</sup> 570.03 3	0.987 20					$E_\gamma=569.97$ 3 (2004Fu30), $I_\gamma=0.37$ (1978HeZQ).
<sup>x</sup> 574.46 4	0.582 19					$E_\gamma=574.37$ 4 (2004Fu30), $I_\gamma=0.21$ (1978HeZQ).
<sup>x</sup> 576.06 <sup>d</sup> 19	0.104 17					
<sup>x</sup> 578.43 <sup>d</sup> 14	0.21 3					
<sup>x</sup> 579.0 5	0.22 3					$E_\gamma=579.60$ 13 (2004Fu30), $I_\gamma=0.100$ (1978HeZQ).
<sup>x</sup> 583.35 3	0.654 15					$E_\gamma=583.28$ 3 (2004Fu30), $I_\gamma=0.25$ (1978HeZQ).
<sup>x</sup> 588.80 8	0.355 19					$E_\gamma=588.27$ 7 (2004Fu30), $I_\gamma=0.19$ (1978HeZQ).
<sup>x</sup> 593.91 8	0.428 18					$E_\gamma=593.89$ 6 (2004Fu30), $I_\gamma=0.21$ (1978HeZQ).
<sup>x</sup> 596.37 12	0.101 18					$E_\gamma=595.55$ 22 (2004Fu30), $I_\gamma=0.065$ (1978HeZQ).
<sup>x</sup> 597.07 <sup>d</sup> 13	0.191 19					
<sup>x</sup> 599.15 14	0.145 18					$E_\gamma=598.27$ 17, $I_\gamma=0.050$ 4 (1978HeZQ).
<sup>x</sup> 601.06 18	0.106 19					$E_\gamma=600.35$ 12, $I_\gamma=0.041$ 4 (1978HeZQ).
<sup>x</sup> 604.85 5	0.355 18					$E_\gamma=605.06$ 5, $I_\gamma=0.139$ 5 (1978HeZQ).
<sup>x</sup> 607.71 8	0.195 15					$E_\gamma=607.84$ 9, $I_\gamma=0.086$ 5 (1978HeZQ).
<sup>x</sup> 610.53 7	0.254 15					$E_\gamma=610.50$ 9, $I_\gamma=0.111$ 6 (1978HeZQ).
<sup>x</sup> 612.7 <sup>e</sup> 3	0.088 <sup>j</sup> 16					$I_\gamma=0.044$ 8 (1978HeZQ).
<sup>x</sup> 614.39 3	0.716 19					$E_\gamma=614.55$ 4, $I_\gamma=0.306$ 9 (1978HeZQ).
<sup>x</sup> 617.40 <sup>e</sup> 10	0.112 <sup>j</sup> 8					$I_\gamma=0.056$ 4 (1978HeZQ).
<sup>x</sup> 619.06 3	0.605 16					$E_\gamma=619.26$ 3, $I_\gamma=0.271$ 4 (1978HeZQ).
<sup>x</sup> 621.46 6	0.71 5					$E_\gamma=621.63$ 4, $I_\gamma=0.379$ 14 (1978HeZQ).
<sup>x</sup> 622.43 8	0.54 5					$E_\gamma=622.84$ 6, $I_\gamma=0.177$ 15 (1978HeZQ).
<sup>x</sup> 625.97 9	0.167 12					$E_\gamma=626.10$ 4, $I_\gamma=0.076$ 2 (1978HeZQ).
<sup>x</sup> 628.72 5	0.303 13					$E_\gamma=628.82$ 3, $I_\gamma=0.121$ 2 (1978HeZQ).
<sup>x</sup> 633.91 3	0.448 15					$E_\gamma=634.02$ 3, $I_\gamma=0.146$ 3 (1978HeZQ).
<sup>x</sup> 636.55 6	0.154 15					$E_\gamma=637.0$ 2, $I_\gamma=0.024$ 3 (1978HeZQ).
639.79 <sup>hf</sup> 3	0.443 16	639.8186	(3) <sup>+</sup>	0.0	1 <sup>+</sup>	$E_\gamma=639.41$ 10 (2004Fu30), $I_\gamma=0.19$ 2 (1978HeZQ).
<sup>x</sup> 640.69 <sup>d</sup> 12	0.181 16					
<sup>x</sup> 642.56 9	0.308 22					$E_\gamma=641.58$ 14, $I_\gamma=0.080$ 6 (1978HeZQ).
<sup>x</sup> 643.64 17	0.143 22					$E_\gamma=643.18$ 6, $I_\gamma=0.138$ 7 (1978HeZQ).
<sup>x</sup> 645.65 <sup>e</sup> 19	0.042 <sup>j</sup> 4					$I_\gamma=0.021$ 2 (1978HeZQ).
<sup>x</sup> 648.25 5	0.5410 20					$E_\gamma=648.52$ 2, $I_\gamma=0.241$ 2 (1978HeZQ).
<sup>x</sup> 649.44 <sup>d</sup> 18	0.152 19					
<sup>x</sup> 651.12 4	0.405 13					$E_\gamma=651.01$ 3, $I_\gamma=0.173$ 3 (1978HeZQ).
<sup>x</sup> 653.10 3	0.574 13					$E_\gamma=653.15$ 2, $I_\gamma=0.238$ 3 (1978HeZQ).
<sup>x</sup> 655.8 <sup>e</sup> 2	0.054 <sup>j</sup> 6					$I_\gamma=0.027$ 3 (1978HeZQ).
657.46 <sup>bn</sup> 3	0.316 9	829.61?	(2,3) <sup>+</sup>	172.1492	2 <sup>+</sup>	$E_\gamma=657.66$ 4, $I_\gamma=0.144$ 4 (1978HeZQ).
<sup>x</sup> 660.67 7	0.127 8					$E_\gamma=660.73$ 7, $I_\gamma=0.062$ 3 (1978HeZQ).
<sup>x</sup> 663.17 6	0.174 8					$E_\gamma=663.33$ 11, $I_\gamma=0.075$ 6 (1978HeZQ).
<sup>x</sup> 665.06 6	0.364 14					$E_\gamma=665.23$ 11, $I_\gamma=0.175$ 13 (1978HeZQ).
666.34 <sup>g</sup> 3	0.781 15	929.895		263.5569	(3) <sup>+</sup>	$E_\gamma=666.57$ 5, $I_\gamma=0.307$ 16 (1978HeZQ).
<sup>x</sup> 668.60 3	0.349 9					$E_\gamma=668.90$ 3, $I_\gamma=0.142$ 3 (1978HeZQ).
<sup>x</sup> 670.49 15	0.068 9					$E_\gamma=670.4$ 3, $I_\gamma=0.019$ 6 (1978HeZQ).



γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 673.47 14	0.080 14		Eγ=673.9 3, Iγ=0.012 2 (1978HeZQ).
<sup>x</sup> 678.70 3	0.395 8		Eγ=678.80 4, Iγ=0.168 3 (1978HeZQ).
<sup>x</sup> 681.42 5	0.237 9		Eγ=681.57 11, Iγ=0.096 11 (1978HeZQ).
<sup>x</sup> 682.88 3	0.862 10		Eγ=683.01 4, Iγ=0.382 9 (1978HeZQ).
<sup>x</sup> 684.75 12	0.074 7		Eγ=684.9 3, Iγ=0.029 5 (1978HeZQ).
<sup>x</sup> 687.86 3	0.097 11		Eγ=687.71 9, Iγ=0.053 2 (1978HeZQ).
<sup>x</sup> 689.88 8	0.294 21		Eγ=690.2 2, Iγ=0.105 10 (1978HeZQ).
<sup>x</sup> 691.06 19	0.191 17		Eγ=691.82 6, Iγ=0.098 5 (1978HeZQ).
<sup>x</sup> 692.32 <sup>d</sup> 12	0.174 17		
<sup>x</sup> 695.58 18	0.073 17		Eγ=696.81 16, Iγ=0.036 6 (1978HeZQ).
<sup>x</sup> 697.73 10	0.133 14		Eγ=698.45 17, Iγ=0.045 5 (1978HeZQ).
<sup>x</sup> 700.41 8	0.176 12		Eγ=700.72 7, Iγ=0.064 3 (1978HeZQ).
<sup>x</sup> 703.88 3	0.941 18		Eγ=704.03 1, Iγ=0.432 5 (1978HeZQ).
<sup>x</sup> 705.38 10	0.214 16		Eγ=705.68 6, Iγ=0.101 5 (1978HeZQ).
<sup>x</sup> 709.0 <sup>e</sup> 3	0.042 <sup>j</sup> 10		Iγ=0.021 5 (1978HeZQ).
<sup>x</sup> 710.32 11	0.119 11		Eγ=710.73 13, Iγ=0.056 5 (1978HeZQ).
<sup>x</sup> 712.99 5	0.279 11		Eγ=713.13 3, Iγ=0.124 2 (1978HeZQ).
<sup>x</sup> 718.15 <sup>d</sup> 16	0.143 18		
<sup>x</sup> 719.39 14	0.301 20		Eγ=719.12 6, Iγ=0.138 8 (1978HeZQ).
<sup>x</sup> 720.53 7	0.341 24		Eγ=720.61 5, Iγ=0.164 8 (1978HeZQ).
<sup>x</sup> 723.37 4	0.2610 9		Eγ=723.58 4, Iγ=0.119 3 (1978HeZQ).
<sup>x</sup> 725.46 <sup>d</sup> 18	0.062 9		
<sup>x</sup> 727.53 16	0.128 18		Eγ=726.76 16, Iγ=0.041 5 (1978HeZQ).
<sup>x</sup> 728.70 9	0.236 17		Eγ=728.64 4, Iγ=0.138 8 (1978HeZQ).
<sup>x</sup> 732.5 4	0.043 17		Eγ=732.06 17, Iγ=0.024 3 (1978HeZQ).
<sup>x</sup> 736.86 4	0.519 20		Eγ=737.04 2, Iγ=0.238 2 (1978HeZQ).
<sup>x</sup> 739.44 12	0.158 25		Eγ=739.66 7, Iγ=0.071 3 (1978HeZQ).
<sup>x</sup> 741.74 15	0.081 15		Eγ=742.19 9, Iγ=0.076 3 (1978HeZQ).
<sup>x</sup> 743.88 5	0.247 13		Eγ=744.28 5, Iγ=0.147 3 (1978HeZQ).
<sup>x</sup> 746.45 3	0.443 12		Eγ=746.72 2, Iγ=0.237 3 (1978HeZQ).
<sup>x</sup> 749.56 4	0.333 14		Eγ=749.60 2, Iγ=0.205 3 (1978HeZQ).
<sup>x</sup> 752.06 10	0.120 17		Eγ=751.97 6, Iγ=0.098 3 (1978HeZQ).
<sup>x</sup> 754.38 7	0.43 3		Eγ=754.54 2, Iγ=0.243 3 (1978HeZQ).
<sup>x</sup> 756.52 4	0.67 3		Eγ=756.73 1, Iγ=0.340 3 (1978HeZQ).
<sup>x</sup> 760.13 12	0.185 21		Eγ=760.06 3, Iγ=0.101 2 (1978HeZQ).
<sup>x</sup> 764.14 10	0.112 11		Eγ=764.61 16, Iγ=0.024 3 (1978HeZQ).
<sup>x</sup> 767.57 7	0.33 3		Eγ=767.83 9, Iγ=0.17 2 (1978HeZQ).
<sup>x</sup> 768.64 9	0.32 3		Eγ=769.01 16, Iγ=0.12 2 (1978HeZQ).
<sup>x</sup> 771.17 10	0.113 9		Eγ=771.48 11, Iγ=0.053 3 (1978HeZQ).
<sup>x</sup> 774.25 8	0.143 11		Eγ=774.43 6, Iγ=0.072 3 (1978HeZQ).
<sup>x</sup> 778.63 <sup>e</sup> 10	0.066 <sup>j</sup> 4		Iγ=0.033 2 (1978HeZQ).
<sup>x</sup> 781.01 13	0.217 19		Eγ=781.20 5, Iγ=0.130 4 (1978HeZQ).
<sup>x</sup> 782.66 21	0.129 17		Eγ=783.13 8, Iγ=0.081 4 (1978HeZQ).

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Comments</u>
<sup>x</sup> 785.48 16	0.1110 16					E <sub>γ</sub> =785.72 6, I <sub>γ</sub> =0.100 3 (1978HeZQ).
<sup>x</sup> 787.89 <sup>e</sup> 10	0.110 <sup>j</sup> 6					I <sub>γ</sub> =0.055 3 (1978HeZQ).
<sup>x</sup> 790.44 5	0.229 14					E <sub>γ</sub> =790.53 3, I <sub>γ</sub> =0.118 2 (1978HeZQ).
<sup>x</sup> 794.77 4	0.344 11					E <sub>γ</sub> =794.92 5, I <sub>γ</sub> =0.145 10 (1978HeZQ).
<sup>x</sup> 799.55 5	0.2310 11					E <sub>γ</sub> =799.81 3, I <sub>γ</sub> =0.102 2 (1978HeZQ).
<sup>x</sup> 802.73 20	0.085 12					E <sub>γ</sub> =803.56 7, I <sub>γ</sub> =0.091 4 (1978HeZQ): probably corresponds to doublet: 802.73γ+804.30γ In 2004Fu30.
<sup>x</sup> 804.30 14	0.199 15					E <sub>γ</sub> =803.56 7, I <sub>γ</sub> =0.091 4 (1978HeZQ): probably corresponds to doublet: 802.73γ+804.30γ In 2004Fu30.
<sup>x</sup> 805.73 10	0.239 15					E <sub>γ</sub> =805.54 5, I <sub>γ</sub> =0.160 4 (1978HeZQ).
<sup>x</sup> 807.85 13	0.107 13					E <sub>γ</sub> =807.87 7, I <sub>γ</sub> =0.080 3 (1978HeZQ).
<sup>x</sup> 810.29 9	0.198 24					E <sub>γ</sub> =810.76 9, I <sub>γ</sub> =0.051 3 (1978HeZQ).
<sup>x</sup> 813.40 3	2.01 3					E <sub>γ</sub> =813.57 1, I <sub>γ</sub> =0.864 8 (1978HeZQ).
<sup>x</sup> 815.02 20	0.145 20					E <sub>γ</sub> =815.09 18, I <sub>γ</sub> =0.047 9 (1978HeZQ).
<sup>x</sup> 818.52 4	0.286 11					E <sub>γ</sub> =818.71 2, I <sub>γ</sub> =0.108 2 (1978HeZQ).
<sup>x</sup> 818.77 <sup>e</sup> 3	0.196 <sup>j</sup> 4					I <sub>γ</sub> =0.098 2 (1978HeZQ).
<sup>x</sup> 825.90 18	0.068 17					E <sub>γ</sub> =825.77 8, I <sub>γ</sub> =0.054 3 (1978HeZQ).
<sup>x</sup> 828.75 11	0.2010 18					E <sub>γ</sub> =828.15 17, I <sub>γ</sub> =0.060 8 (1978HeZQ).
830.05 <sup>bn</sup> 12	0.194 19	829.61?	(2,3) <sup>+</sup>	0.0	1 <sup>+</sup>	E <sub>γ</sub> =829.69 11, I <sub>γ</sub> =0.129 7 (1978HeZQ).
<sup>x</sup> 832.62 7	0.300 14					E <sub>γ</sub> =831.72 18, I <sub>γ</sub> =0.077 7 (1978HeZQ).
<sup>x</sup> 834.21 15	0.162 14					E <sub>γ</sub> =833.29 9, I <sub>γ</sub> =0.138 9 (1978HeZQ).
<sup>x</sup> 835.88 15	0.115 13					E <sub>γ</sub> =835.41 5, I <sub>γ</sub> =0.083 3 (1978HeZQ).
<sup>x</sup> 839.71 <sup>d</sup> 16	0.098 12					
<sup>x</sup> 840.86 10	0.151 13					E <sub>γ</sub> =840.62 4, I <sub>γ</sub> =0.071 2 (1978HeZQ).
<sup>x</sup> 847.27 <sup>d</sup> 5	0.3010 11					
<sup>x</sup> 849.87 6	0.231 10					E <sub>γ</sub> =850.01 5, I <sub>γ</sub> =0.108 3 (1978HeZQ).
<sup>x</sup> 852.43 4	0.392 12					E <sub>γ</sub> =852.59 3, I <sub>γ</sub> =0.186 3 (1978HeZQ).
<sup>x</sup> 855.10 10	0.135 12					E <sub>γ</sub> =855.34 9, I <sub>γ</sub> =0.073 4 (1978HeZQ).
<sup>x</sup> 859.01 14	0.197 22					E <sub>γ</sub> =859.60 5, I <sub>γ</sub> =0.113 3 (1978HeZQ).
<sup>x</sup> 860.14 <sup>d</sup> 21	0.112 24					
<sup>x</sup> 862.89 4	0.309 11					E <sub>γ</sub> =863.00 4, I <sub>γ</sub> =0.144 3 (1978HeZQ).
<sup>x</sup> 866.77 21	0.077 13					E <sub>γ</sub> =867.46 11, I <sub>γ</sub> =0.094 8 (1978HeZQ).
<sup>x</sup> 868.34 8	0.283 15					E <sub>γ</sub> =869.23 9, I <sub>γ</sub> =0.125 8 (1978HeZQ): probably corresponds to doublet: 868.34γ+870.04γ In 2004Fu30.
<sup>x</sup> 870.04 18	0.104 16					E <sub>γ</sub> =869.23 9, I <sub>γ</sub> =0.125 8 (1978HeZQ): probably corresponds to doublet: 868.34γ+870.04γ In 2004Fu30.
<sup>x</sup> 872.58 11	0.283 24					E <sub>γ</sub> =872.86 5, I <sub>γ</sub> =0.181 7 (1978HeZQ).
<sup>x</sup> 873.88 <sup>d</sup> 21	0.29 3					
<sup>x</sup> 874.97 12	0.30 4					E <sub>γ</sub> =874.81 4, I <sub>γ</sub> =0.217 7 (1978HeZQ).
<sup>x</sup> 878.68 19	0.077 14					E <sub>γ</sub> =879.03 13, I <sub>γ</sub> =0.055 5 (1978HeZQ).
<sup>x</sup> 881.05 6	0.243 13					E <sub>γ</sub> =881.40 6, I <sub>γ</sub> =0.120 5 (1978HeZQ).
<sup>x</sup> 886.36 6	0.247 13					E <sub>γ</sub> =886.43 5, I <sub>γ</sub> =0.137 4 (1978HeZQ).
<sup>x</sup> 888.79 21	0.074 16					E <sub>γ</sub> =889.13 12, I <sub>γ</sub> =0.060 4 (1978HeZQ).
<sup>x</sup> 892.77 11	0.186 18					E <sub>γ</sub> =892.64 8, I <sub>γ</sub> =0.122 8 (1978HeZQ).
<sup>x</sup> 893.96 13	0.162 17					E <sub>γ</sub> =894.30 9, I <sub>γ</sub> =0.092 8 (1978HeZQ).
<sup>x</sup> 899.90 11	0.172 16					E <sub>γ</sub> =899.92 4, I <sub>γ</sub> =0.095 3 (1978HeZQ).
<sup>x</sup> 904.36 10	0.246 16					E <sub>γ</sub> =904.54 5, I <sub>γ</sub> =0.107 4 (1978HeZQ).

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 906.73 11	0.1910 16		Eγ=906.80 6, Iγ=0.088 4 (1978HeZQ).
<sup>x</sup> 912.19 8	0.181 11		Eγ=912.47 5, Iγ=0.087 3 (1978HeZQ).
<sup>x</sup> 914.44 23	0.056 10		Eγ=915.17 17, Iγ=0.030 3 (1978HeZQ).
<sup>x</sup> 917.21 12	0.132 10		Eγ=917.82 9, Iγ=0.091 5 (1978HeZQ).
<sup>x</sup> 919.07 7	0.231 11		Eγ=919.62 6, Iγ=0.100 6 (1978HeZQ).
<sup>x</sup> 923.30 23	0.068 16		Eγ=923.43 9, Iγ=0.040 3 (1978HeZQ).
<sup>x</sup> 926.01 3	0.624 15		Eγ=926.19 2, Iγ=0.281 3 (1978HeZQ).
<sup>x</sup> 928.57 13	0.118 12		Eγ=928.72 7, Iγ=0.058 3 (1978HeZQ).
<sup>x</sup> 935.51 <sup>d</sup> 11	0.132 11		
<sup>x</sup> 938.61 10	0.171 11		Eγ=938.67 6, Iγ=0.079 3 (1978HeZQ).
<sup>x</sup> 940.63 12	0.135 11		Eγ=941.18 9, Iγ=0.068 3 (1978HeZQ).
<sup>x</sup> 943.69 4	0.454 12		Eγ=943.86 3, Iγ=0.194 3 (1978HeZQ).
<sup>x</sup> 946.70 5	0.298 12		Eγ=946.85 4, Iγ=0.119 3 (1978HeZQ).
<sup>x</sup> 950.09 12	0.1410 13		Eγ=950.11 12, Iγ=0.061 5 (1978HeZQ).
<sup>x</sup> 952.08 16	0.149 14		Eγ=952.2 2, Iγ=0.064 5 (1978HeZQ).
<sup>x</sup> 953.84 18	0.116 14		Eγ=953.99 16, Iγ=0.047 7 (1978HeZQ).
<sup>x</sup> 958.23 3	0.452 13		Eγ=958.38 1, Iγ=0.198 2 (1978HeZQ).
<sup>x</sup> 962.31 9	0.163 11		Eγ=962.43 4, Iγ=0.072 2 (1978HeZQ).
<sup>x</sup> 965.94 8	0.181 11		Eγ=966.30 5, Iγ=0.076 2 (1978HeZQ).
<sup>x</sup> 968.62 3	0.559 12		Eγ=968.84 2, Iγ=0.253 2 (1978HeZQ).
<sup>x</sup> 971.97 4	0.437 12		Eγ=972.13 2, Iγ=0.210 2 (1978HeZQ).
<sup>x</sup> 976.65 13	0.221 23		Eγ=976.77 8, Iγ=0.112 10 (1978HeZQ).
<sup>x</sup> 977.9 3	0.108 22		Eγ=978.13 16, Iγ=0.053 10 (1978HeZQ).
<sup>x</sup> 982.8 <sup>d</sup> 3	0.115 22		
<sup>x</sup> 984.31 9	0.431 23		Eγ=984.35 5, Iγ=0.241 6 (1978HeZQ).
<sup>x</sup> 986.26 12	0.208 16		Eγ=986.52 6, Iγ=0.112 4 (1978HeZQ).
<sup>x</sup> 989.09 13	0.147 16		Eγ=989.27 5, Iγ=0.077 2 (1978HeZQ).
<sup>x</sup> 994.93 5	0.307 12		Eγ=995.09 3, Iγ=0.138 2 (1978HeZQ).
<sup>x</sup> 998.43 13	0.143 12		Eγ=998.61 10, Iγ=0.067 5 (1978HeZQ).
<sup>x</sup> 1000.34 14	0.149 12		Eγ=1000.66 14, Iγ=0.077 4 (1978HeZQ).
<sup>x</sup> 1002.48 10	0.163 11		Eγ=1002.79 9, Iγ=0.082 5 (1978HeZQ).
<sup>x</sup> 1005.9 3	0.055 11		Eγ=1005.99 12, Iγ=0.043 3 (1978HeZQ).
<sup>x</sup> 1008.82 24	0.0710 13		Eγ=1008.81 16, Iγ=0.048 4 (1978HeZQ).
<sup>x</sup> 1010.66 7	0.290 14		Eγ=1010.86 5, Iγ=0.156 5 (1978HeZQ).
<sup>x</sup> 1017.42 19	0.091 11		Eγ=1017.58 11, Iγ=0.059 5 (1978HeZQ).
<sup>x</sup> 1019.14 12	0.149 11		Eγ=1019.46 9, Iγ=0.070 5 (1978HeZQ).
<sup>x</sup> 1024.48 7	0.173 9		Eγ=1024.50 4, Iγ=0.086 2 (1978HeZQ).
<sup>x</sup> 1028.20 14	0.0810 10		Eγ=1028.20 7, Iγ=0.044 2 (1978HeZQ).
<sup>x</sup> 1032.9 <sup>d</sup> 3	0.066 12		
<sup>x</sup> 1034.40 7	0.243 13		Eγ=1034.33 4, Iγ=0.111 2 (1978HeZQ).
<sup>x</sup> 1037.06 7	0.195 9		Eγ=1037.24 6, Iγ=0.083 3 (1978HeZQ).
<sup>x</sup> 1038.96 <sup>d</sup> 19	0.097 10		
<sup>x</sup> 1040.86 7	0.393 14		Eγ=1040.22 10, Iγ=0.108 9 (1978HeZQ).

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 1042.35 13	0.154 14		Eγ=1041.78 7, Iγ=0.148 10 (1978HeZQ).
<sup>x</sup> 1045.52 3	0.452 13		Eγ=1045.61 2, Iγ=0.201 2 (1978HeZQ).
<sup>x</sup> 1049.32 11	0.103 10		Eγ=1049.56 8, Iγ=0.048 2 (1978HeZQ).
<sup>x</sup> 1052.51 4	0.284 9		Eγ=1052.65 4, Iγ=0.124 3 (1978HeZQ).
<sup>x</sup> 1055.18 8	0.156 10		Eγ=1055.18 7, Iγ=0.063 3 (1978HeZQ).
<sup>x</sup> 1061.80 5	0.257 9		Eγ=1061.90 3, Iγ=0.114 2 (1978HeZQ).
<sup>x</sup> 1064.68 8	0.154 9		Eγ=1064.83 7, Iγ=0.071 3 (1978HeZQ).
<sup>x</sup> 1067.09 5	0.315 10		Eγ=1067.32 4, Iγ=0.151 3 (1978HeZQ).
<sup>x</sup> 1069.42 7	0.193 10		Eγ=1069.71 7, Iγ=0.091 3 (1978HeZQ).
<sup>x</sup> 1072.06 5	0.231 12		Eγ=1072.33 5, Iγ=0.126 3 (1978HeZQ).
<sup>x</sup> 1074.87 15	0.078 14		Eγ=1075.02 10, Iγ=0.054 2 (1978HeZQ).
<sup>x</sup> 1076.96 15	0.077 15		Eγ=1077.7 2, Iγ=0.033 3 (1978HeZQ).
<sup>x</sup> 1079.70 5	0.2310 13		Eγ=1080.01 5, Iγ=0.109 3 (1978HeZQ).
<sup>x</sup> 1082.98 7	0.175 10		Eγ=1083.28 7, Iγ=0.080 3 (1978HeZQ).
<sup>x</sup> 1085.33 7	0.183 10		Eγ=1085.59 7, Iγ=0.083 3 (1978HeZQ).
<sup>x</sup> 1088.18 9	0.124 12		Eγ=1088.31 6, Iγ=0.067 2 (1978HeZQ).
<sup>x</sup> 1091.34 7	0.206 15		Eγ=1091.49 5, Iγ=0.068 2 (1978HeZQ).
<sup>x</sup> 1094.57 18	0.159 22		Eγ=1095.11 13, Iγ=0.078 13 (1978HeZQ): probably corresponds to 1094.57γ and/or 1095.9γ In 2004Fu30.
<sup>x</sup> 1095.9 3	0.161 19		Eγ=1095.11 13, Iγ=0.078 13 (1978HeZQ): probably corresponds to 1094.57γ and/or 1095.9γ In 2004Fu30.
<sup>x</sup> 1097.45 <sup>d</sup> 18	0.141 16		
<sup>x</sup> 1105.53 5	0.462 15		Eγ=1105.72 5, Iγ=0.196 3 (1978HeZQ).
<sup>x</sup> 1108.56 18	0.1610 19		Eγ=1109.19 11, Iγ=0.088 7 (1978HeZQ).
<sup>x</sup> 1110.34 19	0.263 23		Eγ=1111.32 11, Iγ=0.192 12 (1978HeZQ).
<sup>x</sup> 1112.03 9	0.524 24		Eγ=1112.87 8, Iγ=0.159 15 (1978HeZQ): probably corresponds to doublet: 1112.03γ+1113.9γ In 2004Fu30.
<sup>x</sup> 1113.9 3	0.108 19		Eγ=1112.87 8, Iγ=0.159 15 (1978HeZQ): probably corresponds to doublet: 1112.03γ+1113.9γ In 2004Fu30.
<sup>x</sup> 1117.54 <sup>d</sup> 14	0.0510 10		
<sup>x</sup> 1120.95 5	0.208 8		Eγ=1121.27 6, Iγ=0.073 2 (1978HeZQ).
<sup>x</sup> 1123.73 8	0.145 8		Eγ=1124.16 13, Iγ=0.065 5 (1978HeZQ).
<sup>x</sup> 1125.62 12	0.102 8		Eγ=1126.1 3, Iγ=0.027 5 (1978HeZQ).
<sup>x</sup> 1128.78 9	0.128 9		Eγ=1129.08 9, Iγ=0.057 3 (1978HeZQ).
<sup>x</sup> 1130.71 <sup>d</sup> 21	0.058 10		
<sup>x</sup> 1134.35 <sup>d</sup> 12	0.121 11		
<sup>x</sup> 1136.18 5	0.304 11		Eγ=1135.97 4, Iγ=0.123 3 (1978HeZQ).
<sup>x</sup> 1139.54 4	0.263 9		Eγ=1139.59 5, Iγ=0.090 3 (1978HeZQ).
<sup>x</sup> 1142.85 6	0.237 9		Eγ=1143.20 6, Iγ=0.077 3 (1978HeZQ).
<sup>x</sup> 1144.85 <sup>d</sup> 15	0.089 9		
<sup>x</sup> 1148.23 4	0.211 11		Eγ=1148.30 5, Iγ=0.107 4 (1978HeZQ).
<sup>x</sup> 1150.64 11	0.104 13		Eγ=1150.2 2, Iγ=0.025 4 (1978HeZQ).
<sup>x</sup> 1153.61 3	0.292 9		Eγ=1153.92 3, Iγ=0.109 2 (1978HeZQ).
<sup>x</sup> 1156.60 12	0.094 9		Eγ=1157.53 7, Iγ=0.063 2 (1978HeZQ).
<sup>x</sup> 1158.5 3	0.050 10		Eγ=1160.2 3, Iγ=0.025 3 (1978HeZQ).
<sup>x</sup> 1162.34 4	0.368 10		Eγ=1162.53 4, Iγ=0.187 3 (1978HeZQ).
<sup>x</sup> 1164.92 15	0.043 10		Eγ=1165.0 2, Iγ=0.034 5 (1978HeZQ).

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 1167.76 18	0.060 9		Eγ=1167.66 14, Iγ=0.037 2 (1978HeZQ).
<sup>x</sup> 1170.69 10	0.111 11		Eγ=1170.56 7, Iγ=0.051 2 (1978HeZQ).
<sup>x</sup> 1174.37 5	0.232 10		Eγ=1174.44 3, Iγ=0.108 2 (1978HeZQ).
<sup>x</sup> 1180.69 4	0.332 9		Eγ=1180.85 2, Iγ=0.157 2 (1978HeZQ).
<sup>x</sup> 1186.2 <sup>d</sup> 3	0.056 11		Eγ=1187.23 6, Iγ=0.051 2 (1978HeZQ).
<sup>x</sup> 1187.54 14	0.108 12		Eγ=1187.23 6, Iγ=0.051 2 (1978HeZQ).
<sup>x</sup> 1190.44 <sup>d</sup> 17	0.052 6		
<sup>x</sup> 1192.89 3	0.433 7		Eγ=1193.07 4, Iγ=0.200 8 (1978HeZQ).
<sup>x</sup> 1197.20 25	0.047 10		Eγ=1197.25 18, Iγ=0.018 2 (1978HeZQ).
<sup>x</sup> 1201.39 <sup>d</sup> 4	0.241 10		
<sup>x</sup> 1205.11 7	0.244 10		Eγ=1205.12 7, Iγ=0.101 5 (1978HeZQ).
<sup>x</sup> 1207.07 14	0.112 10		Eγ=1207.01 13, Iγ=0.054 5 (1978HeZQ).
<sup>x</sup> 1210.61 15	0.132 12		Eγ=1210.94 13, Iγ=0.059 7 (1978HeZQ).
<sup>x</sup> 1212.3 3	0.089 11		Eγ=1212.8 4, Iγ=0.035 5 (1978HeZQ).
<sup>x</sup> 1214.47 13	0.144 9		Eγ=1215.01 19, Iγ=0.065 5 (1978HeZQ).
<sup>x</sup> 1216.76 4	0.407 10		Eγ=1216.96 4, Iγ=0.176 6 (1978HeZQ).
<sup>x</sup> 1223.8 3	0.047 8		Eγ=1223.51 9, Iγ=0.032 2 (1978HeZQ).
<sup>x</sup> 1230.0 3	0.083 19		Eγ=1228.7 2, Iγ=0.021 3 (1978HeZQ).
<sup>x</sup> 1231.4 3	0.098 19		Eγ=1231.05 7, Iγ=0.076 3 (1978HeZQ).
<sup>x</sup> 1234.96 11	0.148 10		Eγ=1234.99 9, Iγ=0.071 4 (1978HeZQ).
<sup>x</sup> 1237.01 12	0.169 10		Eγ=1237.15 10, Iγ=0.089 4 (1978HeZQ).
<sup>x</sup> 1239.19 23	0.070 10		Eγ=1239.51 14, Iγ=0.038 4 (1978HeZQ).
<sup>x</sup> 1245.23 7	0.273 15		Eγ=1245.42 3, Iγ=0.150 3 (1978HeZQ).
<sup>x</sup> 1249.00 <sup>e</sup> 11	0.090 <sup>j</sup> 6		Iγ=0.045 3 (1978HeZQ).
<sup>x</sup> 1252.84 18	0.109 17		Eγ=1253.16 5, Iγ=0.093 3 (1978HeZQ).
<sup>x</sup> 1257.9 3	0.15 3		Eγ=1257.94 10, Iγ=0.047 3 (1978HeZQ).
<sup>x</sup> 1271.2 17	0.03 3		Eγ=1271.3 2, Iγ=0.017 3 (1978HeZQ).
<sup>x</sup> 1276.58 23	0.065 10		Eγ=1277.09 17, Iγ=0.036 4 (1978HeZQ).
<sup>x</sup> 1278.90 7	0.208 9		Eγ=1279.12 6, Iγ=0.092 5 (1978HeZQ).
<sup>x</sup> 1283.7 4	0.0310 10		Eγ=1284.14 14, Iγ=0.048 5 (1978HeZQ).
<sup>x</sup> 1286.06 13	0.119 11		Eγ=1286.18 19, Iγ=0.039 7 (1978HeZQ).
<sup>x</sup> 1287.5 <sup>e</sup> 3	0.034 <sup>j</sup> 10		Iγ=0.017 5 (1978HeZQ).
<sup>x</sup> 1290.9 <sup>e</sup> 3	0.050 <sup>j</sup> 8		Iγ=0.025 4 (1978HeZQ).
<sup>x</sup> 1293.36 <sup>d</sup> 3	0.918 11		
<sup>x</sup> 1299.53 5	0.310 9		Eγ=1299.42 6, Iγ=0.130 6 (1978HeZQ).
<sup>x</sup> 1301.98 20	0.075 8		Eγ=1301.30 16, Iγ=0.053 6 (1978HeZQ).
<sup>x</sup> 1304.79 12	0.114 8		Eγ=1304.83 8, Iγ=0.053 2 (1978HeZQ).
<sup>x</sup> 1308.91 <sup>d</sup> 14	0.138 11		
<sup>x</sup> 1310.7 <sup>d</sup> 4	0.052 11		
<sup>x</sup> 1313.48 13	0.105 10		Eγ=1313.45 13, Iγ=0.033 2 (1978HeZQ).
<sup>x</sup> 1317.38 17	0.073 11		Eγ=1317.40 14, Iγ=0.023 4 (1978HeZQ).
<sup>x</sup> 1323.0 <sup>e</sup> 3	0.042 <sup>j</sup> 8		Iγ=0.021 4 (1978HeZQ).

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 1325.28 5	0.366 11		Eγ=1325.44 4, Iγ=0.170 4 (1978HeZQ).
<sup>x</sup> 1328.37 11	0.1510 10		Eγ=1328.42 7, Iγ=0.086 3 (1978HeZQ).
<sup>x</sup> 1330.94 22	0.078 10		Eγ=1331.21 12, Iγ=0.040 3 (1978HeZQ).
<sup>x</sup> 1335.00 16	0.093 12		Eγ=1335.11 7, Iγ=0.051 4 (1978HeZQ).
<sup>x</sup> 1340.06 21	0.089 12		Eγ=1340.84 16, Iγ=0.050 6 (1978HeZQ).
<sup>x</sup> 1342.40 11	0.183 12		Eγ=1343.11 12, Iγ=0.095 5 (1978HeZQ).
<sup>x</sup> 1344.81 <sup>d</sup> 19	0.135 15		
<sup>x</sup> 1346.68 24	0.105 15		Eγ=1345.94 8, Iγ=0.085 4 (1978HeZQ).
<sup>x</sup> 1350.6 <sup>e</sup> 3	0.025 <sup>j</sup> 4		Iγ=0.021 4 (1978HeZQ).
<sup>x</sup> 1352.90 12	0.113 10		Eγ=1353.22 11, Iγ=0.064 6 (1978HeZQ).
<sup>x</sup> 1357.32 14	0.125 10		Eγ=1357.38 8, Iγ=0.071 3 (1978HeZQ).
<sup>x</sup> 1359.6 3	0.064 10		Eγ=1360.86 13, Iγ=0.058 5 (1978HeZQ).
<sup>x</sup> 1362.14 <sup>d</sup> 14	0.031 17		
<sup>x</sup> 1363.83 21	0.144 15		Eγ=1363.2 2, Iγ=0.063 10 (1978HeZQ).
<sup>x</sup> 1366.27 22	0.083 12		Eγ=1366.39 11, Iγ=0.055 3 (1978HeZQ).
<sup>x</sup> 1370.83 15	0.089 11		Eγ=1370.66 19, Iγ=0.035 3 (1978HeZQ).
<sup>x</sup> 1373.67 11	0.149 9		Eγ=1373.3 2, Iγ=0.049 5 (1978HeZQ).
<sup>x</sup> 1375.68 10	0.166 10		Eγ=1375.29 9, Iγ=0.084 6 (1978HeZQ).
<sup>x</sup> 1380.48 10	0.119 10		Eγ=1381.52 15, Iγ=0.039 4 (1978HeZQ).
<sup>x</sup> 1383.25 11	0.110 9		Eγ=1383.9 3, Iγ=0.030 4 (1978HeZQ).
<sup>x</sup> 1386.01 5	0.277 8		Eγ=1386.35 7, Iγ=0.110 4 (1978HeZQ).
<sup>x</sup> 1388.78 11	0.1110 8		Eγ=1389.40 18, Iγ=0.042 3 (1978HeZQ).
<sup>x</sup> 1391.40 13	0.111 9		Eγ=1391.8 2, Iγ=0.053 5 (1978HeZQ).
<sup>x</sup> 1393.62 14	0.103 9		Eγ=1394.09 19, Iγ=0.041 5 (1978HeZQ).
<sup>x</sup> 1399.73 19	0.058 8		Eγ=1399.83 16, Iγ=0.028 2 (1978HeZQ).
<sup>x</sup> 1403.35 8	0.143 7		Eγ=1403.57 9, Iγ=0.081 4 (1978HeZQ).
<sup>x</sup> 1408.12 <sup>d</sup> 12	0.095 7		
<sup>x</sup> 1412.2 3	0.044 8		Eγ=1403.28 15, Iγ=0.036 3 (1978HeZQ).
<sup>x</sup> 1414.9 4	0.033 9		Eγ=1415.4 2, Iγ=0.026 3 (1978HeZQ).
<sup>x</sup> 1419.77 15	0.112 12		Eγ=1419.59 9, Iγ=0.047 2 (1978HeZQ).
<sup>x</sup> 1424.6 6	0.06 3		Eγ=1425.27 6, Iγ=0.052 3 (1978HeZQ): probably corresponds to doublet: 1424.6γ+1425.9γ In 2004Fu30.
<sup>x</sup> 1425.9 5	0.08 3		Eγ=1425.27 6, Iγ=0.052 3 (1978HeZQ): probably corresponds to doublet: 1424.6γ+1425.9γ In 2004Fu30.
<sup>x</sup> 1430.91 10	0.131 8		Eγ=1431.06 7, Iγ=0.059 3 (1978HeZQ).
<sup>x</sup> 1434.11 12	0.102 8		Eγ=1434.07 5, Iγ=0.085 3 (1978HeZQ).
<sup>x</sup> 1438.85 6	0.205 8		Eγ=1438.93 4, Iγ=0.093 2 (1978HeZQ).
<sup>x</sup> 1443.20 15	0.079 8		Eγ=1443.57 8, Iγ=0.044 2 (1978HeZQ).
<sup>x</sup> 1447.17 8	0.155 8		Eγ=1447.30 4, Iγ=0.087 3 (1978HeZQ).
<sup>x</sup> 1451.2 4	0.046 10		Eγ=1451.40 17, Iγ=0.039 5 (1978HeZQ).
<sup>x</sup> 1453.1 3	0.051 10		Eγ=1453.5 3, Iγ=0.028 5 (1978HeZQ).
<sup>x</sup> 1458.12 13	0.107 8		Eγ=1458.18 10, Iγ=0.060 5 (1978HeZQ).
<sup>x</sup> 1460.15 <sup>d</sup> 19	0.072 8		
<sup>x</sup> 1467.36 6	0.224 11		Eγ=1467.56 6, Iγ=0.076 2 (1978HeZQ).
<sup>x</sup> 1471.34 11	0.118 9		Eγ=1471.48 10, Iγ=0.045 2 (1978HeZQ).

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 1475.7 3	0.0310 10		Eγ=1476.1 3, Iγ=0.018 3 (1978HeZQ).
<sup>x</sup> 1479.19 9	0.1410 11		Eγ=1479.43 8, Iγ=0.078 3 (1978HeZQ).
<sup>x</sup> 1482.59 19	0.073 14		Eγ=1482.80 16, Iγ=0.033 3 (1978HeZQ).
<sup>x</sup> 1487.12 14	0.135 13		Eγ=1486.94 12, Iγ=0.078 6 (1978HeZQ).
<sup>x</sup> 1489.1 <sup>e</sup> 5	0.042 <sup>j</sup> 10		Iγ=0.021 5 (1978HeZQ).
<sup>x</sup> 1492.19 <sup>e</sup> 17	0.066 <sup>j</sup> 6		Iγ=0.033 3 (1978HeZQ).
<sup>x</sup> 1497.67 14	0.084 9		Eγ=1497.86 9, Iγ=0.037 3 (1978HeZQ).
<sup>x</sup> 1502.48 17	0.068 8		Eγ=1502.55 16, Iγ=0.026 3 (1978HeZQ).
<sup>x</sup> 1505.97 10	0.128 8		Eγ=1505.86 7, Iγ=0.061 3 (1978HeZQ).
<sup>x</sup> 1512.14 <sup>d</sup> 3	0.11 5		
<sup>x</sup> 1515.84 <sup>e</sup> 18	0.048 <sup>j</sup> 6		Iγ=0.024 3 (1978HeZQ).
<sup>x</sup> 1519.50 18	0.080 11		Eγ=1519.35 10, Iγ=0.041 3 (1978HeZQ).
<sup>x</sup> 1522.8 4	0.033 10		Eγ=1523.0 3, Iγ=0.018 3 (1978HeZQ).
<sup>x</sup> 1525.94 <sup>e</sup> 12	0.074 <sup>j</sup> 6		Iγ=0.037 3 (1978HeZQ).
<sup>x</sup> 1532.2 5	0.0210 8		Eγ=1531.1 3, Iγ=0.014 4 (1978HeZQ).
<sup>x</sup> 1536.0 3	0.045 9		Eγ=1535.53 19, Iγ=0.026 3 (1978HeZQ).
<sup>x</sup> 1538.0 <sup>e</sup> 2	0.046 <sup>j</sup> 6		Iγ=0.023 3 (1978HeZQ).
<sup>x</sup> 1542.32 24	0.065 9		Eγ=1543.06 14, Iγ=0.039 4 (1978HeZQ).
<sup>x</sup> 1544.42 16	0.106 9		Eγ=1545.42 17, Iγ=0.047 3 (1978HeZQ).
<sup>x</sup> 1547.04 19	0.084 8		Eγ=1548.3 2, Iγ=0.045 5 (1978HeZQ).
<sup>x</sup> 1549.25 15	0.0910 8		Eγ=1550.3 4, Iγ=0.024 5 (1978HeZQ).
<sup>x</sup> 1552.9 3	0.037 7		Eγ=1553.4 2, Iγ=0.020 2 (1978HeZQ).
<sup>x</sup> 1559.3 <sup>d</sup> 4	0.013 7		
<sup>x</sup> 1564.33 20	0.055 7		Eγ=1564.35 19, Iγ=0.017 3 (1978HeZQ).
<sup>x</sup> 1570.32 12	0.141 11		Eγ=1570.25 5, Iγ=0.073 3 (1978HeZQ).
<sup>x</sup> 1576.69 16	0.097 10		Eγ=1576.45 8, Iγ=0.044 3 (1978HeZQ).
<sup>x</sup> 1582.5 5	0.027 8		Eγ=1582.4 2, Iγ=0.014 2 (1978HeZQ).
<sup>x</sup> 1587.9 3	0.046 8		Eγ=1588.00 15, Iγ=0.030 2 (1978HeZQ).
<sup>x</sup> 1590.82 <sup>e</sup> 12	0.072 <sup>j</sup> 4		Iγ=0.036 2 (1978HeZQ).
<sup>x</sup> 1596.8 7	0.023 10		Eγ=1597.5 3, Iγ=0.012 2 (1978HeZQ).
<sup>x</sup> 1602.34 17	0.098 10		Eγ=1602.15 8, Iγ=0.046 2 (1978HeZQ).
<sup>x</sup> 1606.60 21	0.079 9		Eγ=1606.57 12, Iγ=0.031 2 (1978HeZQ).
<sup>x</sup> 1612.0 3	0.049 9		Eγ=1612.23 13, Iγ=0.028 2 (1978HeZQ).
<sup>x</sup> 1618.05 13	0.134 10		Eγ=1618.24 6, Iγ=0.064 3 (1978HeZQ).
<sup>x</sup> 1631.4 3	0.063 9		Eγ=1632.2 3, Iγ=0.026 5 (1978HeZQ).
<sup>x</sup> 1634.26 14	0.117 9		Eγ=1634.55 17, Iγ=0.043 4 (1978HeZQ).
<sup>x</sup> 1644.52 18	0.086 8		Eγ=1644.16 8, Iγ=0.050 2 (1978HeZQ).
<sup>x</sup> 1648.1 3	0.056 8		Eγ=1647.86 13, Iγ=0.033 2 (1978HeZQ).
<sup>x</sup> 1652.4 3	0.047 8		Eγ=1652.43 15, Iγ=0.025 2 (1978HeZQ).
<sup>x</sup> 1657.47 8	0.201 9		Eγ=1657.48 4, Iγ=0.100 2 (1978HeZQ).
<sup>x</sup> 1670.03 15	0.103 9		Eγ=1669.94 11, Iγ=0.046 3 (1978HeZQ).
<sup>x</sup> 1672.7 <sup>e</sup> 3	0.042 <sup>j</sup> 6		Iγ=0.021 3 (1978HeZQ).
<sup>x</sup> 1678.3 3	0.039 9		Eγ=1677.95 15, Iγ=0.023 2 (1978HeZQ).

γ(<sup>100</sup>Tc) (continued)

$E_{\gamma}^{\dagger}$	$I_{\gamma}^{\ddagger k}$	$E_i(\text{level})$	Comments
<sup>x</sup> 1686.94 <sup>e</sup> 17	0.058 <sup>j</sup> 6		I <sub>γ</sub> =0.029 3 (1978HeZQ).
<sup>x</sup> 1693.6 3	0.056 9		E <sub>γ</sub> =1693.24 10, I <sub>γ</sub> =0.049 3 (1978HeZQ).
<sup>x</sup> 1699.4 4	0.036 9		E <sub>γ</sub> =1699.55 16, I <sub>γ</sub> =0.032 3 (1978HeZQ).
<sup>x</sup> 1704.0 3	0.060 9		E <sub>γ</sub> =1704.42 11, I <sub>γ</sub> =0.046 3 (1978HeZQ).
<sup>x</sup> 1710.81 8	0.243 11		E <sub>γ</sub> =1710.91 9, I <sub>γ</sub> =0.059 3 (1978HeZQ).
<sup>x</sup> 1713.73 15	0.1210 10		E <sub>γ</sub> =1713.97 14, I <sub>γ</sub> =0.039 3 (1978HeZQ).
<sup>x</sup> 1723.53 24	0.095 12		E <sub>γ</sub> =1723.72 14, I <sub>γ</sub> =0.048 4 (1978HeZQ).
<sup>x</sup> 1726.1 4	0.053 11		E <sub>γ</sub> =1726.2 3, I <sub>γ</sub> =0.029 4 (1978HeZQ).
<sup>x</sup> 1731.9 3	0.054 10		E <sub>γ</sub> =1731.90 14, I <sub>γ</sub> =0.028 2 (1978HeZQ).
<sup>x</sup> 1739.7 5	0.037 10		E <sub>γ</sub> =1739.9 3, I <sub>γ</sub> =0.015 3 (1978HeZQ).
<sup>x</sup> 1745.58 22	0.086 10		E <sub>γ</sub> =1745.63 11, I <sub>γ</sub> =0.034 2 (1978HeZQ).
<sup>x</sup> 1757.75 19	0.081 9		E <sub>γ</sub> =1759.14 13, I <sub>γ</sub> =0.033 2 (1978HeZQ): probably corresponds to doublet: 1757.75γ+1760.50γ In 2004Fu30.
<sup>x</sup> 1760.50 23	0.065 9		E <sub>γ</sub> =1759.14 13, I <sub>γ</sub> =0.033 2 (1978HeZQ): probably corresponds to doublet: 1757.75γ+1760.50γ In 2004Fu30.
<sup>x</sup> 1764.79 19	0.069 8		E <sub>γ</sub> =1765.01 17, I <sub>γ</sub> =0.026 2 (1978HeZQ).
<sup>x</sup> 1769.9 3	0.054 8		E <sub>γ</sub> =1770.27 17, I <sub>γ</sub> =0.043 5 (1978HeZQ).
<sup>x</sup> 1772.8 <sup>d</sup> 4	0.036 8		
<sup>x</sup> 1778.94 <sup>d</sup> 11	0.138 8		
<sup>x</sup> 1782.3 <sup>d</sup> 3	0.044 8		
<sup>x</sup> 1786.35 23	0.060 9		E <sub>γ</sub> =1785.38 16, I <sub>γ</sub> =0.028 4 (1978HeZQ).
<sup>x</sup> 1791.8 3	0.048 9		E <sub>γ</sub> =1791.56 15, I <sub>γ</sub> =0.033 3 (1978HeZQ).
<sup>x</sup> 1803.9 <sup>d</sup> 3	0.051 9		
<sup>x</sup> 1809.36 15	0.114 11		E <sub>γ</sub> =1810.10 7, I <sub>γ</sub> =0.059 3 (1978HeZQ).
<sup>x</sup> 1812.2 <sup>d</sup> 3	0.045 10		
<sup>x</sup> 1815.7 <sup>d</sup> 3	0.048 9		
<sup>x</sup> 1819.5 <sup>d</sup> 3	0.063 11		
<sup>x</sup> 1821.55 25	0.092 11		E <sub>γ</sub> =1821.13 14, I <sub>γ</sub> =0.036 3 (1978HeZQ).
<sup>x</sup> 1824.6 3	0.063 10		E <sub>γ</sub> =1826.04 19, I <sub>γ</sub> =0.027 4 (1978HeZQ): probably corresponds to doublet: 1824.6γ+1827.09γ In 2004Fu30.
<sup>x</sup> 1827.09 23	0.071 10		E <sub>γ</sub> =1826.04 19, I <sub>γ</sub> =0.027 4 (1978HeZQ): probably corresponds to doublet: 1824.6γ+1827.09γ In 2004Fu30.
<sup>x</sup> 1834.9 3	0.056 9		E <sub>γ</sub> =1834.8 3, I <sub>γ</sub> =0.019 3 (1978HeZQ).
<sup>x</sup> 1838.5 <sup>d</sup> 3	0.045 8		
<sup>x</sup> 1842.0 4	0.051 9		E <sub>γ</sub> =1843.45 15, I <sub>γ</sub> =0.037 3 (1978HeZQ): probably corresponds to doublet: 1842.0γ+1844.50γ In 2004Fu30.
<sup>x</sup> 1844.50 20	0.101 10		E <sub>γ</sub> =1843.45 15, I <sub>γ</sub> =0.037 3 (1978HeZQ): probably corresponds to doublet: 1842.0γ+1844.50γ In 2004Fu30.
<sup>x</sup> 1847.61 16	0.040 11		E <sub>γ</sub> =1847.0 2, I <sub>γ</sub> =0.025 7 (1978HeZQ).
<sup>x</sup> 1854.59 24	0.076 11		E <sub>γ</sub> =1855.1 2, I <sub>γ</sub> =0.021 4 (1978HeZQ).
<sup>x</sup> 1859.20 21	0.093 11		E <sub>γ</sub> =1859.48 14, I <sub>γ</sub> =0.038 3 (1978HeZQ).
<sup>x</sup> 1862.7 5	0.042 11		E <sub>γ</sub> =1863.2 2, I <sub>γ</sub> =0.021 3 (1978HeZQ).
<sup>x</sup> 1867.6 <sup>d</sup> 5	0.046 12		
<sup>x</sup> 1870.1 3	0.072 12		E <sub>γ</sub> =1869.31 12, I <sub>γ</sub> =0.037 3 (1978HeZQ).
<sup>x</sup> 1874.8 <sup>d</sup> 3	0.051 10		
<sup>x</sup> 1877.90 15	0.090 9		E <sub>γ</sub> =1877.53 14, I <sub>γ</sub> =0.031 3 (1978HeZQ).
<sup>x</sup> 1884.88 <sup>d</sup> 19	0.027 8		



γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 1891.35 24	0.057 9		Eγ=1890.86 14, Iγ=0.031 2 (1978HeZQ).
<sup>x</sup> 1896.4 4	0.038 11		Eγ=1895.2 3, Iγ=0.026 3 (1978HeZQ).
<sup>x</sup> 1898.1 <sup>e</sup> 3	0.050 <sup>j</sup> 6		Iγ=0.025 3 (1978HeZQ).
<sup>x</sup> 1902.45 23	0.074 10		Eγ=1902.44 10, Iγ=0.047 2 (1978HeZQ).
<sup>x</sup> 1909.0 3	0.062 9		Eγ=1908.34 15, Iγ=0.027 3 (1978HeZQ).
<sup>x</sup> 1916.4 4	0.041 12		Eγ=1917.10 17, Iγ=0.020 3 (1978HeZQ).
<sup>x</sup> 1924.0 5	0.031 8		Eγ=1924.03 17, Iγ=0.024 2 (1978HeZQ).
<sup>x</sup> 1927.84 <sup>e</sup> 14	0.068 <sup>j</sup> 4		Iγ=0.034 2 (1978HeZQ).
<sup>x</sup> 1930.60 21	0.0610 8		Eγ=1931.51 15, Iγ=0.028 2 (1978HeZQ).
<sup>x</sup> 1939.8 5	0.031 8		Eγ=1940.00 19, Iγ=0.018 2 (1978HeZQ).
<sup>x</sup> 1946.8 8	0.0110 10		Eγ=1947.3 2, Iγ=0.023 3 (1978HeZQ).
<sup>x</sup> 1953.6 <sup>d</sup> 3	0.058 9		
<sup>x</sup> 1960.0 <sup>d</sup> 4	0.022 9		
<sup>x</sup> 1965.64 24	0.071 9		Eγ=1965.15 10, Iγ=0.057 3 (1978HeZQ).
<sup>x</sup> 1969.5 <sup>e</sup> 2	0.058 <sup>j</sup> 6		Iγ=0.029 3 (1978HeZQ).
<sup>x</sup> 1974.7 11	0.015 10		Eγ=1974.30 16, Iγ=0.034 3 (1978HeZQ).
<sup>x</sup> 1982.4 4	0.046 11		Eγ=1983.01 16, Iγ=0.057 4 (1978HeZQ).
<sup>x</sup> 1986.4 8	0.026 11		Eγ=1986.6 3, Iγ=0.019 3 (1978HeZQ).
<sup>x</sup> 1991.65 <sup>d</sup> 24	0.087 13		
<sup>x</sup> 1996.34 <sup>e</sup> 11	0.068 <sup>j</sup> 4		Iγ=0.034 2 (1978HeZQ).
<sup>x</sup> 2006.0 5	0.042 12		Eγ=2005.71 11, Iγ=0.038 2 (1978HeZQ).
<sup>x</sup> 2010.30 <sup>e</sup> 19	0.050 <sup>j</sup> 4		Iγ=0.025 2 (1978HeZQ).
<sup>x</sup> 2013.2 3	0.054 8		Eγ=2014.03 10, Iγ=0.044 2 (1978HeZQ).
<sup>x</sup> 2022.9 <sup>d</sup> 3	0.096 14		
<sup>x</sup> 2025.6 3	0.094 13		Eγ=2025.73 19, Iγ=0.036 4 (1978HeZQ).
<sup>x</sup> 2032.75 18	0.116 11		Eγ=2033.7 2, Iγ=0.020 3 (1978HeZQ).
<sup>x</sup> 2039.1 <sup>e</sup> 3	0.030 <sup>j</sup> 6		Iγ=0.015 3 (1978HeZQ).
<sup>x</sup> 2046.3 3	0.074 11		Eγ=2045.56 18, Iγ=0.036 3 (1978HeZQ).
<sup>x</sup> 2048.7 4	0.053 11		Eγ=2048.44 17, Iγ=0.035 3 (1978HeZQ).
<sup>x</sup> 2057.5 4	0.045 9		Eγ=2057.17 18, Iγ=0.023 2 (1978HeZQ).
<sup>x</sup> 2062.8 9	0.020 9		Eγ=2064.4 4, Iγ=0.016 3 (1978HeZQ).
<sup>x</sup> 2066.6 3	0.069 9		Eγ=2067.4 3, Iγ=0.025 3 (1978HeZQ).
<sup>x</sup> 2070.0 <sup>d</sup> 8	0.023 9		
<sup>x</sup> 2077.6 3	0.071 10		Eγ=2077.81 18, Iγ=0.028 3 (1978HeZQ).
<sup>x</sup> 2087.2 <sup>d</sup> 4	0.042 9		
<sup>x</sup> 2090.03 20	0.093 9		Eγ=2089.9 2, Iγ=0.034 4 (1978HeZQ).
<sup>x</sup> 2092.89 13	0.126 8		Eγ=2092.71 16, Iγ=0.047 4 (1978HeZQ).
<sup>x</sup> 2097.0 3	0.054 7		Eγ=2097.9 2, Iγ=0.031 3 (1978HeZQ).
<sup>x</sup> 2099.84 19	0.079 7		Eγ=2100.9 2, Iγ=0.028 3 (1978HeZQ).
<sup>x</sup> 2116.9 4	0.049 10		Eγ=2114.6 3, Iγ=0.016 3 (1978HeZQ).
<sup>x</sup> 2124.12 19	0.104 11		Eγ=2124.31 10, Iγ=0.047 4 (1978HeZQ).
<sup>x</sup> 2127.9 3	0.066 11		Eγ=2128.3 3, Iγ=0.028 5 (1978HeZQ).

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 2130.7 4	0.064 11		E <sub>γ</sub> =2130.6 3, I <sub>γ</sub> =0.030 5 (1978HeZQ).
<sup>x</sup> 2137.52 13	0.172 11		E <sub>γ</sub> =2137.79 7, I <sub>γ</sub> =0.092 4 (1978HeZQ).
<sup>x</sup> 2140.41 <sup>d</sup> 25	0.092 11		
<sup>x</sup> 2148.3 3	0.077 11		E <sub>γ</sub> =2148.31 10, I <sub>γ</sub> =0.040 2 (1978HeZQ).
<sup>x</sup> 2153.90 24	0.082 10		E <sub>γ</sub> =2153.82 10, I <sub>γ</sub> =0.042 2 (1978HeZQ).
<sup>x</sup> 2159.64 25	0.079 10		E <sub>γ</sub> =2159.90 10, I <sub>γ</sub> =0.045 2 (1978HeZQ).
<sup>x</sup> 2163.7 5	0.043 11		E <sub>γ</sub> =2164.53 15, I <sub>γ</sub> =0.029 2 (1978HeZQ).
<sup>x</sup> 2174.94 25	0.077 10		E <sub>γ</sub> =2174.68 11, I <sub>γ</sub> =0.039 2 (1978HeZQ).
<sup>x</sup> 2179.56 24	0.079 10		E <sub>γ</sub> =2179.70 12, I <sub>γ</sub> =0.036 2 (1978HeZQ).
<sup>x</sup> 2184.8 3	0.069 9		E <sub>γ</sub> =2184.97 14, I <sub>γ</sub> =0.030 2 (1978HeZQ).
<sup>x</sup> 2192.01 22	0.085 10		E <sub>γ</sub> =2191.43 14, I <sub>γ</sub> =0.022 3 (1978HeZQ).
<sup>x</sup> 2194.4 <sup>e</sup> 3	0.044 <sup>j</sup> 6		I <sub>γ</sub> =0.022 3 (1978HeZQ).
<sup>x</sup> 2204.7 5	0.047 11		E <sub>γ</sub> =2205.7 4, I <sub>γ</sub> =0.031 6 (1978HeZQ).
<sup>x</sup> 2207.8 6	0.035 11		E <sub>γ</sub> =2208.9 3, I <sub>γ</sub> =0.023 4 (1978HeZQ).
<sup>x</sup> 2213.1 4	0.052 13		E <sub>γ</sub> =2213.12 18, I <sub>γ</sub> =0.027 3 (1978HeZQ).
<sup>x</sup> 2231.1 5	0.038 11		E <sub>γ</sub> =2231.4 3, I <sub>γ</sub> =0.019 2 (1978HeZQ).
<sup>x</sup> 2234.8 5	0.041 10		E <sub>γ</sub> =2235.7 2, I <sub>γ</sub> =0.021 2 (1978HeZQ).
<sup>x</sup> 2248.51 24	0.075 9		E <sub>γ</sub> =2248.64 14, I <sub>γ</sub> =0.039 3 (1978HeZQ).
<sup>x</sup> 2253.25 20	0.091 9		E <sub>γ</sub> =2253.60 11, I <sub>γ</sub> =0.048 3 (1978HeZQ).
<sup>x</sup> 2263.4 8	0.032 11		E <sub>γ</sub> =2262.9 3, I <sub>γ</sub> =0.024 3 (1978HeZQ).
<sup>x</sup> 2266.0 5	0.045 11		E <sub>γ</sub> =2266.3 2, I <sub>γ</sub> =0.033 3 (1978HeZQ).
<sup>x</sup> 2274.4 <sup>d</sup> 5	0.0310 10		
<sup>x</sup> 2281.3 3	0.076 9		E <sub>γ</sub> =2281.6 3, I <sub>γ</sub> =0.048 15 (1978HeZQ).
<sup>x</sup> 2284.8 <sup>d</sup> 6	0.035 9		
<sup>x</sup> 2289.4 4	0.048 9		E <sub>γ</sub> =2289.43 13, I <sub>γ</sub> =0.033 2 (1978HeZQ).
<sup>x</sup> 2294.66 <sup>e</sup> 19	0.054 <sup>j</sup> 4		I <sub>γ</sub> =0.027 2 (1978HeZQ).
<sup>x</sup> 2302.5 5	0.036 10		E <sub>γ</sub> =2302.79 12, I <sub>γ</sub> =0.042 2 (1978HeZQ).
<sup>x</sup> 2308.3 3	0.058 9		E <sub>γ</sub> =2308.58 11, I <sub>γ</sub> =0.037 2 (1978HeZQ).
<sup>x</sup> 2320.4 3	0.048 8		E <sub>γ</sub> =2320.1 4, I <sub>γ</sub> =0.015 3 (1978HeZQ).
<sup>x</sup> 2329.7 3	0.0510 8		E <sub>γ</sub> =2327.0 5, I <sub>γ</sub> =0.015 3 (1978HeZQ).
<sup>x</sup> 2332.8 6	0.039 9		E <sub>γ</sub> =2331.0 2, I <sub>γ</sub> =0.033 3 (1978HeZQ).
<sup>x</sup> 2335.9 <sup>d</sup> 5	0.040 8		
<sup>x</sup> 2340.5 3	0.065 8		E <sub>γ</sub> =2339.9 3, I <sub>γ</sub> =0.021 3 (1978HeZQ).
<sup>x</sup> 2344.6 3	0.052 8		E <sub>γ</sub> =2344.1 4, I <sub>γ</sub> =0.019 3 (1978HeZQ).
<sup>x</sup> 2352.7 4	0.039 9		E <sub>γ</sub> =2352.7 4, I <sub>γ</sub> =0.014 4 (1978HeZQ).
<sup>x</sup> 2362.4 3	0.062 10		E <sub>γ</sub> =2361.39 16, I <sub>γ</sub> =0.045 3 (1978HeZQ).
<sup>x</sup> 2365.2 <sup>e</sup> 3	0.050 <sup>j</sup> 6		I <sub>γ</sub> =0.025 3 (1978HeZQ).
<sup>x</sup> 2370.7 3	0.0710 10		E <sub>γ</sub> =2371.29 11, I <sub>γ</sub> =0.049 3 (1978HeZQ).
<sup>x</sup> 2373.8 <sup>f</sup> 5	0.041 9		
<sup>x</sup> 2378.48 19	0.104 9		E <sub>γ</sub> =2378.37 12, I <sub>γ</sub> =0.046 3 (1978HeZQ).
<sup>x</sup> 2386.0 <sup>f</sup> 3	0.056 <sup>j</sup> 6		I <sub>γ</sub> =0.028 3 (1978HeZQ). E <sub>γ</sub> =2387.8 3, I <sub>γ</sub> =0.062 9 (2004Fu30) probably corresponds to doublet: 2386.0γ+2389.4γ In 1978HeZQ.

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 2389.4 <sup>f</sup> 4	0.046 <sup>j</sup> 6		I <sub>γ</sub> =0.023 3 (1978HeZQ). E <sub>γ</sub> =2387.8 3, I <sub>γ</sub> =0.062 9 (2004Fu30) probably corresponds to doublet: 2386.0γ+2389.4γ In 1978HeZQ.
<sup>x</sup> 2394.43 19	0.102 10		E <sub>γ</sub> =2394.50 12, I <sub>γ</sub> =0.046 2 (1978HeZQ).
<sup>x</sup> 2404.92 21	0.085 9		E <sub>γ</sub> =2404.3 3, I <sub>γ</sub> =0.031 4 (1978HeZQ).
<sup>x</sup> 2408.1 3	0.076 9		E <sub>γ</sub> =2407.5 3, I <sub>γ</sub> =0.037 4 (1978HeZQ).
<sup>x</sup> 2411.31 24	0.072 8		E <sub>γ</sub> =2410.8 2, I <sub>γ</sub> =0.037 4 (1978HeZQ).
<sup>x</sup> 2417.0 3	0.064 8		E <sub>γ</sub> =2417.0 2, I <sub>γ</sub> =0.027 3 (1978HeZQ).
<sup>x</sup> 2420.9 <sup>d</sup> 7	0.026 8		
<sup>x</sup> 2424.4 3	0.063 8		E <sub>γ</sub> =2424.9 3, I <sub>γ</sub> =0.027 4 (1978HeZQ).
<sup>x</sup> 2428.09 17	0.098 8		E <sub>γ</sub> =2428.4 3, I <sub>γ</sub> =0.032 4 (1978HeZQ).
<sup>x</sup> 2436.3 4	0.058 11		E <sub>γ</sub> =2436.0 4, I <sub>γ</sub> =0.011 2 (1978HeZQ).
<sup>x</sup> 2441.5 4	0.048 10		E <sub>γ</sub> =2441.8 3, I <sub>γ</sub> =0.018 2 (1978HeZQ).
<sup>x</sup> 2448.0 3	0.059 10		E <sub>γ</sub> =2448.32 15, I <sub>γ</sub> =0.030 2 (1978HeZQ).
<sup>x</sup> 2455.9 4	0.046 9		E <sub>γ</sub> =2456.30 19, I <sub>γ</sub> =0.027 2 (1978HeZQ).
<sup>x</sup> 2460.5 5	0.045 9		E <sub>γ</sub> =2460.56 16, I <sub>γ</sub> =0.033 2 (1978HeZQ).
<sup>x</sup> 2477.28 14	0.145 10		E <sub>γ</sub> =2477.55 6, I <sub>γ</sub> =0.089 2 (1978HeZQ).
<sup>x</sup> 2484.4 3	0.081 10		E <sub>γ</sub> =2485.25 10, I <sub>γ</sub> =0.054 2 (1978HeZQ).
<sup>x</sup> 2492.2 4	0.050 10		E <sub>γ</sub> =2491.95 12, I <sub>γ</sub> =0.048 2 (1978HeZQ).
<sup>x</sup> 2501.1 3	0.048 9		E <sub>γ</sub> =2501.4 5, I <sub>γ</sub> =0.011 2 (1978HeZQ).
<sup>x</sup> 2508.41 15	0.111 8		E <sub>γ</sub> =2508.87 11, I <sub>γ</sub> =0.048 2 (1978HeZQ).
<sup>x</sup> 2513.5 5	0.031 7		E <sub>γ</sub> =2514.2 3, I <sub>γ</sub> =0.021 2 (1978HeZQ).
<sup>x</sup> 2527.37 25	0.074 10		E <sub>γ</sub> =2527.10 9, I <sub>γ</sub> =0.053 2 (1978HeZQ).
<sup>x</sup> 2533.2 <sup>d</sup> 4	0.043 9		
<sup>x</sup> 2538.13 23	0.078 10		E <sub>γ</sub> =2536.91 19, I <sub>γ</sub> =0.024 2 (1978HeZQ).
<sup>x</sup> 2544.7 3	0.073 12		E <sub>γ</sub> =2546.2 2, I <sub>γ</sub> =0.023 2 (1978HeZQ).
<sup>x</sup> 2548.1 <sup>d</sup> 3	0.066 13		
<sup>x</sup> 2555.23 24	0.069 8		E <sub>γ</sub> =2555.9 3, I <sub>γ</sub> =0.034 5 (1978HeZQ).
<sup>x</sup> 2558.45 16	0.103 7		E <sub>γ</sub> =2558.7 2, I <sub>γ</sub> =0.045 5 (1978HeZQ).
<sup>x</sup> 2566.3 <sup>d</sup> 3	0.047 7		
<sup>x</sup> 2569.8 4	0.044 7		E <sub>γ</sub> =2569.03 13, I <sub>γ</sub> =0.039 2 (1978HeZQ).
<sup>x</sup> 2574.2 4	0.0310 8		E <sub>γ</sub> =2576.93 14, I <sub>γ</sub> =0.047 3 (1978HeZQ).
<sup>x</sup> 2580.92 <sup>e</sup> 18	0.076 <sup>j</sup> 6		I <sub>γ</sub> =0.038 3 (1978HeZQ).
<sup>x</sup> 2590.5 3	0.096 12		
<sup>x</sup> 2593.3 4	0.071 12		E <sub>γ</sub> =2594.01 16, I <sub>γ</sub> =0.046 3 (1978HeZQ).
<sup>x</sup> 2604.60 25	0.093 11		E <sub>γ</sub> =2604.30 11, I <sub>γ</sub> =0.050 2 (1978HeZQ).
<sup>x</sup> 2609.79 24	0.097 12		E <sub>γ</sub> =2609.26 11, I <sub>γ</sub> =0.054 2 (1978HeZQ).
<sup>x</sup> 2617.9 3	0.054 7		E <sub>γ</sub> =2619.19 16, I <sub>γ</sub> =0.032 2 (1978HeZQ): probably corresponds to doublet: 2617.9γ+2621.5γ In 2004Fu30.
<sup>x</sup> 2621.5 4	0.034 7		E <sub>γ</sub> =2619.19 16, I <sub>γ</sub> =0.032 2 (1978HeZQ): probably corresponds to doublet: 2617.9γ+2621.5γ In 2004Fu30.
<sup>x</sup> 2631.2 <sup>d</sup> 4	0.037 7		
<sup>x</sup> 2641.0 3	0.076 11		E <sub>γ</sub> =2641.0 3, I <sub>γ</sub> =0.027 4 (1978HeZQ).
<sup>x</sup> 2644.48 21	0.109 10		E <sub>γ</sub> =2644.42 17, I <sub>γ</sub> =0.050 4 (1978HeZQ).
<sup>x</sup> 2650.8 4	0.054 10		E <sub>γ</sub> =2650.6 4, I <sub>γ</sub> =0.013 2 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 2661.65 17	0.1110 9		E <sub>γ</sub> =2660.1 3, I <sub>γ</sub> =0.020 3 (1978HeZQ).
<sup>x</sup> 2671.7 3	0.094 11		E <sub>γ</sub> =2672.27 16, I <sub>γ</sub> =0.049 4 (1978HeZQ).
<sup>x</sup> 2674.8 3	0.088 11		E <sub>γ</sub> =2675.7 2, I <sub>γ</sub> =0.038 4 (1978HeZQ).
<sup>x</sup> 2685.0 <sup>e</sup> 3	0.030 <sup>j</sup> 4		I <sub>γ</sub> =0.015 2 (1978HeZQ).
<sup>x</sup> 2694.3 3	0.081 11		E <sub>γ</sub> =2695.39 10, I <sub>γ</sub> =0.052 3 (1978HeZQ): probably corresponds to doublet: 2694.3γ+2697.4γ In 2004Fu30.
<sup>x</sup> 2697.4 5	0.053 11		E <sub>γ</sub> =2695.39 10, I <sub>γ</sub> =0.052 3 (1978HeZQ): probably corresponds to doublet: 2694.3γ+2697.4γ In 2004Fu30.
<sup>x</sup> 2709.5 5	0.043 13		E <sub>γ</sub> =2710.55 17, I <sub>γ</sub> =0.032 3 (1978HeZQ).
<sup>x</sup> 2713.8 <sup>d</sup> 7	0.039 11		
<sup>x</sup> 2717.1 4	0.062 11		E <sub>γ</sub> =2716.64 15, I <sub>γ</sub> =0.038 2 (1978HeZQ).
<sup>x</sup> 2722.2 3	0.073 10		E <sub>γ</sub> =2722.41 13, I <sub>γ</sub> =0.042 3 (1978HeZQ).
<sup>x</sup> 2732.23 22	0.088 11		E <sub>γ</sub> =2733.1 2, I <sub>γ</sub> =0.025 3 (1978HeZQ).
<sup>x</sup> 2745.6 3	0.057 10		E <sub>γ</sub> =2745.7 3, I <sub>γ</sub> =0.027 3 (1978HeZQ).
<sup>x</sup> 2750.4 <sup>e</sup> 4	0.036 <sup>j</sup> 6		I <sub>γ</sub> =0.018 3 (1978HeZQ).
<sup>x</sup> 2757.51 22	0.084 9		E <sub>γ</sub> =2757.13 13, I <sub>γ</sub> =0.049 3 (1978HeZQ).
<sup>x</sup> 2761.7 3	0.082 10		E <sub>γ</sub> =2763.45 10, I <sub>γ</sub> =0.064 3 (1978HeZQ): probably corresponds to doublet: 2761.7γ+2764.6γ In 2004Fu30.
<sup>x</sup> 2764.6 3	0.092 10		E <sub>γ</sub> =2763.45 10, I <sub>γ</sub> =0.064 3 (1978HeZQ): probably corresponds to doublet: 2761.7γ+2764.6γ In 2004Fu30.
<sup>x</sup> 2768.0 <sup>d</sup> 5	0.046 9		
<sup>x</sup> 2773.58 19	0.113 11		E <sub>γ</sub> =2774.82 10, I <sub>γ</sub> =0.062 3 (1978HeZQ): probably corresponds to doublet: 2773.58γ+2776.65γ In 2004Fu30.
<sup>x</sup> 2776.65 20	0.114 12		E <sub>γ</sub> =2774.82 10, I <sub>γ</sub> =0.062 3 (1978HeZQ): probably corresponds to doublet: 2773.58γ+2776.65γ In 2004Fu30.
<sup>x</sup> 2782.5 <sup>d</sup> 3	0.066 8		
<sup>x</sup> 2786.12 20	0.113 9		E <sub>γ</sub> =2786.03 15, I <sub>γ</sub> =0.040 3 (1978HeZQ).
<sup>x</sup> 2789.2 <sup>d</sup> 3	0.069 9		
<sup>x</sup> 2796.6 <sup>d</sup> 3	0.058 8		
<sup>x</sup> 2800.60 <sup>d</sup> 22	0.080 8		
<sup>x</sup> 2807.8 3	0.074 9		E <sub>γ</sub> =2809.70 12, I <sub>γ</sub> =0.040 3 (1978HeZQ): probably corresponds to doublet: 2807.8γ+2811.3γ In 2004Fu30.
<sup>x</sup> 2811.3 3	0.075 9		E <sub>γ</sub> =2809.70 12, I <sub>γ</sub> =0.040 3 (1978HeZQ): probably corresponds to doublet: 2807.8γ+2811.3γ In 2004Fu30.
<sup>x</sup> 2818.4 <sup>d</sup> 5	0.042 11		
<sup>x</sup> 2827.5 3	0.076 10		E <sub>γ</sub> =2827.59 18, I <sub>γ</sub> =0.034 2 (1978HeZQ).
<sup>x</sup> 2830.9 4	0.059 10		E <sub>γ</sub> =2832.2 3, I <sub>γ</sub> =0.021 2 (1978HeZQ).
<sup>x</sup> 2840.67 24	0.093 10		E <sub>γ</sub> =2840.98 15, I <sub>γ</sub> =0.036 3 (1978HeZQ).
<sup>x</sup> 2846.33 20	0.115 10		E <sub>γ</sub> =2846.65 12, I <sub>γ</sub> =0.046 3 (1978HeZQ).
<sup>x</sup> 2859.4 4	0.049 11		E <sub>γ</sub> =2860.5 3, I <sub>γ</sub> =0.031 5 (1978HeZQ).
<sup>x</sup> 2870.02 22	0.083 9		E <sub>γ</sub> =2870.53 12, I <sub>γ</sub> =0.034 2 (1978HeZQ).
<sup>x</sup> 2879.56 24	0.076 8		E <sub>γ</sub> =2879.55 16, I <sub>γ</sub> =0.026 2 (1978HeZQ).
<sup>x</sup> 2886.3 4	0.053 8		E <sub>γ</sub> =2887.45 19, I <sub>γ</sub> =0.034 3 (1978HeZQ).
<sup>x</sup> 2890.43 16	0.124 9		E <sub>γ</sub> =2891.07 15, I <sub>γ</sub> =0.045 3 (1978HeZQ).
<sup>x</sup> 2897.1 3	0.074 9		E <sub>γ</sub> =2897.35 16, I <sub>γ</sub> =0.028 3 (1978HeZQ).
<sup>x</sup> 2909.49 13	0.141 8		E <sub>γ</sub> =2909.63 15, I <sub>γ</sub> =0.054 4 (1978HeZQ).
<sup>x</sup> 2918.06 22	0.079 8		E <sub>γ</sub> =2918.40 14, I <sub>γ</sub> =0.035 3 (1978HeZQ).
<sup>x</sup> 2922.8 <sup>d</sup> 9	0.044 19		
<sup>x</sup> 2928.28 23	0.087 9		E <sub>γ</sub> =2928.12 16, I <sub>γ</sub> =0.032 2 (1978HeZQ).
<sup>x</sup> 2929.1 <sup>d</sup> 5	0.082 20		

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 2934.7 4	0.042 8		E <sub>γ</sub> =2934.2 3, I <sub>γ</sub> =0.015 2 (1978HeZQ).
<sup>x</sup> 2945.1 <sup>d</sup> 3	0.045 9		
<sup>x</sup> 2952.0 4	0.038 9		E <sub>γ</sub> =2952.3 3, I <sub>γ</sub> =0.018 3 (1978HeZQ).
<sup>x</sup> 2957.1 4	0.053 8		E <sub>γ</sub> =2958.4 2, I <sub>γ</sub> =0.064 8 (1978HeZQ): probably corresponds to doublet: 2957.1γ+2960.2γ In 2004Fu30.
<sup>x</sup> 2960.2 4	0.061 8		E <sub>γ</sub> =2958.4 2, I <sub>γ</sub> =0.064 8 (1978HeZQ): probably corresponds to doublet: 2957.1γ+2960.2γ In 2004Fu30.
<sup>x</sup> 2963.6 <sup>d</sup> 3	0.060 7		
<sup>x</sup> 2974.7 3	0.057 8		E <sub>γ</sub> =2976.1 2, I <sub>γ</sub> =0.024 2 (1978HeZQ).
<sup>x</sup> 2978.2 <sup>d</sup> 3	0.071 9		
<sup>x</sup> 2984.01 <sup>d</sup> 23	0.090 9		
<sup>x</sup> 2987.15 19	0.138 10		E <sub>γ</sub> =2986.53 12, I <sub>γ</sub> =0.060 3 (1978HeZQ).
<sup>x</sup> 2989.9 6	0.074 12		E <sub>γ</sub> =2990.53 18, I <sub>γ</sub> =0.040 3 (1978HeZQ): probably corresponds to doublet: 2989.9γ+2991.3γ In 2004Fu30.
<sup>x</sup> 2991.3 4	0.12 3		E <sub>γ</sub> =2990.53 18, I <sub>γ</sub> =0.040 3 (1978HeZQ): probably corresponds to doublet: 2989.9γ+2991.3γ In 2004Fu30.
<sup>x</sup> 2992.3 <sup>d</sup> 4	0.067 12		
<sup>x</sup> 2998.5 <sup>d</sup> 4	0.044 9		
<sup>x</sup> 3012.67 16	0.111 8		E <sub>γ</sub> =3012.75 15, I <sub>γ</sub> =0.040 3 (1978HeZQ).
<sup>x</sup> 3018.5 3	0.059 8		E <sub>γ</sub> =3018.7 3, I <sub>γ</sub> =0.024 3 (1978HeZQ).
<sup>x</sup> 3024.8 3	0.063 9		E <sub>γ</sub> =3023.9 3, I <sub>γ</sub> =0.022 3 (1978HeZQ).
<sup>x</sup> 3033.2 <sup>d</sup> 3	0.084 10		
<sup>x</sup> 3036.3 <sup>d</sup> 3	0.118 11		
<sup>x</sup> 3039.7 5	0.072 11		E <sub>γ</sub> =3040.13 15, I <sub>γ</sub> =0.040 3 (1978HeZQ).
<sup>x</sup> 3042.6 <sup>d</sup> 4	0.071 11		
<sup>x</sup> 3049.0 3	0.062 10		E <sub>γ</sub> =3048.3 2, I <sub>γ</sub> =0.024 2 (1978HeZQ).
<sup>x</sup> 3058.6 3	0.0910 15		E <sub>γ</sub> =3059.04 9, I <sub>γ</sub> =0.044 2 (1978HeZQ).
<sup>x</sup> 3067.06 11	0.122 8		E <sub>γ</sub> =3066.90 13, I <sub>γ</sub> =0.032 3 (1978HeZQ).
<sup>x</sup> 3071.5 3	0.058 8		
<sup>x</sup> 3074.43 14	0.124 8		E <sub>γ</sub> =3073.89 11, I <sub>γ</sub> =0.039 2 (1978HeZQ).
<sup>x</sup> 3079.96 11	0.135 9		E <sub>γ</sub> =3080.39 14, I <sub>γ</sub> =0.029 2 (1978HeZQ).
<sup>x</sup> 3083.66 <sup>d</sup> 17	0.087 10		
<sup>x</sup> 3089.13 13	0.133 14		E <sub>γ</sub> =3089.34 8, I <sub>γ</sub> =0.055 2 (1978HeZQ).
<sup>x</sup> 3094.8 3	0.0810 11		E <sub>γ</sub> =3094.89 17, I <sub>γ</sub> =0.027 3 (1978HeZQ).
<sup>x</sup> 3102.6 3	0.081 12		E <sub>γ</sub> =3104.47 9, I <sub>γ</sub> =0.053 3 (1978HeZQ): probably corresponds to doublet: 3102.6γ+3105.7γ In 2004Fu30.
<sup>x</sup> 3105.7 3	0.0810 13		E <sub>γ</sub> =3104.47 9, I <sub>γ</sub> =0.053 3 (1978HeZQ): probably corresponds to doublet: 3102.6γ+3105.7γ In 2004Fu30.
<sup>x</sup> 3115.53 25	0.091 10		E <sub>γ</sub> =3116.52 17, I <sub>γ</sub> =0.032 2 (1978HeZQ).
<sup>x</sup> 3120.48 22	0.1210 11		E <sub>γ</sub> =3121.81 12, I <sub>γ</sub> =0.050 2 (1978HeZQ).
<sup>x</sup> 3123.9 <sup>d</sup> 5	0.064 11		
<sup>x</sup> 3127.2 4	0.065 11		E <sub>γ</sub> =3127.08 16, I <sub>γ</sub> =0.032 2 (1978HeZQ).
<sup>x</sup> 3135.0 3	0.075 10		E <sub>γ</sub> =3135.29 16, I <sub>γ</sub> =0.030 3 (1978HeZQ).
<sup>x</sup> 3141.8 <sup>d</sup> 7	0.075 25		
<sup>x</sup> 3143.90 23	0.074 9		E <sub>γ</sub> =3143.9 2, I <sub>γ</sub> =0.030 3 (1978HeZQ).
<sup>x</sup> 3148.1 5	0.088 22		E <sub>γ</sub> =3148.6 3, I <sub>γ</sub> =0.023 3 (1978HeZQ): probably corresponds to doublet: 3148.1γ+3149.3γ In 2004Fu30.
<sup>x</sup> 3149.3 3	0.071 8		E <sub>γ</sub> =3148.6 3, I <sub>γ</sub> =0.023 3 (1978HeZQ): probably corresponds to doublet: 3148.1γ+3149.3γ In 2004Fu30.

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 3155.55 9	0.181 8		Eγ=3155.76 10, Iγ=0.060 2 (1978HeZQ).
<sup>x</sup> 3160.51 20	0.085 8		Eγ=3160.7 2, Iγ=0.028 2 (1978HeZQ).
<sup>x</sup> 3164.4 <sup>d</sup> 6	0.078 22		
<sup>x</sup> 3166.55 16	0.103 8		Eγ=3165.99 18, Iγ=0.029 2 (1978HeZQ).
<sup>x</sup> 3172.72 <sup>d</sup> 13	0.199 10		
<sup>x</sup> 3174.83 3	0.165 12		Eγ=3174.59 8, Iγ=0.061 3 (1978HeZQ).
<sup>x</sup> 3188.4 6	0.075 22		Eγ=3189.06 16, Iγ=0.033 2 (1978HeZQ).
<sup>x</sup> 3198.0 5	0.097 22		Eγ=3197.60 11, Iγ=0.046 2 (1978HeZQ).
<sup>x</sup> 3210.3 <sup>d</sup> 5	0.089 22		
<sup>x</sup> 3221.51 <sup>e</sup> 19	0.066 <sup>j</sup> 6		Iγ=0.033 3 (1978HeZQ).
<sup>x</sup> 3225.8 <sup>d</sup> 5	0.12 3		
<sup>x</sup> 3233.4 8	0.07 3		Eγ=3233.63 13, Iγ=0.033 2 (1978HeZQ).
<sup>x</sup> 3244.2 4	0.15 3		Eγ=3243.56 9, Iγ=0.050 2 (1978HeZQ).
<sup>x</sup> 3249.77 <sup>e</sup> 13	0.062 <sup>j</sup> 4		Iγ=0.031 2 (1978HeZQ).
<sup>x</sup> 3265.8 9	0.06 3		Eγ=3265.99 13, Iγ=0.045 2 (1978HeZQ).
<sup>x</sup> 3270.7 6	0.09 3		Eγ=3270.48 18, Iγ=0.031 2 (1978HeZQ).
<sup>x</sup> 3278.9 3	0.121 23		Eγ=3280.10 15, Iγ=0.033 2 (1978HeZQ).
<sup>x</sup> 3285.1 4	0.100 20		Eγ=3285.72 11, Iγ=0.052 2 (1978HeZQ).
<sup>x</sup> 3289.0 6	0.065 20		Eγ=3291.57 13, Iγ=0.040 3 (1978HeZQ).
<sup>x</sup> 3302.9 9	0.042 20		Eγ=3302.59 12, Iγ=0.040 3 (1978HeZQ).
<sup>x</sup> 3311.6 6	0.11 3		Eγ=3311.20 13, Iγ=0.057 3 (1978HeZQ).
<sup>x</sup> 3314.7 6	0.11 3		Eγ=3315.21 13, Iγ=0.065 3 (1978HeZQ).
<sup>x</sup> 3321.6 6	0.09 3		Eγ=3320.84 14, Iγ=0.040 2 (1978HeZQ).
<sup>x</sup> 3325.81 <sup>e</sup> 9	0.134 <sup>j</sup> 6		Iγ=0.067 3 (1978HeZQ).
<sup>x</sup> 3329.4 10	0.056 25		Eγ=3330.95 11, Iγ=0.044 2 (1978HeZQ): probably corresponds to doublet: 3329.4γ+3332.1γ In 2004Fu30.
<sup>x</sup> 3332.1 9	0.061 24		Eγ=3330.95 11, Iγ=0.044 2 (1978HeZQ): probably corresponds to doublet: 3329.4γ+3332.1γ In 2004Fu30.
<sup>x</sup> 3341.38 22	0.200 22		Eγ=3341.59 7, Iγ=0.086 3 (1978HeZQ).
<sup>x</sup> 3347.0 3	0.142 21		Eγ=3346.46 8, Iγ=0.076 3 (1978HeZQ).
<sup>x</sup> 3355.2 <sup>e</sup> 4	0.026 <sup>j</sup> 4		Iγ=0.013 2 (1978HeZQ).
<sup>x</sup> 3360.90 25	0.169 20		Eγ=3361.27 8, Iγ=0.062 2 (1978HeZQ).
<sup>x</sup> 3367.9 4	0.096 20		Eγ=3367.3 2, Iγ=0.021 2 (1978HeZQ).
<sup>x</sup> 3379.0 5	0.092 22		Eγ=3379.6 4, Iγ=0.029 6 (1978HeZQ).
<sup>x</sup> 3381.9 5	0.108 23		Eγ=3382.2 3, Iγ=0.034 6 (1978HeZQ).
<sup>x</sup> 3395.4 3	0.141 20		Eγ=3395.18 8, Iγ=0.062 2 (1978HeZQ).
<sup>x</sup> 3401.8 6	0.066 18		Eγ=3401.22 19, Iγ=0.027 2 (1978HeZQ).
<sup>x</sup> 3407.0 3	0.172 20		Eγ=3407.35 18, Iγ=0.068 7 (1978HeZQ).
<sup>x</sup> 3410.1 3	0.169 20		Eγ=3409.9 2, Iγ=0.058 8 (1978HeZQ).
<sup>x</sup> 3419.17 23	0.173 19		Eγ=3418.83 7, Iγ=0.067 2 (1978HeZQ).
<sup>x</sup> 3426.0 3	0.125 19		Eγ=3426.26 10, Iγ=0.047 2 (1978HeZQ).
<sup>x</sup> 3440.6 3	0.20 3		Eγ=3440.88 11, Iγ=0.084 4 (1978HeZQ).
<sup>x</sup> 3443.8 4	0.15 3		Eγ=3444.6 2, Iγ=0.039 4 (1978HeZQ).
<sup>x</sup> 3450.2 4	0.13 3		Eγ=3451.71 9, Iγ=0.065 2 (1978HeZQ): probably corresponds to doublet: 3450.2γ+3453.1γ In 2004Fu30.
<sup>x</sup> 3453.1 4	0.17 3		Eγ=3451.71 9, Iγ=0.065 2 (1978HeZQ): probably corresponds to doublet: 3450.2γ+3453.1γ In 2004Fu30.

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 3460.6 21	0.03 3		E <sub>γ</sub> =3459.94 15, I <sub>γ</sub> =0.045 2 (1978HeZQ).
<sup>x</sup> 3473.1 7	0.09 3		E <sub>γ</sub> =3474.91 9, I <sub>γ</sub> =0.058 2 (1978HeZQ): probably corresponds to doublet: 3473.1γ+3476.6γ In 2004Fu30.
<sup>x</sup> 3476.6 5	0.12 3		E <sub>γ</sub> =3474.91 9, I <sub>γ</sub> =0.058 2 (1978HeZQ): probably corresponds to doublet: 3473.1γ+3476.6γ In 2004Fu30.
<sup>x</sup> 3495.1 9	0.052 21		E <sub>γ</sub> =3494.84 19, I <sub>γ</sub> =0.022 2 (1978HeZQ).
<sup>x</sup> 3501.2 6	0.072 21		E <sub>γ</sub> =3501.22 18, I <sub>γ</sub> =0.028 2 (1978HeZQ).
<sup>x</sup> 3506.6 <sup>e</sup> 3	0.050 <sup>j</sup> 6		I <sub>γ</sub> =0.025 3 (1978HeZQ).
<sup>x</sup> 3509.9 3	0.157 22		E <sub>γ</sub> =3510.43 12, I <sub>γ</sub> =0.055 3 (1978HeZQ).
<sup>x</sup> 3522.7 6	0.093 23		E <sub>γ</sub> =3522.94 18, I <sub>γ</sub> =0.050 5 (1978HeZQ).
<sup>x</sup> 3525.8 5	0.106 24		E <sub>γ</sub> =3526.0 3, I <sub>γ</sub> =0.027 4 (1978HeZQ).
<sup>x</sup> 3536.4 3	0.096 17		E <sub>γ</sub> =3536.20 19, I <sub>γ</sub> =0.044 3 (1978HeZQ).
<sup>x</sup> 3540.1 <sup>f</sup> 4	0.058 <sup>j</sup> 6		I <sub>γ</sub> =0.029 3 (1978HeZQ). E <sub>γ</sub> =3542.6 4, I <sub>γ</sub> =0.074 16 (2004Fu30) probably corresponds to doublet: 3540.1γ+3544.20γ In 1978HeZQ.
<sup>x</sup> 3544.20 <sup>f</sup> 18	0.082 <sup>j</sup> 6		I <sub>γ</sub> =0.041 3 (1978HeZQ). E <sub>γ</sub> =3542.6 4, I <sub>γ</sub> =0.074 16 (2004Fu30) probably corresponds to doublet: 3540.1γ+3544.20γ In 1978HeZQ.
<sup>x</sup> 3557.2 4	0.083 15		E <sub>γ</sub> =3556.60 9, I <sub>γ</sub> =0.051 2 (1978HeZQ).
<sup>x</sup> 3563.0 4	0.084 15		E <sub>γ</sub> =3562.10 15, I <sub>γ</sub> =0.032 2 (1978HeZQ).
<sup>x</sup> 3573.8 3	0.089 15		E <sub>γ</sub> =3573.61 13, I <sub>γ</sub> =0.031 2 (1978HeZQ).
<sup>x</sup> 3586.1 6	0.081 24		E <sub>γ</sub> =3586.38 14, I <sub>γ</sub> =0.037 2 (1978HeZQ).
<sup>x</sup> 3591.5 <sup>d</sup> 4	0.136 25		
<sup>x</sup> 3600.7 3	0.19 3		E <sub>γ</sub> =3600.31 7, I <sub>γ</sub> =0.080 2 (1978HeZQ).
<sup>x</sup> 3605.6 4	0.146 25		E <sub>γ</sub> =3604.63 13, I <sub>γ</sub> =0.044 2 (1978HeZQ).
<sup>x</sup> 3613.80 18	0.32 3		E <sub>γ</sub> =3613.48 4, I <sub>γ</sub> =0.106 2 (1978HeZQ).
<sup>x</sup> 3621.79 23	0.204 23		E <sub>γ</sub> =3621.60 5, I <sub>γ</sub> =0.084 2 (1978HeZQ).
<sup>x</sup> 3633.2 9	0.050 20		E <sub>γ</sub> =3633.63 13, I <sub>γ</sub> =0.029 2 (1978HeZQ).
<sup>x</sup> 3640.3 <sup>e</sup> 3	0.036 <sup>j</sup> 4		I <sub>γ</sub> =0.018 2 (1978HeZQ).
<sup>x</sup> 3645.5 <sup>e</sup> 2	0.044 <sup>j</sup> 4		I <sub>γ</sub> =0.022 2 (1978HeZQ).
<sup>x</sup> 3652.33 <sup>e</sup> 15	0.058 <sup>j</sup> 4		I <sub>γ</sub> =0.029 2 (1978HeZQ).
<sup>x</sup> 3658.2 5	0.084 20		E <sub>γ</sub> =3657.99 14, I <sub>γ</sub> =0.044 2 (1978HeZQ).
<sup>x</sup> 3662.37 <sup>e</sup> 19	0.062 <sup>j</sup> 4		I <sub>γ</sub> =0.031 2 (1978HeZQ).
<sup>x</sup> 3672.1 11	0.05 3		E <sub>γ</sub> =3671.6 3, I <sub>γ</sub> =0.014 2 (1978HeZQ).
<sup>x</sup> 3695.81 11	0.203 12		E <sub>γ</sub> =3695.83 9, I <sub>γ</sub> =0.042 2 (1978HeZQ).
<sup>x</sup> 3704.17 <sup>e</sup> 18	0.066 <sup>j</sup> 4		I <sub>γ</sub> =0.033 2 (1978HeZQ).
<sup>x</sup> 3708.7 <sup>e</sup> 2	0.064 <sup>j</sup> 4		I <sub>γ</sub> =0.032 2 (1978HeZQ).
<sup>x</sup> 3713.6 <sup>e</sup> 2	0.052 <sup>j</sup> 4		I <sub>γ</sub> =0.026 2 (1978HeZQ).
<sup>x</sup> 3723.1 <sup>e</sup> 2	0.036 <sup>j</sup> 4		I <sub>γ</sub> =0.018 2 (1978HeZQ).
<sup>x</sup> 3728.9 <sup>e</sup> 3	0.030 <sup>j</sup> 4		I <sub>γ</sub> =0.015 2 (1978HeZQ).
<sup>x</sup> 3736.08 24	0.140 18		E <sub>γ</sub> =3735.67 9, I <sub>γ</sub> =0.043 2 (1978HeZQ).
<sup>x</sup> 3743.7 <sup>e</sup> 3	0.032 <sup>j</sup> 2		I <sub>γ</sub> =0.016 1 (1978HeZQ).
<sup>x</sup> 3748.6 <sup>e</sup> 4	0.040 <sup>j</sup> 4		I <sub>γ</sub> =0.020 2 (1978HeZQ).
<sup>x</sup> 3753.4 <sup>e</sup> 4	0.062 <sup>j</sup> 6		I <sub>γ</sub> =0.031 3 (1978HeZQ).
<sup>x</sup> 3756.5 4	0.147 25		E <sub>γ</sub> =3756.85 19, I <sub>γ</sub> =0.048 4 (1978HeZQ).
<sup>x</sup> 3763.4 7	0.072 24		E <sub>γ</sub> =3763.13 18, I <sub>γ</sub> =0.024 1 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 3768.8 6	0.091 24		Eγ=3768.81 9, Iγ=0.043 1 (1978HeZQ).
<sup>x</sup> 3779.4 5	0.072 18		Eγ=3779.7 3, Iγ=0.018 2 (1978HeZQ).
<sup>x</sup> 3784.3 3	0.115 18		Eγ=3785.33 16, Iγ=0.037 2 (1978HeZQ).
<sup>x</sup> 3788.9 <sup>d</sup> 4	0.092 18		
<sup>x</sup> 3793.3 <sup>d</sup> 4	0.087 18		
<sup>x</sup> 3803.8 4	0.109 18		Eγ=3803.96 11, Iγ=0.040 2 (1978HeZQ).
<sup>x</sup> 3809.41 23	0.194 19		Eγ=3809.88 6, Iγ=0.072 2 (1978HeZQ).
<sup>x</sup> 3812.9 <sup>d</sup> 8	0.054 17		
<sup>x</sup> 3821.3 5	0.076 17		Eγ=3821.55 15, Iγ=0.025 2 (1978HeZQ).
<sup>x</sup> 3832.5 <sup>d</sup> 5	0.079 17		
<sup>x</sup> 3836.8 5	0.075 17		Eγ=3835.4 8, Iγ=0.035 9 (1978HeZQ).
<sup>x</sup> 3852.1 <sup>d</sup> 5	0.079 17		
<sup>x</sup> 3863.75 24	0.187 20		Eγ=3863.5 3, Iγ=0.087 7 (1978HeZQ).
<sup>x</sup> 3876.4 5	0.086 19		Eγ=3876.1 4, Iγ=0.077 8 (1978HeZQ).
<sup>x</sup> 3881.5 4	0.113 19		Eγ=3881.9 5, Iγ=0.060 8 (1978HeZQ).
<sup>x</sup> 3886.2 6	0.067 19		Eγ=3889.0 4, Iγ=0.073 8 (1978HeZQ): probably corresponds to doublet: 3886.2γ+3891.3γ In 2004Fu30.
<sup>x</sup> 3891.3 5	0.091 19		Eγ=3889.0 4, Iγ=0.073 8 (1978HeZQ): probably corresponds to doublet: 3886.2γ+3891.3γ In 2004Fu30.
<sup>x</sup> 3904.3 <sup>d</sup> 5	0.076 17		
<sup>x</sup> 3909.3 <sup>d</sup> 4	0.092 17		
<sup>x</sup> 3915.98 21	0.197 18		Eγ=3916.8 3, Iγ=0.075 8 (1978HeZQ).
<sup>x</sup> 3920.2 <sup>d</sup> 3	0.116 18		
<sup>x</sup> 3927.09 21	0.1810 18		Eγ=3927.3 6, Iγ=0.050 9 (1978HeZQ).
<sup>x</sup> 3932.6 3	0.22 3		Eγ=3932.7 4, Iγ=0.083 9 (1978HeZQ).
<sup>x</sup> 3934.9 <sup>d</sup> 6	0.09 3		
<sup>x</sup> 3940.9 4	0.093 20		Eγ=3941.4 7, Iγ=0.031 8 (1978HeZQ).
<sup>x</sup> 3949.71 21	0.187 18		Eγ=3949.4 3, Iγ=0.084 9 (1978HeZQ).
<sup>x</sup> 3957.1 <sup>d</sup> 7	0.048 16		
<sup>x</sup> 3969.2 5	0.078 18		Eγ=3968.9 5, Iγ=0.035 7 (1978HeZQ).
<sup>x</sup> 3985.1 3	0.150 20		Eγ=3985.2 4, Iγ=0.047 6 (1978HeZQ).
<sup>x</sup> 3998.3 6	0.076 19		Eγ=3999.7 5, Iγ=0.037 7 (1978HeZQ).
<sup>x</sup> 4009.7 5	0.097 19		Eγ=4010.4 4, Iγ=0.065 8 (1978HeZQ).
<sup>x</sup> 4014.7 4	0.103 19		Eγ=4016.0 5, Iγ=0.072 9 (1978HeZQ).
<sup>x</sup> 4021.1 4	0.109 19		Eγ=4022.0 4, Iγ=0.069 8 (1978HeZQ).
<sup>x</sup> 4034.7 3	0.166 20		Eγ=4035.1 4, Iγ=0.053 8 (1978HeZQ).
<sup>x</sup> 4041.60 21	0.225 21		Eγ=4042.40 18, Iγ=0.124 8 (1978HeZQ).
<sup>x</sup> 4045.7 <sup>d</sup> 3	0.142 20		
<sup>x</sup> 4065.61 16	0.215 16		Eγ=4065.3 3, Iγ=0.090 8 (1978HeZQ).
<sup>x</sup> 4072.00 14	0.250 16		Eγ=4071.8 2, Iγ=0.112 8 (1978HeZQ).
<sup>x</sup> 4082.94 22	0.152 17		Eγ=4082.8 3, Iγ=0.068 7 (1978HeZQ).
<sup>x</sup> 4096.3 3	0.213 24		Eγ=4095.8 3, Iγ=0.093 7 (1978HeZQ).
<sup>x</sup> 4102.3 4	0.121 22		Eγ=4103.0 3, Iγ=0.088 8 (1978HeZQ).



<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
x4115.4 3	0.1510 23		Eγ=4115.3 3, Iγ=0.087 8 (1978HeZQ).
x4128.82 <sup>d</sup> 25	0.104 13		
x4133.61 <sup>d</sup> 24	0.107 13		
x4138.8 <sup>d</sup> 4	0.073 13		
x4143.33 20	0.152 14		Eγ=4143.0 3, Iγ=0.077 7 (1978HeZQ).
x4147.01 <sup>d</sup> 19	0.161 14		
x4163.6 3	0.147 18		Eγ=4164.9 4, Iγ=0.062 7 (1978HeZQ).
x4167.0 <sup>d</sup> 7	0.061 17		
x4172.3 4	0.085 16		Eγ=4172.6 8, Iγ=0.101 7 (1978HeZQ).
x4184.0 <sup>d</sup> 4	0.107 19		
x4192.86 22	0.207 21		Eγ=4192.8 2, Iγ=0.101 7 (1978HeZQ).
x4206.6 6	0.074 19		Eγ=4207.7 5, Iγ=0.048 8 (1978HeZQ).
x4212.0 3	0.1310 20		Eγ=4214.1 3, Iγ=0.090 8 (1978HeZQ).
x4216.6 <sup>d</sup> 4	0.128 19		
x4228.28 21	0.169 17		Eγ=4228.9 5, Iγ=0.050 11 (1978HeZQ).
x4235.2 <sup>d</sup> 3	0.172 19		
x4238.29 15	0.325 20		Eγ=4237.39 13, Iγ=0.191 10 (1978HeZQ).
x4244.5 <sup>d</sup> 5	0.074 15		
x4248.9 4	0.101 18		Eγ=4248.9 3, Iγ=0.087 9 (1978HeZQ).
x4253.3 <sup>d</sup> 3	0.117 18		
x4259.1 3	0.123 18		Eγ=4258.4 3, Iγ=0.101 8 (1978HeZQ).
x4266.95 10	0.453 23		Eγ=4266.94 13, Iγ=0.194 9 (1978HeZQ).
x4272.5 <sup>d</sup> 3	0.108 18		
x4282.4 3	0.215 23		Eγ=4283.2 2, Iγ=0.123 10 (1978HeZQ).
x4285.0 <sup>d</sup> 4	0.149 22		
x4291.2 3	0.146 16		Eγ=4291.2 4, Iγ=0.057 9 (1978HeZQ).
x4296.7 <sup>d</sup> 4	0.084 16		
x4304.1 3	0.114 16		Eγ=4303.6 4, Iγ=0.056 8 (1978HeZQ).
x4312.84 24	0.154 16		Eγ=4313.5 3, Iγ=0.071 8 (1978HeZQ).
x4329.8 3	0.086 14		Eγ=4330.2 7, Iγ=0.039 8 (1978HeZQ).
x4336.74 16	0.196 14		Eγ=4337.1 4, Iγ=0.060 8 (1978HeZQ).
x4344.2 <sup>d</sup> 5	0.0510 12		
x4357.93 12	0.272 14		Eγ=4357.75 14, Iγ=0.157 9 (1978HeZQ).
x4366.3 3	0.106 13		Eγ=4365.6 3, Iγ=0.059 7 (1978HeZQ).
x4381.70 <sup>d</sup> 22	0.148 20		
x4383.69 16	0.274 23		Eγ=4383.00 12, Iγ=0.172 8 (1978HeZQ).
x4388.8 <sup>d</sup> 4	0.067 12		
x4398.9 <sup>d</sup> 3	0.109 13		
x4404.26 14	0.210 14		Eγ=4406.2 5, Iγ=0.087 14 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
x4409.5 <sup>d</sup> 3	0.111 13		
x4418.59 18	0.167 14		E <sub>γ</sub> =4419.4 3, I <sub>γ</sub> =0.100 9 (1978HeZQ).
x4429.1 <sup>e</sup> 6	0.15 <sup>j</sup> 3		I <sub>γ</sub> =0.076 14 (1978HeZQ).
x4433.85 20	0.32 3		E <sub>γ</sub> =4433.9 3, I <sub>γ</sub> =0.183 14 (1978HeZQ).
x4446.3 3	0.18 3		E <sub>γ</sub> =4444.3 4, I <sub>γ</sub> =0.065 10 (1978HeZQ).
x4455.56 13	0.253 17		E <sub>γ</sub> =4456.2 4, I <sub>γ</sub> =0.067 10 (1978HeZQ).
x4462.1 <sup>d</sup> 5	0.20 6		
x4464.00 19	0.62 6		E <sub>γ</sub> =4463.64 7, I <sub>γ</sub> =0.341 10 (1978HeZQ).
x4467.7 <sup>d</sup> 5	0.082 16		
x4472.68 15	0.228 17		E <sub>γ</sub> =4472.6 3, I <sub>γ</sub> =0.080 8 (1978HeZQ).
x4480.10 14	0.207 13		E <sub>γ</sub> =4481.3 3, I <sub>γ</sub> =0.087 8 (1978HeZQ).
x4484.81 <sup>d</sup> 21	0.136 12		
x4491.2 <sup>d</sup> 3	0.092 12		
x4496.0 5	0.078 15		E <sub>γ</sub> =4496.9 3, I <sub>γ</sub> =0.064 8 (1978HeZQ), May contain contribution from 4498.88γ also.
x4498.88 <sup>d</sup> 22	0.1710 15		
x4506.96 21	0.241 20		E <sub>γ</sub> =4506.4 4, I <sub>γ</sub> =0.089 12 (1978HeZQ).
x4508.75 <sup>d</sup> 3	0.01 3		
x4511.83 11	0.339 15		E <sub>γ</sub> =4511.4 3, I <sub>γ</sub> =0.146 11 (1978HeZQ).
x4522.1 <sup>d</sup> 3	0.100 14		
x4539.6 4	0.094 14		E <sub>γ</sub> =4541.7 3, I <sub>γ</sub> =0.079 8 (1978HeZQ): probably corresponds to doublet: 4539.6γ+4543.4γ In 2004Fu30.
x4543.4 3	0.100 15		E <sub>γ</sub> =4541.7 3, I <sub>γ</sub> =0.079 8 (1978HeZQ): probably corresponds to doublet: 4539.6γ+4543.4γ In 2004Fu30.
x4553.96 15	0.199 14		E <sub>γ</sub> =4553.5 4, I <sub>γ</sub> =0.081 9 (1978HeZQ).
x4560.38 18	0.160 13		E <sub>γ</sub> =4559.6 5, I <sub>γ</sub> =0.057 9 (1978HeZQ).
x4567.73 24	0.25 3		E <sub>γ</sub> =4569.75 12, I <sub>γ</sub> =0.215 10 (1978HeZQ): probably corresponds to doublet: 4567.73γ+4570.3γ In 2004Fu30.
x4570.3 3	0.237 23		E <sub>γ</sub> =4569.75 12, I <sub>γ</sub> =0.215 10 (1978HeZQ): probably corresponds to doublet: 4567.73γ+4570.3γ In 2004Fu30.
x4573.2 <sup>d</sup> 3	0.141 19		
x4586.35 17	0.216 16		E <sub>γ</sub> =4586.8 2, I <sub>γ</sub> =0.110 9 (1978HeZQ).
x4592.5 <sup>d</sup> 4	0.076 15		
x4600.9 5	0.063 15		E <sub>γ</sub> =4602.7 8, I <sub>γ</sub> =0.030 8 (1978HeZQ).
x4607.0 <sup>d</sup> 5	0.0610 14		
x4618.05 11	0.327 16		E <sub>γ</sub> =4617.3 2, I <sub>γ</sub> =0.126 8 (1978HeZQ).
x4626.4 4	0.094 14		E <sub>γ</sub> =4627.9 6, I <sub>γ</sub> =0.039 8 (1978HeZQ).
x4630.0 <sup>d</sup> 5	0.076 13		
x4637.0 <sup>d</sup> 3	0.096 13		
x4641.90 23	0.171 15		E <sub>γ</sub> =4641.2 3, I <sub>γ</sub> =0.087 9 (1978HeZQ).
x4645.3 <sup>d</sup> 5	0.076 14		
x4653.2 3	0.096 13		E <sub>γ</sub> =4655.4 6, I <sub>γ</sub> =0.053 10 (1978HeZQ).
x4658.88 <sup>d</sup> 21	0.186 14		
x4662.67 18	0.211 14		E <sub>γ</sub> =4661.0 2, I <sub>γ</sub> =0.156 11 (1978HeZQ).
x4670.70 22	0.144 13		E <sub>γ</sub> =4669.9 3, I <sub>γ</sub> =0.064 8 (1978HeZQ).

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 4679.0 3	0.187 20		E <sub>γ</sub> =4680.3 13, I <sub>γ</sub> =0.167 8 (1978HeZQ); probably corresponds to doublet: 4680.3γ+4681.7γ In 2004Fu30.
<sup>x</sup> 4681.7 3	0.183 21		E <sub>γ</sub> =4680.3 13, I <sub>γ</sub> =0.167 8 (1978HeZQ); probably corresponds to doublet: 4680.3γ+4681.7γ In 2004Fu30.
<sup>x</sup> 4689.1 6	0.047 12		E <sub>γ</sub> =4689.9 2, I <sub>γ</sub> =0.100 7 (1978HeZQ).
<sup>x</sup> 4700.4 4	0.073 12		E <sub>γ</sub> =4700.9 3, I <sub>γ</sub> =0.065 7 (1978HeZQ).
<sup>x</sup> 4719.9 4	0.16 3		E <sub>γ</sub> =4720.0 5, I <sub>γ</sub> =0.17 4 (1978HeZQ).
<sup>x</sup> 4722.50 18	0.44 3		E <sub>γ</sub> =4723.5 5, I <sub>γ</sub> =0.17 4 (1978HeZQ).
<sup>x</sup> 4729.7 4	0.18 3		E <sub>γ</sub> =4731.09 18, I <sub>γ</sub> =0.260 11 (1978HeZQ); probably corresponds to doublet: 4729.7γ+4732.2γ In 2004Fu30.
<sup>x</sup> 4732.2 3	0.28 3		E <sub>γ</sub> =4731.09 18, I <sub>γ</sub> =0.260 11 (1978HeZQ); probably corresponds to doublet: 4729.7γ+4732.2γ In 2004Fu30.
<sup>x</sup> 4736.9 <sup>e</sup> 4	0.266 <sup>j</sup> 20		I <sub>γ</sub> =0.133 10 (1978HeZQ). E <sub>γ</sub> : May correspond to 4740.4γ In 2004Fu30. May Be the same As 4736.9γ In 1978HeZQ.
<sup>x</sup> 4740.4 4	0.18 3		May Be the same As 4736.9γ In 1978HeZQ.
<sup>x</sup> 4744.2 3	0.213 24		E <sub>γ</sub> =4743.1 2, I <sub>γ</sub> =0.163 9 (1978HeZQ).
<sup>x</sup> 4752.62 18	0.279 21		E <sub>γ</sub> =4752.11 18, I <sub>γ</sub> =0.137 8 (1978HeZQ).
<sup>x</sup> 4773.50 18	0.2110 17		E <sub>γ</sub> =4774.0 3, I <sub>γ</sub> =0.101 9 (1978HeZQ).
<sup>x</sup> 4782.6 3	0.116 15		E <sub>γ</sub> =4782.4 4, I <sub>γ</sub> =0.073 8 (1978HeZQ).
<sup>x</sup> 4795.27 16	0.234 16		E <sub>γ</sub> =4794.7 2, I <sub>γ</sub> =0.115 9 (1978HeZQ).
<sup>x</sup> 4810.7 3	0.106 12		E <sub>γ</sub> =4809.4 4, I <sub>γ</sub> =0.045 8 (1978HeZQ).
<sup>x</sup> 4823.9 <sup>d</sup> 4	0.139 19		
<sup>x</sup> 4826.80 25	0.209 19		E <sub>γ</sub> =4825.67 16, I <sub>γ</sub> =0.128 7 (1978HeZQ).
<sup>x</sup> 4839.28 5	0.823 22		E <sub>γ</sub> =4838.98 6, I <sub>γ</sub> =0.356 8 (1978HeZQ).
<sup>x</sup> 4852.8 3	0.099 12		E <sub>γ</sub> =4853.8 5, I <sub>γ</sub> =0.040 8 (1978HeZQ).
<sup>x</sup> 4861.1 5	0.105 17		E <sub>γ</sub> =4862.6 3, I <sub>γ</sub> =0.070 7 (1978HeZQ); probably corresponds to doublet: 4861.1γ+4864.3γ In 2004Fu30.
<sup>x</sup> 4864.3 4	0.124 17		E <sub>γ</sub> =4862.6 3, I <sub>γ</sub> =0.070 7 (1978HeZQ); probably corresponds to doublet: 4861.1γ+4864.3γ In 2004Fu30.
<sup>x</sup> 4873.28 21	0.178 15		E <sub>γ</sub> =4872.9 2, I <sub>γ</sub> =0.095 6 (1978HeZQ).
<sup>x</sup> 4901.64 19	0.1910 15		E <sub>γ</sub> =4902.63 19, I <sub>γ</sub> =0.130 9 (1978HeZQ).
<sup>x</sup> 4906.2 <sup>d</sup> 5	0.084 13		
<sup>x</sup> 4910.3 <sup>d</sup> 5	0.081 13		
<sup>x</sup> 4915.52 14	0.274 16		E <sub>γ</sub> =4914.7 2, I <sub>γ</sub> =0.120 8 (1978HeZQ).
<sup>x</sup> 4925.65 23	0.149 16		E <sub>γ</sub> =4924.6 6, I <sub>γ</sub> =0.038 8 (1978HeZQ).
<sup>x</sup> 4936.60 11	0.259 13		E <sub>γ</sub> =4936.8 5, I <sub>γ</sub> =0.13 3 (1978HeZQ).
<sup>x</sup> 4941.7 <sup>e</sup> 6	0.60 <sup>j</sup> 10		I <sub>γ</sub> =0.30 5 (1978HeZQ).
<sup>x</sup> 4954.8 5	0.0810 12		E <sub>γ</sub> =4955.6 3, I <sub>γ</sub> =0.082 11 (1978HeZQ).
<sup>x</sup> 4968.58 13	0.198 12		E <sub>γ</sub> =4969.6 4, I <sub>γ</sub> =0.091 10 (1978HeZQ).
<sup>x</sup> 4975.04 8	0.361 13		E <sub>γ</sub> =4976.08 17, I <sub>γ</sub> =0.198 10 (1978HeZQ).
<sup>x</sup> 4979.25 <sup>d</sup> 15	0.189 11		
<sup>x</sup> 4988.7 3	0.113 11		E <sub>γ</sub> =4988.3 8, I <sub>γ</sub> =0.038 8 (1978HeZQ).
<sup>x</sup> 4992.4 <sup>d</sup> 4	0.088 12		
<sup>x</sup> 4995.9 3	0.148 13		E <sub>γ</sub> =4995.0 4, I <sub>γ</sub> =0.075 8 (1978HeZQ).
<sup>x</sup> 4999.4 <sup>d</sup> 6	0.057 12		
<sup>x</sup> 5010.80 19	0.220 17		E <sub>γ</sub> =5011.5 7, I <sub>γ</sub> =0.09 3 (1978HeZQ).
<sup>x</sup> 5015.25 20	0.211 16		E <sub>γ</sub> =5015.4 8, I <sub>γ</sub> =0.08 3 (1978HeZQ).
<sup>x</sup> 5033.40 16	0.245 15		E <sub>γ</sub> =5033.4 3, I <sub>γ</sub> =0.092 8 (1978HeZQ).

γ(<sup>100</sup>Tc) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡k</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>Comments</u>
<sup>x</sup> 5046.8 18	0.209 15		Eγ=5046.5 3, Iγ=0.071 7 (1978HeZQ).
<sup>x</sup> 5057.5 4	0.096 14		Eγ=5059.6 6, Iγ=0.065 10 (1978HeZQ).
<sup>x</sup> 5063.84 15	0.262 15		Eγ=5065.0 4, Iγ=0.102 10 (1978HeZQ).
<sup>x</sup> 5070.6 <sup>d</sup> 5	0.065 13		
<sup>x</sup> 5094.12 12	0.52 3		Eγ=5094.02 8, Iγ=0.257 7 (1978HeZQ).
<sup>x</sup> 5110.68 12	0.258 13		Eγ=5110.47 16, Iγ=0.117 6 (1978HeZQ).
<sup>x</sup> 5120.7 4	0.071 13		Eγ=5122.2 4, Iγ=0.062 6 (1978HeZQ).
<sup>x</sup> 5129.08 9	0.392 15		Eγ=5129.11 13, Iγ=0.200 7 (1978HeZQ).
<sup>x</sup> 5139.7 3	0.094 11		Eγ=5138.7 4, Iγ=0.050 6 (1978HeZQ).
<sup>x</sup> 5153.03 16	0.186 12		Eγ=5152.7 2, Iγ=0.079 7 (1978HeZQ).
<sup>x</sup> 5168.57 8	0.474 15		Eγ=5168.23 15, Iγ=0.238 10 (1978HeZQ).
<sup>x</sup> 5174.6 3	0.105 11		Eγ=5174.6 6, Iγ=0.057 10 (1978HeZQ).
<sup>x</sup> 5185.5 3	0.098 11		Eγ=5184.8 6, Iγ=0.039 7 (1978HeZQ).
<sup>x</sup> 5194.1 3	0.092 11		Eγ=5194.3 3, Iγ=0.069 7 (1978HeZQ).
<sup>x</sup> 5216.05 7	0.303 8		Eγ=5215.4 2, Iγ=0.146 9 (1978HeZQ).
<sup>x</sup> 5222.09 12	0.146 7		Eγ=5221.7 5, Iγ=0.077 6 (1978HeZQ).
<sup>x</sup> 5229.6 3	0.064 6		Eγ=5229.2 6, Iγ=0.040 7 (1978HeZQ).
<sup>x</sup> 5241.4 <sup>d</sup> 4	0.0310 16		
<sup>x</sup> 5245.78 20	0.093 7		Eγ=5245.9 8, Iγ=0.045 11 (1978HeZQ).
<sup>x</sup> 5254.1 <sup>d</sup> 3	0.055 8		
<sup>x</sup> 5258.79 19	0.0910 18		Eγ=5257.4 4, Iγ=0.063 6 (1978HeZQ).
<sup>x</sup> 5265.87 13	0.191 10		Eγ=5265.5 3, Iγ=0.087 6 (1978HeZQ).
<sup>x</sup> 5269.4 <sup>d</sup> 3	0.009 10		
<sup>x</sup> 5285.2 <sup>d</sup> 7	0.038 10		
<sup>x</sup> 5290.2 <sup>d</sup> 8	0.034 10		
<sup>x</sup> 5297.6 <sup>d</sup> 4	0.025 11		
<sup>x</sup> 5306.2 3	0.0910 11		Eγ=5305.1 4, Iγ=0.043 5 (1978HeZQ).
<sup>x</sup> 5319.4 <sup>d</sup> 3	0.098 11		
<sup>x</sup> 5324.21 22	0.143 11		Eγ=5322.5 3, Iγ=0.074 5 (1978HeZQ).
<sup>x</sup> 5340.8 <sup>d</sup> 8	0.038 10		
<sup>x</sup> 5344.7 6	0.049 10		Eγ=5343.7 6, Iγ=0.032 5 (1978HeZQ).
<sup>x</sup> 5351.7 6	0.041 10		Eγ=5353.5 6, Iγ=0.030 6 (1978HeZQ).
<sup>x</sup> 5371.91 9	0.369 13		Eγ=5371.83 12, Iγ=0.171 8 (1978HeZQ).
<sup>x</sup> 5383.8 <sup>d</sup> 5	0.040 9		
<sup>x</sup> 5389.65 16	0.277 17		Eγ=5391.5 15, Iγ=0.252 10 (1978HeZQ); probably corresponds to doublet: 5389.65γ+5392.45γ In 2004Fu30.
<sup>x</sup> 5392.45 11	0.408 18		Eγ=5391.5 15, Iγ=0.252 10 (1978HeZQ); probably corresponds to doublet: 5389.65γ+5392.45γ In 2004Fu30.
<sup>x</sup> 5401.68 11	0.207 9		Eγ=5402.6 5, Iγ=0.055 6 (1978HeZQ).
<sup>x</sup> 5411.81 3	2.086 24		Eγ=5411.71 4, Iγ=0.885 10 (1978HeZQ).
<sup>x</sup> 5420.8 3	0.060 8		Eγ=5423.6 5, Iγ=0.046 13 (1978HeZQ).
<sup>x</sup> 5434.94 13	0.419 20		Eγ=5435.88 10, Iγ=0.239 7 (1978HeZQ); probably contains contribution from 5437.9γ In 2004Fu30.
<sup>x</sup> 5437.9 <sup>d</sup> 3	0.184 18		

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu30,1979Pi08 (continued)

γ(<sup>100</sup>Tc) (continued)

$E_\gamma^\dagger$	$I_\gamma^{\ddagger k}$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
<sup>x</sup> 5452.8 3	0.095 11					Eγ=5455.0 4, Iγ=0.046 13 (1978HeZQ); probably corresponds to doublet: 5452.8γ+5457.1γ In 2004Fu30.
<sup>x</sup> 5457.1 6	0.056 11					Eγ=5455.0 4, Iγ=0.046 13 (1978HeZQ); probably corresponds to doublet: 5452.8γ+5457.1γ In 2004Fu30.
<sup>x</sup> 5460.9 <sup>d</sup> 4	0.078 11					
<sup>x</sup> 5468.91 4	1.115 22					Eγ=5468.74 6, Iγ=0.459 8 (1978HeZQ).
<sup>x</sup> 5496.2 3	0.102 10					Eγ=5496.3 4, Iγ=0.046 13 (1978HeZQ).
<sup>x</sup> 5518.51 6	0.637 16					Eγ=5518.60 8, Iγ=0.277 6 (1978HeZQ).
<sup>x</sup> 5528.3 6	0.045 9					Eγ=5528.7 6, Iγ=0.029 4 (1978HeZQ).
<sup>x</sup> 5551.47 8	0.328 11					Eγ=5551.16 13, Iγ=0.138 17 (1978HeZQ).
<sup>x</sup> 5577.2 6	0.0510 11					Eγ=5575.1 6, Iγ=0.031 5 (1978HeZQ).
<sup>x</sup> 5580.9 7	0.0510 11					Eγ=5583.3 3, Iγ=0.075 5 (1978HeZQ); probably corresponds to doublet: 5580.9γ+5584.9γ In 2004Fu30.
<sup>x</sup> 5584.9 5	0.067 10					Eγ=5583.3 3, Iγ=0.075 5 (1978HeZQ); probably corresponds to doublet: 5580.9γ+5584.9γ In 2004Fu30.
<sup>x</sup> 5595.7 3	0.096 11					Eγ=5595.6 3, Iγ=0.051 4 (1978HeZQ).
<sup>x</sup> 5605.3 <sup>d</sup> 6	0.029 7					
<sup>x</sup> 5613.4 <sup>d</sup> 5	0.038 7					
<sup>x</sup> 5621.35 19	0.103 8					Eγ=5621.6 7, Iγ=0.039 7 (1978HeZQ).
<sup>x</sup> 5637.2 3	0.064 7					Eγ=5637.0 5, Iγ=0.034 5 (1978HeZQ).
<sup>x</sup> 5655.57 15	0.205 12					Eγ=5656.9 3, Iγ=0.188 18 (1978HeZQ).
<sup>x</sup> 5659.94 8	0.472 16					Eγ=5661.5 4, Iγ=0.138 17 (1978HeZQ).
<sup>x</sup> 5664.7 <sup>d</sup> 3	0.099 9					
<sup>x</sup> 5696.73 3	1.5110 24					Eγ=5696.20 4, Iγ=0.708 7 (1978HeZQ).
5713.81 8	0.371 12	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	1051.15		Eγ=5713.61 15, Iγ=0.194 7 (1978HeZQ, unplaced).
<sup>x</sup> 5720.65 12	0.229 11					Eγ=5721.4 4, Iγ=0.095 7 (1978HeZQ).
<sup>x</sup> 5727.90 22	0.114 10					Eγ=5728.9 6, Iγ=0.044 6 (1978HeZQ).
<sup>x</sup> 5754.59 5	1.019 21					Eγ=5754.11 6, Iγ=0.488 7 (1978HeZQ).
<sup>x</sup> 5764.78 24	0.1210 12					Eγ=5766.0 2, Iγ=0.091 5 (1978HeZQ).
<sup>x</sup> 5772.4 <sup>d</sup> 6	0.047 11					
<sup>x</sup> 5792.95 16	0.202 12					Eγ=5792.13 18, Iγ=0.107 5 (1978HeZQ).
5811.7 4	0.052 8	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	952.878	(2 to 7) <sup>+</sup>	Eγ=5812.7 6, Iγ=0.031 4 (1978HeZQ, unplaced).
5835.2 3	0.067 8	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	929.895		Eγ=5833.6 5, Iγ=0.036 5 (1978HeZQ, unplaced).
<sup>x</sup> 5878.32 8	0.466 14					Eγ=5877.60 8, Iγ=0.256 5 (1978HeZQ).
<sup>x</sup> 5899.51 17	0.076 5					Eγ=5898.9 4, Iγ=0.041 4 (1978HeZQ).
<sup>x</sup> 5907.4 <sup>d</sup> 6	0.022 5					
5911.3 6	0.025 5	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	854.007	(2 to 7) <sup>+</sup>	Eγ=5910.0 7, Iγ=0.023 4 (1978HeZQ, unplaced).
<sup>x</sup> 5927.0 3	0.063 7					Eγ=5926.9 5, Iγ=0.042 5 (1978HeZQ).
5935.45 <sup>bn</sup> 13	0.175 8	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	829.61?	(2,3) <sup>+</sup>	Eγ=5935.0 4, Iγ=0.077 6 (1978HeZQ).
5943.25 9	0.254 9	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	821.737		Eγ=5942.4 2, Iγ=0.132 6 (1978HeZQ, unplaced).
<sup>x</sup> 5981.13 23	0.063 6					Eγ=5981.0 4, Iγ=0.036 3 (1978HeZQ).
6017.4 6	0.013 5	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	748.202		Eγ=6017.1 8, Iγ=0.019 3 (1978HeZQ, unplaced).

γ(<sup>100</sup>Tc) (continued)

$E_\gamma^\dagger$	$I_\gamma^{\ddagger k}$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
<sup>x</sup> 6055.64 20	0.090 7					$E_\gamma=6054.8$ 3, $I_\gamma=0.060$ 4 (1978HeZQ).
<sup>x</sup> 6063.7 4	0.036 6					$E_\gamma=6063.2$ 7, $I_\gamma=0.024$ 4 (1978HeZQ).
6084.13 <sup>bn</sup> 24	0.056 5	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	680.478?		$E_\gamma=6084.6$ 8, $I_\gamma=0.034$ 7 (1978HeZQ).
6125.16 13	0.159 9	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	639.8186 (3) <sup>+</sup>		$E_\gamma=6125.1$ 3, $I_\gamma=0.087$ 7 (1978HeZQ).
<sup>x</sup> 6130.46 19	0.099 7					$E_\gamma=6130.9$ 7, $I_\gamma=0.087$ 7 (1978HeZQ).
6165.09 18	0.091 6	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	599.7771 (2 to 7) <sup>+</sup>		$E_\gamma=6165.3$ 3, $I_\gamma=0.060$ 4 (1978HeZQ, unplaced).
6184.47 17	0.100 6	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	580.4086 (3,4,5) <sup>+</sup>		$E_\gamma=6183.8$ 3, $I_\gamma=0.054$ 4 (1978HeZQ).
6212.7 <sup>d</sup> 4	0.035 5	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	552.2859 4 <sup>+</sup> ,5 <sup>+</sup>		
6219.97 5	0.581 13	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	544.8715 (6) <sup>-</sup>		$E_\gamma=6219.4$ 2, $I_\gamma=0.34$ 2 (1978HeZQ).
6225.17 12	0.175 8	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	539.6331 (4 <sup>-</sup> ,5 <sup>-</sup> )		$E_\gamma=6224.3$ 4, $I_\gamma=0.101$ 15 (1978HeZQ).
6250.85 14	0.125 6	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	513.9202 (3 to 6) <sup>+</sup>		$E_\gamma=6249.9$ 3, $I_\gamma=0.061$ 3 (1978HeZQ, unplaced).
6264.74 <sup>c</sup> 8	0.297 9	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	500.1466 (4) <sup>-</sup>		$E_\gamma=6264.4$ 2, $I_\gamma=0.183$ 9 (1978HeZQ).
						γ to 500.020 or 500.147 level, however, the energy difference and $J^\pi$ assignments appear to favor the placement from the latter.
6270.6 6	0.078 6	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	493.6751 4 <sup>+</sup> ,5 <sup>+</sup>		$E_\gamma=6270.4$ 9, $I_\gamma=0.034$ 8 (1978HeZQ).
6303.91 25	0.077 6	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	461.0910 (5) <sup>+</sup>		$E_\gamma=6304.4$ 3, $I_\gamma=0.058$ 4 (1978HeZQ).
6308.5 <sup>d</sup> 4	0.046 5	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	456.793		
6340.3 8	0.012 4	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	424.3621 (3,4) <sup>+</sup>		$E_\gamma=6340.3$ 12, $I_\gamma=0.009$ 3 (1978HeZQ).
6364.5 4	0.029 4	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	400.6317 (5) <sup>+</sup>		$E_\gamma=6363.3$ 6, $I_\gamma=0.020$ 3 (1978HeZQ).
6444.9 4	0.026 4	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	319.4897 (5) <sup>+</sup>		$E_\gamma=6443.2$ 6, $I_\gamma=0.019$ 3 (1978HeZQ).
6470.2 4	0.029 4	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	294.9233 (4) <sup>+</sup>		$E_\gamma=6468.6$ 11, $I_\gamma=0.017$ 4 (1978HeZQ).
6477.2 3	0.033 4	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	287.5160 (5) <sup>+</sup>		$E_\gamma=6475.9$ 8, $I_\gamma=0.021$ 4 (1978HeZQ).
6501.1 3	0.036 4	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	263.5569 (3) <sup>+</sup>		$E_\gamma=6500.6$ 5, $I_\gamma=0.022$ 3 (1978HeZQ).
6520.5 6	0.014 3	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	243.9554 (6) <sup>+</sup>		$E_\gamma=6518.3$ 8, $I_\gamma=0.014$ 3 (1978HeZQ).
6564.26 10	0.171 7	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	200.6659 (4) <sup>+</sup>		$E_\gamma=6563.8$ 1, $I_\gamma=0.121$ 3 (1978HeZQ).
6593.2 8	0.012 3	(6765.08)	4 <sup>+</sup> ,5 <sup>+</sup>	172.1492 2 <sup>+</sup>		$E_\gamma=6591.2$ 8, $I_\gamma=0.012$ 2 (1978HeZQ).

<sup>†</sup> From bent-crystal spectrometer data of 1978HeZQ for γ data below 596 keV, unless otherwise stated. Above this energy values are mainly from 2004Fu30 from Compton suppressed Ge detector used in the suppression mode in the intermediate energy region and in the pair spectrometer mode for higher energy γ rays. Corresponding values for most γ rays are also available from 1978HeZQ. Quoted uncertainties in energies from bent-crystal data are from relative precision, defined by  $\Delta E=(5 \times 10^{-8}) \times E \gamma^2/n$ , where n=order of the spectrum and the calibration uncertainty is 0.05 keV, the same as that for the 539.59γ and 590.83γ (calibration lines) from <sup>100</sup>Tc β<sup>-</sup> to <sup>100</sup>Ru, which should be added into the uncertainty in quadrature.

<sup>‡</sup> From 2004Fu30, unless otherwise stated. Values given by 2004Fu30 are in units of milli-barns, the evaluators have converted these to units of 0.1b. When values are taken from 1978HeZQ, these are adjusted upwards by a factor of 3 for γ's below 400 keV and by a factor of 2 for γ's above 400 keV. The uncertainties for γ's from bent-crystal data are not given by 1978HeZQ, the evaluators have assigned 5% to γ's with  $I_\gamma \geq 1.0$ , 10% to γ's with  $I_\gamma = 0.1$  to 1.0 and 25% to γ's with  $I_\gamma < 0.1$ .

# From ce data of 1979Pi08. The γ-ray and ce intensities are known per 100 n-captures from 1979Pi08 and/or 1978HeZQ.

@ From 2004Fu30.

& Placement from 294.9 level (1979Pi08) replaced by the 94.251γ based on better energy agreement (evaluators).

$\gamma(^{100}\text{Tc})$  (continued)

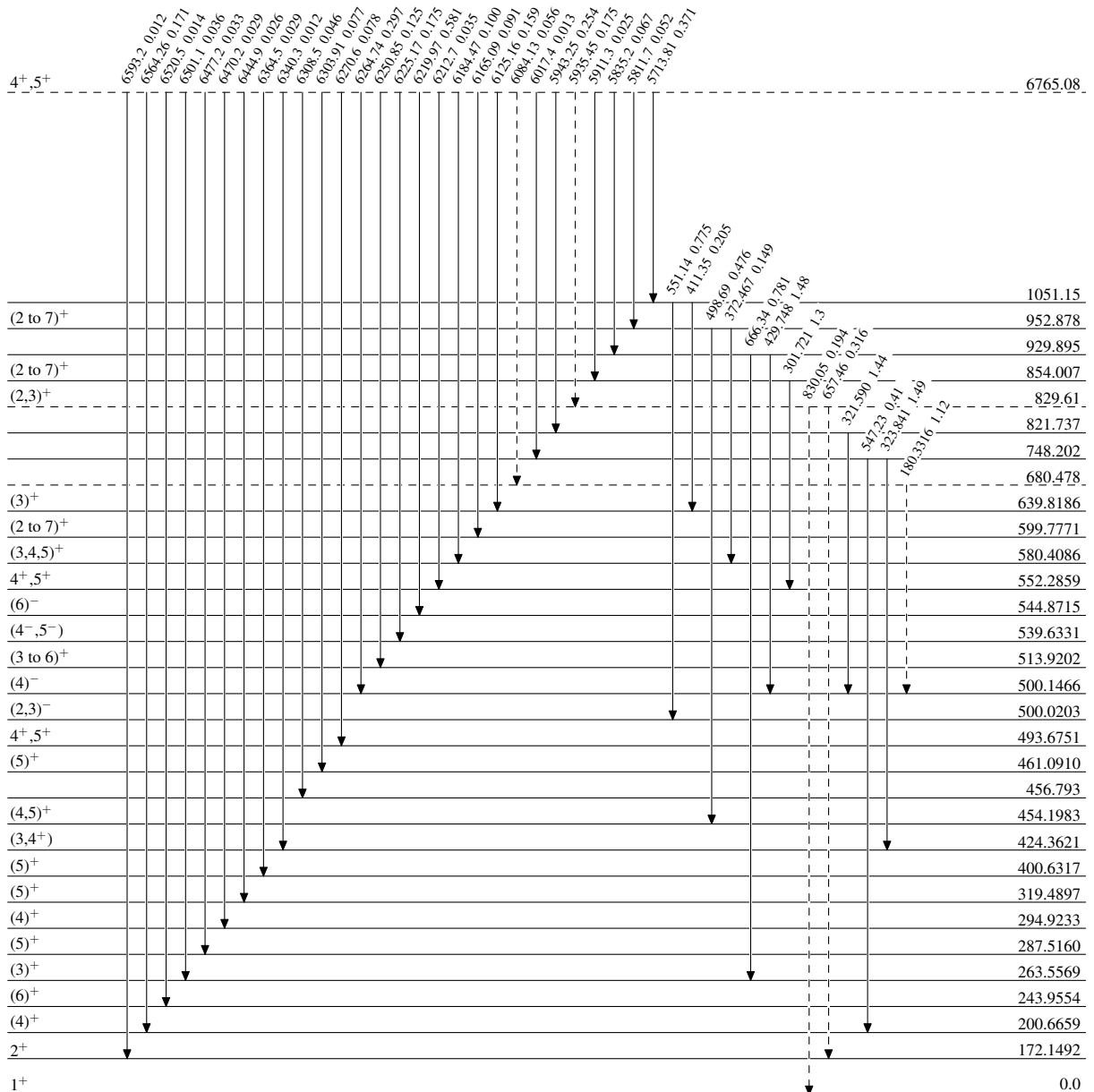
- <sup>a</sup> Poor fit in the decay scheme, deviates by 0.01 to 0.02 keV, several times the quoted relative uncertainty.
- <sup>b</sup> Placement suggested by the evaluators on the basis of (p,n $\gamma$ ) results.
- <sup>c</sup> Probably a doublet populating both levels at 500.02 and 500.14 keV.
- <sup>d</sup>  $\gamma$  From 2004Fu30 only.
- <sup>e</sup>  $\gamma$  from 1978HeZQ only.
- <sup>f</sup> From 1978HeZQ.
- <sup>g</sup> Placement from 2004Fu30.
- <sup>h</sup> Placement from 1979Pi08.
- <sup>i</sup> From 2004Fu30.
- <sup>j</sup> Intensity taken from 1978HeZQ but adjusted by the evaluators to match the scale of 2004Fu30, the adjusted value is a factor of 2 or 3 larger depending on the  $\gamma$ -ray energy range.
- <sup>k</sup> Intensity per 100 neutron captures.
- <sup>l</sup> Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on  $\gamma$ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
- <sup>m</sup> Multiply placed with undivided intensity.
- <sup>n</sup> Placement of transition in the level scheme is uncertain.
- <sup>x</sup>  $\gamma$  ray not placed in level scheme.

$^{99}\text{Tc}(n,\gamma)$  E=thermal 2004Fu30,1979Pi08

Legend

Level Scheme  
Intensities: In units of 0.1b

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- - - - -→  $\gamma$  Decay (Uncertain)



$^{100}_{43}\text{Tc}_{57}$



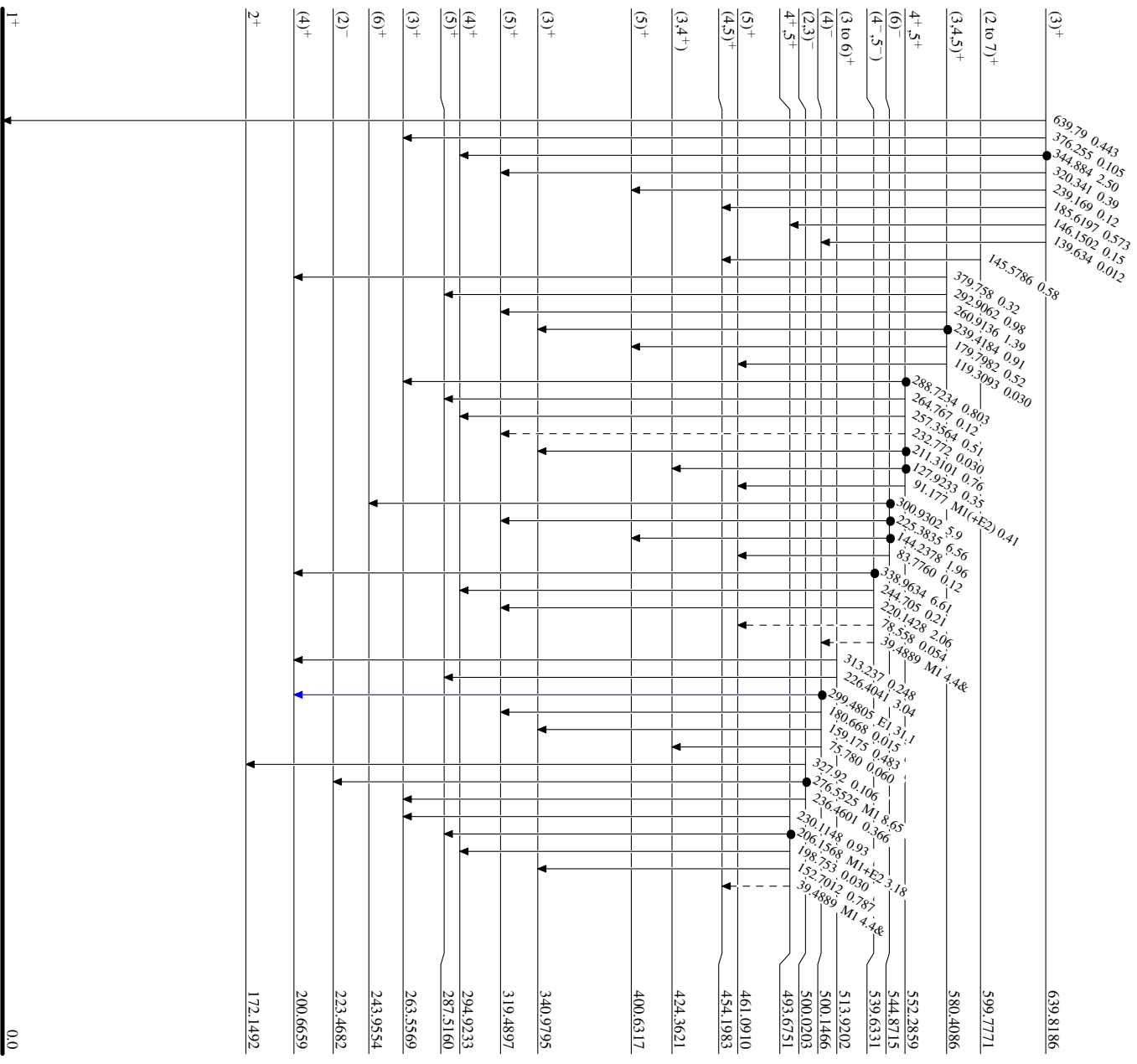
<sup>99</sup>Tc(n,γ) E=thermal 2004Fu.30.1979Pr108

Level Scheme (continued)

Intensities: In units of 0.1b  
& Multiply placed: undivided intensity given

Legend

- I<sub>γ</sub> < 2% × I<sub>γ<sup>max</sup></sub>
- I<sub>γ</sub> < 10% × I<sub>γ<sup>max</sup></sub>
- I<sub>γ</sub> > 10% × I<sub>γ<sup>max</sup></sub>
- γ Decay (Uncertain)
- Coincidence



<sup>100</sup>Tc<sub>57</sub>

<sup>99</sup>Tc(n,γ) E=thermal 2004Fu.30.1979Pr08

Level Scheme (continued)

Intensities: In units of 0.1b  
& Multiply placed: undivided intensity given

Legend

- I<sub>γ</sub> < 2% × I<sub>γ<sup>max</sup></sub>
- I<sub>γ</sub> < 10% × I<sub>γ<sup>max</sup></sub>
- I<sub>γ</sub> > 10% × I<sub>γ<sup>max</sup></sub>
- γ Decay (Uncertain)
- Coincidence

