^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 172, 1 (2021)	31-Jan-2021

All data are from 2018MuZY, unless otherwise stated.
S(n)=6764.4 *10* (2017Wa10).
J^π(^{99}Tc g.s.)=9/2$^+$.
2018MuZY: evaluation of neutron resonance parameters.
2020No07: resonance energies and parameters for 119 resonances up to 1 keV. Main paper is about average neutron cross sections measured using GELINA facility with the time-of-flight technique. Deduced Maxwellian-averaged cross section (MACS).
1982Ma27: energies and Γ parameters of 183 resonances in the range 2.660 to 5.066 keV are given. The authors also give average cross-section data for E(n)=2.65 to 2000 keV.
2000Gu13: total neutron cross sections measured from 3 eV to 150 keV. Up to 10 keV, 659 resonances were resolved and analyzed. Data for 120 resonances from 5.58 eV to 1008 eV and associated width parameters are given in the paper. The authors state that complete data for all the 659 resonances up to 10 keV can be obtained from OECD/NEA databank. 2018MuZY give a complete evaluated list of resonances and associated parameters.
2004Ko24: two resonances reported at 5.6 eV and 20.3 eV.
^{99}Tc(n,γ) resonances: evaluation by 2006RoZZ.
Others:
2003Ma11: E=8-90, 190, 330, 540 keV: measured Eγ, Iγ, cross section.
2002Ab03, 2001Ab21: E=1-1000 eV. Measured Eγ, Iγ(t), cross section, $T_{1/2}$(^{100}Tc isotope).
Additional information 1.
2001Gu17: E=3 eV-90 keV. Measured Eγ, cross section.
1999Ar13: E=spectrum, measured capture rates.
1998RaZX, 1997RaZT: E=3-400 eV, measured Eγ, Iγ, deduced resonances.
For additional references see 2018MuZY.

^{100}Tc Levels

g=statistical weight factor.
For values of $2g\Gamma_n^0$ and $2g\Gamma_n^1$, see 2018MuZY.

E(level)†	J^π#	L‡	Comments
S(n)-0.03091	5$^+$	0	E(n)=−15.00 eV *1* in 2000Gu13. E(level): fictitious level below S(n). Γ_γ=(137) meV.
S(n)+0.00558 *1*	5$^+$	0	$g\Gamma_n$=0.00205 eV *3*, Γ_γ=0.156 eV *5* (2004Ko24). $2g\Gamma_n$=3.78 meV *6*, Γ_γ=0.1464 eV *60* (2018MuZY). E(n)=5.59 eV *1*, Γ_γ=141.8 meV *20*, Γ_n=3.70 meV *12* (2020No07).
S(n)+0.01460 *1*	3$^-$		E(level): from 2020No07, resonance is not listed in 2018MuZY. Γ_n≈0.00001 eV (2020No07).
S(n)+0.02020 *2*	4$^+$	0	$g\Gamma_n$=0.00306 eV *20*, Γ_γ=0.188 eV *16* (2004Ko24). $2g\Gamma_n$=7.50 meV *28*, Γ_γ=0.1548 eV *60* (2018MuZY). E(n)=20.28 eV *1*, Γ_γ=150.9 meV *22*, Γ_n=8.70 meV *34* (2020No07).
S(n)+0.02239 *3*	5$^-$@	(1)	$2g\Gamma_n$=0.0110 meV *11*. E(n)=22.39 eV *1*, Γ_n≈01 meV (2020No07).
S(n)+0.03984 *1*	5$^+$	0	$2g\Gamma_n$=1.19 meV *4*, Γ_γ=0.1214 eV *80*. E(n)=39.86 eV *2*, Γ_γ=125.0 meV *84*, Γ_n=1.07 meV *6* (2020No07).
S(n)+0.05680 *1*	4$^+$	0	$2g\Gamma_n$=3.50 meV *15*, Γ_γ=0.140 eV *6*. E(n)=56.70 eV *3*, Γ_γ=137.3 meV *81*, Γ_n=3.94 eV *20* (2020No07).
S(n)+0.05871 *4*	6$^-$@	(1)	$2g\Gamma_n$=0.030 meV *15*. E(n)=58.75 eV *3*, Γ_n≈0.01 meV (2020No07).
S(n)+0.06143 *1*	3$^-$@	(1)	$2g\Gamma_n$=0.070 meV *7*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)[†]	J$^{\pi}$[#]	L[‡]	Comments
			E(n)=61.46 eV *4*, Γ_n=0.09 meV *1* (2020No07).
S(n)+0.06606 *6*	5$^-$[@]	(1)	2gΓ_n=0.022 meV *10*. E(n)=66.11 eV *4*, Γ_n≈0.01 meV (2020No07).
S(n)+0.06766 *1*	4$^-$[@]	(1)	2gΓ_n=0.09 meV *1*. E(n)=67.69 eV *4*, Γ_n=0.09 meV *1* (2020No07).
S(n)+0.08096 *1*	3$^-$[@]	(1)	2gΓ_n=0.12 meV *1*. E(n)=81.00 eV *5*, Γ_n=0.16 eV *1* (2020No07).
S(n)+0.08173 *1*	6$^-$[@]	(1)	2gΓ_n=0.12 meV *1*. E(n)=81.77 eV *5*, Γ_n=0.08 meV *1* (2020No07).
S(n)+0.10284 *5*	4$^-$[@]	(1)	2gΓ_n=0.045 meV *10*. E(n)=102.89 eV *6*, Γ_n=0.04 meV *1* (2020No07).
S(n)+0.10919 *3*	3$^-$[@]	(1)	2gΓ_n=0.08 meV *1*. E(n)=109.24 eV *6*, Γ_n=0.11 meV *1* (2020No07).
S(n)+0.11122 *1*	5$^+$	0	2gΓ_n=10.92 meV *6*, Γ_γ=0.1329 eV *53*. E(n)=111.27 eV *6*, Γ_γ=119 meV *9*, Γ_n=10.45 meV *51* (2020No07).
S(n)+0.11421 *3*	5$^-$[@]	(1)	2gΓ_n=0.08 meV *1*. E(n)=114.24 eV *7*, Γ_n=0.05 meV *1* (2020No07).
S(n)+0.12377 *9*	4$^+$	0	2gΓ_n=3.68 meV *2*, Γ_γ=0.1434 eV *66*. E(n)=123.84 eV *8*, Γ_γ=135 meV *13*, Γ_n=4.10 meV *22* (2020No07).
S(n)+0.14834 *4*	3$^-$[@]	(1)	2gΓ_n=0.08 meV *1*. E(n)=148.38 eV *9*, Γ_n=0.12 meV *2* (2020No07).
S(n)+0.16127 *2*	5$^-$[@]	(1)	2gΓ_n=0.20 meV *1*. E(n)=161.30 eV *9*, Γ_n=0.19 meV *2* (2020No07).
S(n)+0.16301 *14*	5$^+$	0	2gΓ_n=63.60 meV *32*, Γ_γ=0.1444 eV *58*. E(n)=163.07 eV *9*, Γ_γ=142 meV *8*, Γ_n=58.9 meV *30* (2020No07).
S(n)+0.17315 *4*	4$^-$[@]	(1)	2gΓ_n=0.14 meV *1*. E(n)=173.21 eV *10*, Γ_n=0.15 meV *2* (2020No07).
S(n)+0.17749 *7*	6$^-$[@]	(1)	2gΓ_n=0.078 meV *10*. E(n)=177.54 eV *10*, Γ_n=0.07 meV *1* (2020No07).
S(n)+0.18209 *1*	4$^+$	0	2gΓ_n=60.40 meV *34*, Γ_γ=0.1600 eV *67*. E(n)=182.16 eV *10*, Γ_γ=136 meV *10*, Γ_n=72.9 meV *35* (2020No07).
S(n)+0.19171 *1*	5$^+$	0	2gΓ_n=40.00 meV *26*, Γ_γ=0.1472 eV *63*. E(n)=191.80 eV *11*, Γ_γ=141 meV *13*, Γ_n=37.1 meV *22* (2020No07).
S(n)+0.19636 *3*	3$^-$[@]	(1)	2gΓ_n=0.25 meV *2*. E(n)=196.45 eV *11*, Γ_n=0.29 meV *3* (2020No07).
S(n)+0.20643 *1*	4$^+$[@]		2gΓ_n=0.62 meV *1*. E(n)=206.49 eV *17*, Γ_n=0.69 meV *9* (2020No07). 2018MuZY give L=(1), implying negative parity.
S(n)+0.20996 *2*	4$^-$[@]	(1)	2gΓ_n=0.44 meV *1*. E(n)=210.05 eV *16*, Γ_n=0.49 meV *8* (2020No07).
S(n)+0.21483 *1*	4$^+$[@]	(0)	2gΓ_n=1.07 meV *2*. E(n)=214.92 eV *10*, Γ_n=1.19 meV *11* (2020No07).
S(n)+0.22062 *1*	5$^-$[@]	(1)	2gΓ_n=0.54 meV *1*. E(n)=220.73 eV *19*, Γ_n=0.49 meV *7* (2020No07).
S(n)+0.22600 *3*	4$^-$[@]	(1)	2gΓ_n=0.26 meV *2*. E(n)=226.09 eV *3*, Γ_n=0.28 meV *3* (2020No07).
S(n)+0.24121 *1*	4$^+$	0	2gΓ_n=34.15 meV *13*. E(n)=241.26 eV *13*, Γ_n=38.6 meV *22* (2020No07).
S(n)+0.26166 *5*	3$^-$[@]	(1)	2gΓ_n=0.23 meV *3*. E(n)=261.72 eV *15*, Γ_n=0.32 meV *5* (2020No07).
S(n)+0.27317 *19*	3$^-$[@]	(1)	2gΓ_n=0.71 meV *3*. E(n)=273.23 eV *16*, Γ_n=1.02 meV *6* (2020No07).

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)[†]	Jπ[#]	L[‡]	Comments
S(n)+0.27998 *19*	4^+	0	$2g\Gamma_n$=13.52 meV *5*.
S(n)+0.28004 *16*	4^+[@]		E(level): from 2020No07, resonance is not listed in 2018MuZY. Γ_n=15.3 meV *8* (2020No07).
S(n)+0.28232 *14*	6^-[@]	1	$2g\Gamma_n$=0.10 meV *2*. E(n)=282.44 eV *16*, Γ_n=0.06 meV *3* (2020No07).
S(n)+0.29998 *1*	4^+	0	$2g\Gamma_n$=33.25 meV *12*. E(n)=300.14 eV *29*, Γ_n=38.1 meV *38* (2020No07).
S(n)+0.30510 *3*	5^-[@]	(1)	$2g\Gamma_n$=0.65 meV *2*. E(n)=305.15 eV *18*, Γ_n=0.54 meV *4* (2020No07).
S(n)+0.30681 *1*	5^+	0	$2g\Gamma_n$=15.75 meV *6*. E(n)=306.97 eV *30*, Γ_n=14.7 meV *8* (2020No07).
S(n)+0.31772 *3*	6^-[@]	(1)	$2g\Gamma_n$=0.69 meV *3*. E(n)=317.80 eV *4*, Γ_n=0.54 meV *2* (2020No07).
S(n)+0.32464 *4*	5^-[@]	(1)	$2g\Gamma_n$=0.51 meV *2*. E(n)=324.73 eV *4*, Γ_n=0.47 meV *5* (2020No07).
S(n)+0.33319 *6*	6^-[@]	(1)	$2g\Gamma_n$=0.31 meV *3*. E(n)=333.29 eV *4*, Γ_n=0.25 meV *4* (2020No07).
S(n)+0.34321 *1*	5^+[@]	(0)	$2g\Gamma_n$=1.78 meV *3*. E(n)=343.40 eV *36*, Γ_n=1.65 meV *15* (2020No07).
S(n)+0.35015 *2*	3^-[@]	(1)	$2g\Gamma_n$=0.95 meV *4*. E(n)=350.26 eV *4*, Γ_n=1.39 meV *9* (2020No07).
S(n)+0.35611 *3*	5^-[@]	(1)	$2g\Gamma_n$=0.67 meV *3*. E(n)=356.19 eV *21*, Γ_n=0.65 meV *5* (2020No07).
S(n)+0.35865 *1*	4^+	0	$2g\Gamma_n$=17.65 meV *5*. E(n)=358.85 eV *37*, Γ_n=20.2 meV *10* (2020No07).
S(n)+0.36145 *3*	5^-[@]	(1)	$2g\Gamma_n$=1.13 meV *6*. E(n)=361.55 eV *21*, Γ_n=1.06 meV *7* (2020No07).
S(n)+0.36269 *2*	4^+[@]		$2g\Gamma_n$=1.77 meV *4*. E(n)=362.78 eV *21*, Γ_n=1.97 meV *16* (2020No07). 2018MuZY give L=(1), implying negative parity.
S(n)+0.36493 *1*	5^+	0	$2g\Gamma_n$=156.60 meV *43*. E(n)=365.14 eV *36*, Γ_n=147 meV *9* (2020No07).
S(n)+0.37984 *1*	5^+	0	$2g\Gamma_n$=23.03 meV *80*. E(n)=380.08 eV *42*, Γ_n=21.7 meV *13* (2020No07).
S(n)+0.38612 *4*	5^-[@]	(1)	$2g\Gamma_n$=0.69 meV *3*. E(n)=386.25 eV *22*, Γ_n=0.62 meV *6* (2020No07).
S(n)+0.39830 *7*	3^-[@]	(1)	$2g\Gamma_n$=0.41 meV *4*. E(n)=398.42 eV *23*, Γ_n=0.60 meV *10* (2020No07).
S(n)+0.40300 *8*	3^-[@]	(1)	$2g\Gamma_n$=0.34 meV *5*. E(n)=403.12 eV *23*, Γ_n=0.53 meV *10* (2020No07).
S(n)+0.41042 *43*	4^-[@]	(1)	$2g\Gamma_n$=0.07 meV *4*. E(n)=410.55 eV *24*, Γ_n=0.13 meV *7* (2020No07).
S(n)+0.41293 *41*	5^-[@]	(1)	$2g\Gamma_n$=0.10 meV *3*. E(n)=413.05 eV *24*, Γ_n=0.97 meV *7* (2020No07).
S(n)+0.41682 *39*	4^+	0	$2g\Gamma_n$=57.94 meV *22*. E(n)=416.93 eV *24*, Γ_n=66.2 meV *36* (2020No07).
S(n)+0.42654 *1*	5^+	0	$2g\Gamma_n$=66.94 meV *25*. E(n)=426.66 eV *25*, Γ_n=62.4 meV *35* (2020No07).
S(n)+0.43321 *18*	6^-[@]	(1)	$2g\Gamma_n$=0.20 meV *4*. E(n)=433.38 eV *25*, Γ_n=0.11 meV *6* (2020No07).
S(n)+0.43977 *11*	3^-[@]	(1)	$2g\Gamma_n$=0.46 meV *5*. E(n)=439.91 eV *25*, Γ_n=0.43 meV *12* (2020No07).

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	Comments
S(n)+0.44770 *2*	5^{+}@	(0)	2gΓn=2.44 meV *5*. E(n)=447.82 eV *27*, Γn=2.24 meV *21* (2020No07).
S(n)+0.45992 *1*	4^{+}	0	2gΓn=37.64 meV *14*. E(n)=460.18 eV *26*, Γn=43.1 meV *24* (2020No07).
S(n)+0.46551 *4*	6^{-}@	(1)	2gΓn=1.13 meV *5*. E(n)=465.78 eV *27*, Γn=0.85 meV *8* (2020No07).
S(n)+0.47877 *1*	4^{+}	0	2gΓn=11.45 meV *7*. E(n)=479.06 eV *27*, Γn=13.0 meV *8* (2020No07).
S(n)+0.4804 *1*	4^{-}@	(1)	2gΓn=0.54 meV *5*. E(n)=480.99 eV *28*, Γn=0.63 meV *10* (2020No07).
S(n)+0.48658 *1*	5^{+}	0	2gΓn=5.89 meV *6*. E(n)=486.86 eV *28*, Γn=5.43 meV *38* (2020No07).
S(n)+0.49744 *48*	6^{-}@	(1)	2gΓn=0.90 meV *5*. E(n)=496.81 eV *29*, Γn=0.09 meV *6* (2020No07).
S(n)+0.50769 *10*	6^{-}@	(1)	2gΓn=0.47 meV *5*. E(n)=506.97 eV *29*, Γn=0.38 meV *8* (2020No07).
S(n)+0.51645 *1*	4^{+}	0	2gΓn=11.84 meV *8*. E(n)=515.45 eV *50*, Γn=13.3 meV *8* (2020No07).
S(n)+0.52056 *1*	5^{+}	0	2gΓn=32.48 meV *12*. E(n)=519.56 eV *50*, Γn=30.1 meV *17* (2020No07).
S(n)+0.52739 *4*	4^{-}@	(1)	2gΓn=1.53 meV *6*. E(n)=526.68 eV *30*, Γn=1.76 meV *12* (2020No07).
S(n)+0.53661 *1*	4^{+}	0	2gΓn=27.41 meV *11*. E(n)=535.56 eV *53*, Γn=31.0 meV *17* (2020No07).
S(n)+0.56323 *1*	5^{+}	0	2gΓn=8.77 meV *8*. E(n)=563.65 eV *74*, Γn=8.10 meV *56* (2020No07).
S(n)+0.56709 *5*	6^{-}@	(1)	2gΓn=1.34 meV *7*. E(n)=566.97 eV *7*, Γn=1.05 meV *15* (2020No07).
S(n)+0.58880 *12*	6^{-}@	(1)	2gΓn=0.57 meV *7*. E(n)=589.07 eV *34*, Γn=0.51 meV *10* (2020No07). Additional information 2.
S(n)+0.59375 *1*	4^{+}	0	2gΓn=5.58 meV *7*. E(n)=594.00 eV *32*, Γn=6.38 meV *54* (2020No07).
S(n)+0.59817 *1*	5^{+}	0	2gΓn=28.7 meV *20*. E(n)=598.43 eV *33*, Γn=27.0 meV *16* (2020No07).
S(n)+0.59954 *4*	5^{+}@	(0)	2gΓn=3.59 meV *15*. E(n)=599.84 eV *33*, Γn=3.04 meV *42* (2020No07).
S(n)+0.60676 *1*	4^{+}	0	2gΓn=33.84 meV *14*. E(n)=607.02 eV *33*, Γn=38.6 meV *22* (2020No07).
S(n)+0.61732 *7*	3^{-}@	(1)	2gΓn=1.03 meV *7*. E(n)=617.61 eV *36*, Γn=1.51 meV *21* (2020No07).
S(n)+0.62349 *2*	4^{+}@	(0)	2gΓn=4.94 meV *8*. E(n)=623.76 eV *35*, Γn=5.59 meV *51* (2020No07).
S(n)+0.63053 *17*	5^{-}@	(1)	2gΓn=0.52 meV *9*. E(n)=630.81 eV *36*, Γn=0.47 meV *14* (2020No07).
S(n)+0.63256 *3*	5^{+}@		2gΓn=2.63 meV *16*. E(n)=632.84 eV *36*, Γn=2.45 meV *32* (2020No07). 2018MuZY give L=(1) implying negative parity.
S(n)+0.65471 *1*	4^{+}	0	2gΓn=41.82 meV *16*. E(n)=655.24 eV *93*, Γn=48.0 meV *27* (2020No07).
S(n)+0.67224 *1*	5^{+}	0	2gΓn=23.65 meV *12*. E(n)=672.80 eV *97*, Γn=22.0 meV *13* (2020No07).
S(n)+0.67541 *8*	4^{-}@	(1)	2gΓn=1.20 meV *9*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)[†]	Jπ[#]	L[‡]	Comments
			E(n)=675.75 eV *8*, Γ_n=1.34 meV *20* (2020No07).
S(n)+0.68623 *2*	5^+[@]	0	2gΓ_n=5.73 meV *10*. E(n)=686.8 eV *37*, Γ_n=5.27 meV *68* (2020No07).
S(n)+0.68999 *24*	3^-[@]	(1)	2gΓ_n=0.41 meV *13*. E(n)=690.29 eV *8*, Γ_n=0.63 meV *26* (2020No07).
S(n)+0.69933 *62*	6^-[@]	(1)	2gΓ_n=0.18 meV *9*. E(n)=699.66 eV *8*, Γ_n=0.22 meV *12* (2020No07).
S(n)+0.70216 *12*	5^-[@]	(1)	2gΓ_n=0.85 meV *10*. E(n)=702.51 eV *8*, Γ_n=0.88 meV *17* (2020No07).
S(n)+0.71661 *20*	6^-[@]	(1)	2gΓ_n=0.56 meV *10*. E(n)=716.95 eV *9*, Γ_n=0.54 meV *14* (2020No07).
S(n)+0.72069 *12*	6^-[@]	(1)	2gΓ_n=0.87 meV *10*. E(n)=721.10 eV *9*, Γ_n=0.77 meV *14* (2020No07).
S(n)+0.72409 *1*	5^+[@]	(0)	2gΓ_n=9.10 meV *11*. E(n)=724.43 eV *9*, Γ_n=8.53 meV *66* (2020No07).
S(n)+0.72740 *38*	4^-[@]	(1)	2gΓ_n=0.31 meV *11*. E(n)=727.61 eV *9*, Γ_n=0.47 meV *21* (2020No07).
S(n)+0.7454 *27*	4^+	0	2gΓ_n=103.23 meV *43*. E(n)=745.72 eV *9*, Γ_n=119.1 meV *67* (2020No07).
S(n)+0.7536 *27*	4^+	0	2gΓ_n=56.66 meV *23*. E(n)=753.96 eV *9*, Γ_n=64.7 meV *36* (2020No07).
S(n)+0.7661 *28*	4^+[@]	0	2gΓ_n=9.78 meV *13*. E(n)=766.46 eV *9*, Γ_n=11.0 meV *8* (2020No07).
S(n)+0.77451 *4*	5^+[@]		2gΓ_n=3.18 meV *11*. 2018MuZY give L=(1) implying negative parity. E(n)=774.89 eV *9*, Γ_n=2.93 meV *29* (2020No07).
S(n)+0.79060 *12*	4^-[@]	(1)	2gΓ_n=1.09 meV *12*. E(n)=791.01 eV *10*, Γ_n=1.41 meV *30* (2020No07).
S(n)+0.79864 *3*	4^+[@]		2gΓ_n=4.33 meV *13*. E(n)=799.04 eV *10*, Γ_n=5.08 meV *31* (2020No07). 2018MuZY give L=(1) implying negative parity.
S(n)+0.80559 *1*	5^+	0	2gΓ_n=30.17 meV *17*. E(n)=805.99 eV *10*, Γ_n=28.2 meV *17* (2020No07).
S(n)+0.81591 *1*	5^+	0	2gΓ_n=27.10 meV *17*. E(n)=816.32 eV *10*, Γ_n=25.3 meV *15* (2020No07).
S(n)+0.82804 *4*	4^+[@]		2gΓ_n=3.56 meV *13*. E(n)=828.46 eV *10*, Γ_n=4.24 meV *29* (2020No07). 2018MuZY give L=(1) implying negative parity.
S(n)+0.83871 *1*	4^+	0	2gΓ_n=107.19 meV *45*. E(n)=839.14 eV *10*, Γ_n=123.5 meV *71* (2020No07).
S(n)+0.84494 *8*	5^-[@]	(1)	2gΓ_n=2.30 meV *13*. E(n)=845.30 eV *10*, Γ_n=1.78 meV *31* (2020No07).
S(n)+0.84729 *1*	4^+	0	2gΓ_n=54.60 meV *27*. E(n)=847.72 eV *10*, Γ_n=62.3 meV *35* (2020No07).
S(n)+0.85110 *6*	6^-[@]	(1)	2gΓ_n=2.61 meV *14*. E(n)=851.58 eV *10*, Γ_n=1.90 meV *20* (2020No07).
S(n)+0.87213 *13*	3^-[@]	(1)	2gΓ_n=3.00 meV *36*. E(n)=872.54 eV *10*, Γ_n=4.23 meV *89* (2020No07).
S(n)+0.87359 *8*	4^+[@]		2gΓ_n=5.31 meV *33*. E(n)=874.01 eV *11*, Γ_n=6.08 meV *63* (2020No07). 2018MuZY give L=(1) implying negative parity.
S(n)+0.87592 *2*	5^+[@]	0	2gΓ_n=14.22 meV *19*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)[†]	Jπ[#]	L[‡]	Comments
			E(n)=876.37 eV *11*, Γ_n=13.3 meV *11* (2020No07).
S(n)+0.89272 *1*	4^+	0	$2g\Gamma_n$=125.37 meV *54*. E(n)=893.19 eV *11*, Γ_n=144.2 meV *85* (2020No07).
S(n)+0.89852 *10*	5^-[@]	(1)	$2g\Gamma_n$=1.80 meV *15*. E(n)=899.05 eV *11*, Γ_n=1.43 meV *30* (2020No07).
S(n)+0.90415 *29*	5^-[@]	(1)	$2g\Gamma_n$=0.66 meV *15*. E(n)=0.90459 *11*, Γ_n=0.55 meV *29* (2020No07).
S(n)+0.91531 *22*	3^-[@]	(1)	E(level): from 2000Gu13, resonance is listed in 2020No07, but not in 2018MuZY. Γ_n=1.25 meV *22* (2000Gu13). E(n)=0.91581 *11*, Γ_n=1.22 meV *41* (2020No07).
S(n)+0.9270 *5*	4^+[@]		Jπ: 2018MuZY give L=(1) implying negative parity. $2g\Gamma_n$=4.25 meV *16*. E(n)=0.92750 *11*, Γ_n=4.74 meV *40* (2020No07).
S(n)+0.94291 *14*	5^-[@]	(1)	$2g\Gamma_n$=1.43 meV *17*. E(n)=0.94331 *11*, Γ_n=1.42 meV *30* (2020No07).
S(n)+0.95009 *39*	5^-[@]	(1)	$2g\Gamma_n$=0.53 meV *17*. E(n)=0.95059 *11*, Γ_n=0.57 meV *14* (2020No07).
S(n)+0.97180 *2*	5^+[@]	0	$2g\Gamma_n$=11.83 meV *19*. E(n)=0.97234 *12*, Γ_n=11.0 meV *10* (2020No07).
S(n)+0.98117 *6*	4^-[@]	(1)	$2g\Gamma_n$=3.65 meV *18*. E(n)=0.98173 *12*, Γ_n=4.20 meV *20* (2020No07).
S(n)+0.99466 *1*	4^+[@]	0	$2g\Gamma_n$=47.02 meV *21*. E(n)=0.99522 *12*, Γ_n=53.5 meV *32* (2020No07).
S(n)+1.00800 *7*	4^-[@]	(1)	$2g\Gamma_n$=3.47 meV *18*. E(n)=1.00850 *12*, Γ_n=3.88 meV *50* (2020No07).
S(n)+1.0142 *3*	$[6]^{(-)}$	(1)	$2g\Gamma_n$=0.79 meV *79*.
S(n)+1.0210 *1*	5^+	0	$2g\Gamma_n$=23.98 meV *24*.
S(n)+1.0334 *1*	$[6]^{(-)}$	(1)	$2g\Gamma_n$=2.50 meV *25*.
S(n)+1.04550 *2*	4^+	0	$2g\Gamma_n$=34.92 meV *35*.
S(n)+1.04710 *5*	$[4]^{(+)}$	(0)	$2g\Gamma_n$=13.30 meV *13*.
S(n)+1.0725 *5*	$[5]^{(+)}$	(0)	E(level): uncertainty in E(n) is estimated; 2018MuZY list 0. $2g\Gamma_n$=158.4 meV *2*.
S(n)+1.0838 *1*	5^+	0	E(level): uncertainty in E(n) is estimated; 2018MuZY list 0. $2g\Gamma_n$=342.1 meV *34*.
S(n)+1.08930 *5*	$[4]^{(-)}$	(1)	$2g\Gamma_n$=5.80 meV *58*.
S(n)+1.10540 *6*	$[5]^{(-)}$	(1)	$2g\Gamma_n$=4.96 meV *50*.
S(n)+1.11150 *7*	$[4]^{(-)}$	(1)	$2g\Gamma_n$=4.79 meV *48*.
S(n)+1.13640 *1*	5^+	0	$2g\Gamma_n$=91.9 meV *9*.
S(n)+1.17960 *1*	$[5]^+$	0	$2g\Gamma_n$=105.6 meV *1*.
S(n)+1.1844 *1*	$[5]^{(-)}$	(1)	$2g\Gamma_n$=3.39 meV *34*.
S(n)+1.19400 *2*	$[4]^{(+)}$	(0)	$2g\Gamma_n$=19.44 meV *19*.
S(n)+1.2016 *1*	4^+	0	E(level): uncertainty in E(n) is estimated; 2018MuZY list 0. $2g\Gamma_n$=133.2 meV *1*.
S(n)+1.2083 *2*	$[5]^{(-)}$	(1)	$2g\Gamma_n$=2.05 meV *21*.
S(n)+1.21360 *1*	$[4]^{(+)}$	(0)	$2g\Gamma_n$=31.23 meV *31*.
S(n)+1.22600 *4*	$[5]^{(-)}$	(1)	$2g\Gamma_n$=9.06 meV *91*.
S(n)+1.2338 *2*	$[6]^{(-)}$	(1)	$2g\Gamma_n$=2.73 meV *27*.
S(n)+1.24640 *7*	$[4]^{(-)}$	(1)	$2g\Gamma_n$=5.95 meV *60*.
S(n)+1.2530 *5*	$[3]^{(-)}$	(1)	$2g\Gamma_n$=1.42 meV *14*.
S(n)+1.25520 *7*	$[4]^{(-)}$	(1)	$2g\Gamma_n$=9.18 meV *92*.
S(n)+1.26610 *1*	5^+	0	$2g\Gamma_n$=57.31 meV *57*.
S(n)+1.2687 *2*	$[3]^{(-)}$	(1)	$2g\Gamma_n$=3.74 meV *37*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	Comments
S(n)+1.2730 *2*	[6](−)	(1)	2gΓn=2.20 meV *22*.
S(n)+1.28170 *1*	5(+)	(0)	2gΓn=97.46 meV *98*.
S(n)+1.29610 *4*	[5](+)	(0)	2gΓn=21.23 meV *21*.
S(n)+1.29830 *5*	[5](+)	(0)	2gΓn=15.4 meV *15*.
S(n)+1.3051 *1*	[5](−)	(1)	2gΓn=3.67 meV *37*.
S(n)+1.30810 *1*	[4](+)	(0)	2gΓn=54.9 meV *55*.
S(n)+1.32100 *1*	[5](+)	(0)	2gΓn=41.91 meV *42*.
S(n)+1.33100 *1*	[4](+)	(0)	2gΓn=50.58 meV *51*.
S(n)+1.34470 *8*	[4](−)	(1)	2gΓn=6.57 meV *66*.
S(n)+1.3654 *4*	[6](−)	(1)	2gΓn=1.64 meV *16*.
S(n)+1.36810 *3*	[5](+)	(0)	2gΓn=22.44 meV *22*.
S(n)+1.3783 *1*	[6](−)	(1)	2gΓn=5.32 meV *53*.
S(n)+1.39240 *9*	[4](−)	(1)	2gΓn=6.10 meV *61*.
S(n)+1.3997 *1*	[4](−)	(1)	2gΓn=8.63 meV *86*.
S(n)+1.40210 *1*	[4](+)	(0)	2gΓn=135.0 meV *14*.
S(n)+1.4094 *2*	[6](−)	(1)	2gΓn=3.11 meV *31*.
S(n)+1.42530 *2*	5+	0	2gΓn=35.97 meV *36*.
S(n)+1.43960 *2*	4+	0	2gΓn=38.61 meV *39*.
S(n)+1.44330 *3*	5+	0	2gΓn=222.2 meV *22*.
S(n)+1.44480 *9*	[4](+)	(0)	2gΓn=43.7 meV *44*.
S(n)+1.45080 *9*	[4](−)	(1)	2gΓn=7.16 meV *72*.
S(n)+1.4756 *1*	5+	0	E(level): uncertainty in E(n) is estimated; 2018MuZY list 0. 2gΓn=292.6 meV *29*.
S(n)+1.49140 *7*	[5](−)	(1)	2gΓn=9.6 meV *10*.
S(n)+1.49510 *7*	[4](−)	(1)	2gΓn=10.0 meV *10*.
S(n)+1.5234 *1*	[6](−)	(1)	2gΓn=5.95 meV *60*.
S(n)+1.52920 *3*	[5](+)	(0)	2gΓn=25.6 meV *3*.
S(n)+1.54700 *1*	4+	0	2gΓn=180.0 meV *18*.
S(n)+1.5523 *2*	[6](−)	(1)	2gΓn=4.58 meV *46*.
S(n)+1.56120 *9*	[5](+)	(0)	2gΓn=19.0 meV *19*.
S(n)+1.56310 *9*	[5](+)	(0)	2gΓn=18.8 meV *19*.
S(n)+1.5822 *2*	[3](−)	(1)	2gΓn=3.20 meV *32*.
S(n)+1.59410 *1*	[5](+)	(0)	2gΓn=101.0 meV *1*.
S(n)+1.59870 *9*	[4](−)	(1)	2gΓn=8.57 meV *86*.
S(n)+1.6154 *2*	[6](−)	(1)	2gΓn=3.22 meV *32*.
S(n)+1.6226 *2*	[5](−)	(1)	2gΓn=3.96 meV *40*.
S(n)+1.6500 *2*	[5](+)	(0)	2gΓn=40.3 meV *4*.
S(n)+1.65770 *6*	[5](+)	(0)	2gΓn=14.3 meV *14*.
S(n)+1.66280 *9*	[5](−)	(1)	2gΓn=9.32 meV *93*.
S(n)+1.6678 *1*	[4](−)	(1)	2gΓn=6.92 meV *69*.
S(n)+1.67300 *4*	[5](+)	(0)	2gΓn=23.98 meV *24*.
S(n)+1.6989 *1*	[5](−)	(1)	2gΓn=9.34 meV *93*.
S(n)+1.70250 *1*	[4](+)	(0)	2gΓn=363.6 meV *36*.
S(n)+1.70590 *4*	[5](+)	(0)	2gΓn=44.2 meV *44*.
S(n)+1.71590 *2*	[5](+)	(0)	2gΓn=60.0 meV *6*.
S(n)+1.7472 *1*	[4](+)	(0)	2gΓn=107.1 meV *11*.
S(n)+1.75300 *3*	[5](+)	(0)	2gΓn=36.63 meV *37*.
S(n)+1.76330 *1*	[4](+)	(0)	2gΓn=111.6 meV *1*.
S(n)+1.76850 *2*	[5](+)	(0)	2gΓn=70.2 meV *7*.
S(n)+1.77670 *8*	[4](−)	(1)	2gΓn=12.78 meV *13*.
S(n)+1.7848 *1*	[4](+)	(0)	2gΓn=84.06 meV *84*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	Comments
S(n)+1.80820 *5*	[5](+)	(0)	2gΓn=22.0 meV *2*.
S(n)+1.81940 *8*	[5](−)	(1)	2gΓn=14.41 meV *14*.
S(n)+1.8254 *2*	[4](−)	(1)	2gΓn=5.4 meV *5*.
S(n)+1.85770 *2*	[4](+)	(0)	2gΓn=85.1 meV *9*.
S(n)+1.8650 *4*	[6](−)	(1)	2gΓn=6 meV *6*.
S(n)+1.86730 *4*	[5](+)	(0)	2gΓn=81.2 meV *81*.
S(n)+1.8754 *1*	[5](−)	(1)	2gΓn=8.5 meV *9*.
S(n)+1.8830 *2*	[5](−)	(1)	2gΓn=9.0 meV *9*.
S(n)+1.8862 *2*	[6](−)	(1)	2gΓn=6.96 meV *70*.
S(n)+1.89990 *7*	[5](+)	(0)	2gΓn=22.6 meV *2*.
S(n)+1.90340 *2*	[5](+)	(0)	2gΓn=88.66 meV *89*.
S(n)+1.9201 *1*	[4](+)	(0)	2gΓn=218.7 meV *22*.
S(n)+1.9294 *3*	[6](−)	(1)	2gΓn=4.10 meV *41*.
S(n)+1.93730 *5*	[5](+)	(0)	2gΓn=26.6 meV *3*.
S(n)+1.94710 *7*	[5](−)	(1)	2gΓn=17.6 meV *7*.
S(n)+1.9554 *3*	[5](−)	(1)	2gΓn=6.85 meV *69*.
S(n)+1.95840 *6*	[4](+)	(0)	2gΓn=31.7 meV *32*.
S(n)+1.9878 *3*	[5](−)	(1)	2gΓn=6.3 meV *6*.
S(n)+1.99110 *3*	[4](+)	(0)	2gΓn=74.4 meV *74*.
S(n)+2.00360 *6*	[5](+)	(0)	2gΓn=66.7 meV *67*.
S(n)+2.00590 *2*	[5](+)	(0)	2gΓn=215.6 meV *22*.
S(n)+2.0232 *1*	[4](−)	(1)	2gΓn=10.44 meV *10*.
S(n)+2.03120 *8*	[4](−)	(1)	2gΓn=18.00 meV *18*.
S(n)+2.0557 *1*	[4](−)	(1)	2gΓn=13.14 meV *13*.
S(n)+2.0603 *2*	[5](−)	(1)	2gΓn=11.55 meV *12*.
S(n)+2.0650 *16*	[4](−)	(1)	2gΓn=1.03 meV *10*.
S(n)+2.0777 *1*	[4](+)	(0)	2gΓn=190.8 meV *19*.
S(n)+2.0857 *2*	[4](+)	(0)	2gΓn=116.1 meV *12*.
S(n)+2.09980 *6*	[4](+)	(0)	2gΓn=27.0 meV *3*.
S(n)+2.1056 *1*	[5](−)	(1)	2gΓn=11.9 meV *1*.
S(n)+2.11680 *8*	[5](−)	(1)	2gΓn=19.36 meV *19*.
S(n)+2.1343 *1*	[5](−)	(1)	2gΓn=12.98 meV *13*.
S(n)+2.14980 *3*	[4](+)	(0)	2gΓn=70.7 meV *71*.
S(n)+2.1710 *2*	[4](−)	(1)	2gΓn=8.1 meV *8*.
S(n)+2.1763 *3*	[4](−)	(1)	2gΓn=5.31 meV *53*.
S(n)+2.2038 *9*	[5](−)	(1)	2gΓn=3.9 meV *39*.
S(n)+2.2064 *4*	[4](−)	(1)	2gΓn=9.5 meV *95*.
S(n)+2.22240 *9*	[4](−)	(1)	2gΓn=20.0 meV *2*.
S(n)+2.2306 *1*	[5](−)	(1)	2gΓn=18.8 meV *2*.
S(n)+2.2421 *3*	[5](−)	(1)	2gΓn=7.30 meV *73*.
S(n)+2.25310 *4*	[4](+)	(0)	2gΓn=52.3 meV *52*.
S(n)+2.26140 *8*	[4](+)	(0)	2gΓn=25.7 meV *3*.
S(n)+2.2692 *1*	[5](−)	(1)	2gΓn=13.90 meV *14*.
S(n)+2.28330 *5*	[5](+)	(0)	2gΓn=44.30 meV *44*.
S(n)+2.2913 *3*	[4](+)	(0)	2gΓn=82.3 meV *82*.
S(n)+2.3047 *1*	[5](−)	(1)	2gΓn=14.40 meV *14*.
S(n)+2.3370 *2*	[5](−)	(1)	2gΓn=22.3 meV *22*.
S(n)+2.34020 *4*	[5](+)	(0)	2gΓn=184.8 meV *19*.
S(n)+2.3438 *2*	[5](−)	(1)	2gΓn=16.6 meV *17*.
S(n)+2.3597 *3*	[3](−)	(1)	2gΓn=11.8 meV *12*.
S(n)+2.36310 *6*	[4](+)	(0)	2gΓn=58.0 meV *58*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	gΓnΓγ/Γ (eV)†	Comments
S(n)+2.37780 *7*	[4](+)	(0)		2gΓn=32.7 meV *33*.
S(n)+2.38680 *5*	[4](+)	(0)		2gΓn=48.1 meV *48*.
S(n)+2.40920 *3*	[5](+)	(0)		2gΓn=79.9 meV *80*.
S(n)+2.42130 *2*	[4](+)	(0)		2gΓn=126.9 meV *13*.
S(n)+2.4356 *2*	[3](−)	(1)		2gΓn=9.7 meV *97*.
S(n)+2.47090 *1*	[5](+)	(0)		2gΓn=576.4 meV *58*.
S(n)+2.50390 *2*	[4](+)	(0)		2gΓn=152.1 meV *15*.
S(n)+2.51230 *4*	[5](+)	(0)		2gΓn=123.2 meV *12*.
S(n)+2.51600 *4*	[5](+)	(0)		2gΓn=143.0 meV *14*.
S(n)+2.5203 *1*	[5](+)	(0)		2gΓn=34.2 meV *34*.
S(n)+2.53260 *8*	[4](+)	(0)		2gΓn=34.7 meV *35*.
S(n)+2.54350 *4*	[5](+)	(0)		2gΓn=176.0 meV *18*.
S(n)+2.54600 *5*	[5](+)	(0)		2gΓn=161.7 meV *16*.
S(n)+2.57370 *5*	[4](+)	(0)		2gΓn=59.0 meV *59*.
S(n)+2.59570 *5*	[4](+)	(0)		2gΓn=58.2 meV *58*.
S(n)+2.60240 *7*	[4](+)	(0)		2gΓn=41.4 meV *41*.
S(n)+2.61350 *7*	[4](+)	(0)		2gΓn=54.3 meV *54*.
S(n)+2.61780 *8*	[5](+)	(0)		2gΓn=49.3 meV *49*.
S(n)+2.62460 *3*	[5](+)	(0)		2gΓn=136.4 meV *14*.
S(n)+2.6577 *3*	[3](−)	(1)	0.0059 *3*	2gΓn=12.7 meV *6*.
S(n)+2.67370 *9*	[5](+)	(0)	0.0137 *4*	2gΓn=33.8 meV *8*.
S(n)+2.68570 *1*	[4](+)	(0)	0.0481 *5*	2gΓn=567.0 meV *57*, Γγ=0.129 eV *7*.
S(n)+2.6914 *2*	[5](+)	(0)	0.0087 *5*	2gΓn=194 meV *1*.
S(n)+2.703 *2*	(−)	(1)	0.0039 *4*	2gΓn=8.2 meV *8*.
S(n)+2.7147 *2*	[4](−)	(1)	0.0090 *5*	2gΓn=20.2 meV *10*.
S(n)+2.721 *3*	(−)	(1)	0.0028 *5*	2gΓn=5.8 meV *10*.
S(n)+2.7279 *2*	[4](−)	(1)		2gΓn=18.3 meV *18*.
S(n)+2.73210 *6*	[5](+)	(0)	0.0450 *9*	2gΓn=80.7 meV *81*.
S(n)+2.744 *3*	(−)	(1)	0.0035 *4*	2gΓn=7.3 meV *8*.
S(n)+2.7600 *1*	[5](+)	(0)	0.0127 *5*	2gΓn=30.8 meV *10*.
S(n)+2.76680 *2*	[5](+)	(0)	0.0490 *6*	2gΓn=301.4 meV *30*, Γγ=0.132 eV *2*.
S(n)+2.7824 *6*	[3](−)	(1)	0.0040 *3*	2gΓn=8.7 meV *6*.
S(n)+2.7923 *1*	[5](+)	(0)	0.0149 *5*	2gΓn=37 meV *1*.
S(n)+2.801 *3*	(−)	(1)	0.0036 *4*	2gΓn=7.5 meV *8*.
S(n)+2.8121 *3*	[5](−)	(1)	0.0071 *6*	2gΓn=14.6 meV *12*.
S(n)+2.827 *3*		(1)	0.0032 *7*	E(n)=2817 eV *2* in 1982Ma27. 2gΓn=6.7 meV *14*.
S(n)+2.82830 *4*	[4](−)	(1)	0.0338 *5*	2gΓn=12 meV *12*.
S(n)+2.8370 *5*	[4](+)	(0)	0.0494& *6*	2gΓn=38 meV *18*.
S(n)+2.83900 *9*	[5](+)	(0)		2gΓn=347 meV *35*.
S(n)+2.8510 *1*	[4](+)	(0)	0.0175 *4*	2gΓn=42.3 meV *30*.
S(n)+2.8777 *3*	[3](−)	(1)	0.0063 *4*	2gΓn=14.4 meV *8*.
S(n)+2.882 *3*	(−)	(1)	0.0034 *4*	2gΓn=7.1 meV *8*.
S(n)+2.89200 *5*	[5](+)	(0)	0.0400 *6*	2gΓn=138 meV *2*.
S(n)+2.8962 *4*	[4](−)	(1)	0.0400 *6*	2gΓn=28.6 meV *29*.
S(n)+2.8995 *1*	[4](+)	(0)	0.0293 *5*	2gΓn=95 meV *3*.
S(n)+2.91780 *7*	[4](+)	(0)	0.0216 *5*	2gΓn=64.8 meV *10*.
S(n)+2.9335 *2*	[5](−)	(1)	0.0086 *4*	2gΓn=19.3 meV *8*.
S(n)+2.94300 *4*	[5](+)	(0)	0.0329 *5*	2gΓn=113 meV *3*.
S(n)+2.97590 *6*	[5](+)	(0)	0.0297 *5*	2gΓn=96 meV *4*.
S(n)+2.9914 *3*	[5](−)	(1)	0.0064 *4*	2gΓn=13.9 meV *10*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	gΓnΓγ/Γ (eV)†	Comments
S(n)+3.0042 *2*	[5](+)	(0)	0.0111 *9*	2gΓn=267 meV *1*.
S(n)+3.009 *3*	(−)	(1)	0.0060 *8*	2gΓn=12.9 meV *16*.
S(n)+3.0199 *2*	[4](−)	(1)	0.0095 *4*	2gΓn=22.3 meV *8*.
S(n)+3.0275 *1*	[5](+)	(0)	0.0176 *5*	2gΓn=45.3 meV *10*.
S(n)+3.0373 *4*	[5](−)	(1)	0.0046 *6*	2gΓn=10.7 meV *12*.
S(n)+3.0418 *1*	[4](+)	(0)	0.0210 *6*	2gΓn=62.1 meV *12*.
S(n)+3.050 *3*	(−)	(1)	0.0047 *6*	2gΓn=10.0 meV *12*.
S(n)+3.0618 *5*	[4](−)	(1)	0.0046 *6*	2gΓn=10.9 meV *12*.
S(n)+3.06600 *8*	[5](+)	(0)	0.0327 *6*	2gΓn=98 meV *9*.
S(n)+3.09010 *4*	[5](+)	(0)	0.0372 *6*	2gΓn=139 meV *2*.
S(n)+3.0981 *2*	[5](−)	(1)	0.0135 *5*	2gΓn=31.2 meV *10*.
S(n)+3.120 *3*	(−)	(1)	0.0045 *5*	2gΓn=9.5 meV *10*.
S(n)+3.12710 *6*	[5](+)	(0)	0.0244 *7*	2gΓn=70.5 meV *14*.
S(n)+3.13330 *4*	[5](+)	(0)	0.0403 *6*	2gΓn=161.0 meV *16*, Γγ=0.149 eV *8*.
S(n)+3.1401 *2*	[5](−)	(1)	0.0157 *7*	2gΓn=36 meV *2*.
S(n)+3.1464 *6*	[6](−)	(1)	0.0043 *4*	2gΓn=9.1 meV *8*.
S(n)+3.1622 *1*	[5](+)	(0)	0.0198 *5*	2gΓn=50.6 meV *15*.
S(n)+3.1794 *5*	[6](−)	(1)	0.0045 *5*	2gΓn=9.5 meV *10*.
S(n)+3.18830 *2*	[4](+)	(0)	0.0677& *7*	2gΓn=397 meV *4*.
S(n)+3.1930 *3*	[4](−)	(1)		2gΓn=26.6 meV *27*.
S(n)+3.20150 *4*	[5](+)	(0)	0.0419 *7*	2gΓn=132.0 meV *13*.
S(n)+3.221 *3*	(−)	(1)	0.0058 *6*	2gΓn=12.5 meV *12*.
S(n)+3.2256 *1*	[5](+)	(0)	0.0240 *7*	2gΓn=58 meV *5*.
S(n)+3.2391 *3*	[5](−)	(1)	0.0117 *5*	2gΓn=27.5 meV *10*.
S(n)+3.2589 *2*	[5](+)	(0)	0.0168 *6*	2gΓn=46.0 meV *12*.
S(n)+3.271 *3*	(−)	(1)	0.0018 *4*	2gΓn=3.7 meV *8*.
S(n)+3.2928 *2*	[4](−)	(1)	0.0083 *5*	2gΓn=19 meV *1*.
S(n)+3.30290 *3*	[5](+)	(0)	0.0710 *15*	2gΓn=238.0 meV *24*.
S(n)+3.3282 *2*	[5](+)	(0)	0.0562 *8*	2gΓn=331.2 meV *33*, Γγ=0.155 eV *8*.
S(n)+3.3507 *5*	[3](−)	(1)	0.0059 *4*	2gΓn=13.1 meV *80*.
S(n)+3.3621 *3*	[5](−)	(1)	0.0093 *5*	2gΓn=20.1 meV *10*.
S(n)+3.371 *3*	(−)	(1)	0.0028 *6*	2gΓn=5.8 meV *12*.
S(n)+3.3819 *2*	[5](+)	(0)	0.0173 *7*	2gΓn=44.3 meV *14*.
S(n)+3.3876 *2*	[5](−)	(1)	0.0139 *8*	2gΓn=33.7 meV *16*.
S(n)+3.4063 *2*	[5](−)	(1)	0.0142 *5*	2gΓn=34.6 meV *10*.
S(n)+3.41600 *9*	[4](+)	(0)	0.0255 *7*	2gΓn=82.7 meV *14*.
S(n)+3.42160 *6*	[5](+)	(0)	0.0438 *6*	2gΓn=123 meV *4*.
S(n)+3.4318 *1*	[4](+)	(0)	0.0278 *5*	2gΓn=66 meV *6*.
S(n)+3.4489 *5*	[6](−)	(1)	0.0044 *5*	2gΓn=17.7 meV *10*.
S(n)+3.45350 *3*	[5](+)	(0)	0.0672 *7*	2gΓn=453 meV *5*, Γγ=0.173 eV *11*.
S(n)+3.472 *3*	(−)	(1)	0.0060 *4*	2gΓn=12.9 meV *8*.
S(n)+3.478 *3*	(−)	(1)	0.0027 *5*	2gΓn=5.6 meV *10*.
S(n)+3.49620 *5*	[5](+)	(0)	0.0396 *6*	2gΓn=175 meV *5*.
S(n)+3.5022 *2*	[5](−)	(1)	0.0139 *7*	2gΓn=33.7 meV *14*.
S(n)+3.512 *3*	(−)	(1)	0.0051 *6*	2gΓn=10.9 meV *12*.
S(n)+3.522 *3*	(−)	(1)	0.0019 *3*	2gΓn=3.9 meV *6*.
S(n)+3.535 *3*	(−)	(1)	0.0034 *3*	2gΓn=7.1 meV *6*.
S(n)+3.5587 *1*	[5](+)	(0)	0.0243 *5*	2gΓn=70.1 meV *10*.
S(n)+3.5703 *1*	[4](+)	(0)	0.0196 *7*	2gΓn=60.5 meV *25*.
S(n)+3.5772 *1*	[5](+)	(0)	0.0349 *6*	2gΓn=83 meV *8*.
S(n)+3.59220 *6*	[5](+)	(0)	0.0319 *6*	2gΓn=125 meV *5*.
S(n)+3.6020 *5*	[4](−)	(1)		2gΓn=17.1 meV *17*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	gΓnΓγ/Γ (eV)†	Comments
S(n)+3.60700 *4*	[5](+)	(0)	0.0650& *7*	2gΓn=367 meV *4*, Γγ=0.150 eV *11*.
S(n)+3.6169 *7*	[5](−)	(1)	0.0089 *5*	2gΓn=20.1 meV *10*.
S(n)+3.6346 *6*	[5](−)	(1)	0.0102 *4*	2gΓn=23.4 meV *80*.
S(n)+3.6536 *1*	[4](+)	(0)	0.0238 *6*	2gΓn=75.2 meV *12*.
S(n)+3.6611 *2*	[5](−)	(1)	0.0159 *6*	2gΓn=39.8 meV *12*.
S(n)+3.6947 *1*	[4](+)	(0)	0.0215 *9*	2gΓn=64.4 meV *18*.
S(n)+3.70160 *3*	[5](+)	(0)	0.0685 *8*	2gΓn=397 meV *4*.
S(n)+3.72490 *7*	[5](+)	(0)	0.0402 *7*	2gΓn=118 meV *4*.
S(n)+3.7355 *2*	[5](+)	(0)	0.040 *1*	2gΓn=45.3 eV *50*.
S(n)+3.7583 *8*	[3](−)	(1)	0.0080 *4*	2gΓn=17.7 meV *8*.
S(n)+3.7724 *8*	[4](−)	(1)	0.0070 *8*	2gΓn=15.2 meV *16*.
S(n)+3.7779 *1*	[5](+)	(0)	0.0330 *8*	2gΓn=78 meV *7*.
S(n)+3.7978 *1*	[4](+)	(0)	0.0227 *7*	2gΓn=69.9 meV *14*.
S(n)+3.80610 *5*	[4](+)	(0)	0.0455 *7*	2gΓn=166 meV *5*.
S(n)+3.8285 *2*	[4](−)	(1)	0.0166 *6*	2gΓn=44.6 meV *12*.
S(n)+3.8416 *1*	[5](+)	(0)	0.0802& *14*	2gΓn=160 meV *5*.
S(n)+3.8442 *2*	[4](+)	(0)		2gΓn=93.6 meV *93*.
S(n)+3.8553 *2*	[5](−)	(1)	0.0160 *6*	2gΓn=40.1 meV *12*.
S(n)+3.86810 *5*	[5](+)	(0)	0.0377 *8*	2gΓn=155 meV *8*.
S(n)+3.881 *4*	(−)	(1)	0.0042 *5*	2gΓn=8.9 meV *10*.
S(n)+3.88780 *9*	[5](+)	(0)	0.0341 *8*	2gΓn=112 meV *8*.
S(n)+3.900 *4*	(−)	(1)	0.0078 *7*	2gΓn=17.2 meV *14*.
S(n)+3.908 *4*	(−)	(1)	0.0047 *7*	2gΓn=10.0 meV *14*.
S(n)+3.9200 *2*	[4](+)	(0)	0.0241 *13*	2gΓn=74.0 meV *26*.
S(n)+3.92560 *8*	[4](+)	(0)	0.0481 *10*	2gΓn=179 meV *5*.
S(n)+3.9328 *1*	[5](+)	(0)	0.0315 *11*	2gΓn=101 meV *4*.
S(n)+3.96270 *3*	[4](+)	(0)	0.0776 *13*	2gΓn=373 meV *4*.
S(n)+3.9817 *6*	[4](−)	(1)	0.0079 *7*	2gΓn=17.5 meV *14*.
S(n)+3.99180 *6*	[4](+)	(0)	0.0433 *9*	2gΓn=184 meV *9*.
S(n)+4.0139 *6*	[6](−)	(1)	0.0124 *5*	2gΓn=28.6 meV *10*.
S(n)+4.03230 *4*	[4](+)	(0)	0.0457 *8*	2gΓn=266.5 meV *60*, Γγ=0.155 eV *9*.
S(n)+4.04580 *8*	[4](+)	(0)	0.0476 *8*	2gΓn=128 meV *3*.
S(n)+4.06120 *7*	[5](−)	(1)	0.0135 *9*	2gΓn=32.6 meV *18*.
S(n)+4.065 *4*	[5](+)	(0)	0.0361 *9*	2gΓn=132 meV *3*. E(n) is from 1982Ma27. Value is 4081.8 eV *3* in 2018MuZY.
S(n)+4.076 *4*	(−)	(1)	0.0033 *5*	2gΓn=6.9 meV *10*.
S(n)+4.085 *3*	(−)	(1)	0.0171 *6*	E(n) is from 1982Ma27. 2018MuZY give 4076 eV *4* in 2018MuZY. Note two resonances of the same energy of 4076 eV in 2018MuZY, whereas in 1982Ma27, only one resonance of 4076 eV energy is listed, and the other is 4085 eV *3*. 2gΓn=43 meV *3*.
S(n)+4.09170 *3*	[4](−)	(1)	0.0110 *9*	2gΓn=26.5 meV *30*.
S(n)+4.09700 *4*	[4](+)	(0)	0.0513 *9*	2gΓn=587 meV *6*, Γγ=0.138 eV *7*.
S(n)+4.1106 *2*	[5](+)	(0)	0.0267 *7*	2gΓn=77 meV *3*.
S(n)+4.1208 *3*	[5](−)	(1)	0.0189 *6*	2gΓn=46 meV *3*.
S(n)+4.142 *4*	(−)	(1)	0.0035 *7*	2gΓn=7.3 meV *14*.
S(n)+4.148 *4*	(−)	(1)	0.0051 *5*	2gΓn=10.9 meV *10*.
S(n)+4.16090 *5*	[4](+)	(0)	0.0409 *17*	2gΓn=212 meV *4*, Γγ=0.148 eV *10*.
S(n)+4.168 *4*	(−)	(1)	0.0052 *18*	2gΓn=11.1 meV *36*.
S(n)+4.175 *4*	(−)	(1)	0.0069 *8*	2gΓn=15.1 meV *16*.
S(n)+4.183 *4*	(−)	(1)	0.0085 *4*	2gΓn=18.9 meV *8*.
S(n)+4.194 *4*	(−)	(1)	0.0077 *4*	2gΓn=17.0 meV *8*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	gΓnΓγ/Γ (eV)†	Comments
S(n)+4.2045 *8*	[5](−)	(1)	0.0103 *4*	2gΓn=23.5 meV *8*.
S(n)+4.2274 *9*	[4](−)	(1)	0.0074 *5*	2gΓn=16.2 meV *10*.
S(n)+4.2365 *3*	[5](−)	(1)	0.0171 *5*	2gΓn=43 meV *1*.
S(n)+4.2477 *1*	[5](+)	(0)	0.0384 *7*	2gΓn=104 meV *3*.
S(n)+4.2637 *6*	[5](−)	(1)	0.0132 *4*	2gΓn=31.0 meV *8*.
S(n)+4.2788 *1*	[5](+)	(0)	0.0321 *6*	2gΓn=102 meV *10*.
S(n)+4.2905 *3*	[4](−)	(1)	0.0156 *8*	2gΓn=38.4 meV *16*.
S(n)+4.30850 *9*	[4](+)	(0)	0.0112 *6*	2gΓn=151 meV *7*.
S(n)+4.3160 *1*	[4](+)	(0)	0.0432 *8*	2gΓn=11 meV *10*.
S(n)+4.320 *4*	(−)	(1)	0.0400 *9*	2gΓn=15.4 meV *18*.
S(n)+4.3372 *2*	[5](+)	(0)	0.0205 *6*	2gΓn=57.3 meV *12*.
S(n)+4.3559 *4*	[5](+)	(0)	0.0144 *8*	2gΓn=36.0 meV *16*. E(n)=4362 *4* in 1982Ma27.
S(n)+4.3597 *2*	[5](+)	(0)	0.0748 *12*	2gΓn=141 meV *14*.
S(n)+4.3726 *2*	[4](+)	(0)	0.0238 *12*	2gΓn=71.0 meV *24*.
S(n)+4.38240 *4*	[5](+)	(0)	0.0537& *15*	2gΓn=585 meV *12*, Γγ=0.146 eV *7*.
S(n)+4.3885 *5*	[5](−)	(1)	0.0185 *15*	E(n)=4395 eV *4* in 1982Ma27. 2gΓn=40.4 meV *40*.
S(n)+4.3973 *2*	[4](+)	(0)	0.0248 *13*	2gΓn=49 meV *3*.
S(n)+4.4213 *5*	[6](−)	(1)	0.0199& *9*	2gΓn=23.7 meV *30*.
S(n)+4.4299 *9*	[5](−)	(1)		2gΓn=14.1 meV *30*.
S(n)+4.4394 *2*	[5](−)	(1)	0.0287 *11*	2gΓn=90 meV *4*.
S(n)+4.458 *4*	(−)	(1)	0.0101 *9*	2gΓn=23.5 meV *18*.
S(n)+4.46630 *9*	[5](+)	(0)	0.0364 *12*	2gΓn=142 meV *2*.
S(n)+4.4931 *4*	[5](−)	(1)	0.0079 *14*	2gΓn=17.5 meV *28*.
S(n)+4.4995 *1*	[5](+)	(0)	0.0586 *24*	2gΓn=221 meV *5*.
S(n)+4.5047 *1*	[5](+)	(0)	0.0758 *21*	2gΓn=189 meV *4*.
S(n)+4.5243 *5*	[4](−)	(1)	0.0212 *10*	2gΓn=63 meV *2*.
S(n)+4.5488 *2*	[4](+)	(0)	0.1096& *25*	E(n)=4556 eV *4* in 1982Ma27. 2gΓn=134 meV *3*.
S(n)+4.5537 *2*	[4](+)	(0)		2gΓn=135 meV *3*.
S(n)+4.5830 *3*	[5](−)	(1)	0.0217 *12*	2gΓn=59.0 meV *24*.
S(n)+4.5923 *2*	[5](+)	(0)	0.0426 *16*	2gΓn=87 meV *9*.
S(n)+4.6049 *4*	[5](−)	(1)	0.0420 *18*	2gΓn=32 meV *3*.
S(n)+4.624 *4*	(−)	(1)	0.0033 *10*	2gΓn=6.9 meV *20*.
S(n)+4.6310 *4*	[4](−)	(1)	0.0656& *15*	2gΓn=50 meV *5*. E(n)=4638 eV *4* in 1982Ma27.
S(n)+4.6371 *3*	[4](+)	(0)		2gΓn=62.4 meV *62*.
S(n)+4.6484 *7*	[4](−)	(1)	0.0106 *7*	2gΓn=24.3 meV *14*.
S(n)+4.662 *4*		(1)	0.0067 *8*	2gΓn=14.6 meV *16*. E(n) from 1982Ma27. Value of 4076 eV *4* in 2018MuZY seems a misprint.
S(n)+4.6758 *1*	[4](+)	(0)	0.0491 *11*	2gΓn=122 meV *3*.
S(n)+4.69040 *7*	[5](+)	(0)	0.0411 *10*	2gΓn=238 meV *5*, Γγ=0.114 eV *5*.
S(n)+4.7041 *7*	[5](−)	(1)	0.0088 *9*	2gΓn=19.7 meV *18*.
S(n)+4.7131 *2*	[5](+)	(0)	0.0331 *10*	2gΓn=92.8 meV *90*.
S(n)+4.7322 *23*	[5](−)	(1)		2gΓn=33 meV *33*.
S(n)+4.7347 *4*	[5](+)	(0)	0.0745& *12*	2gΓn=209 meV *21*.
S(n)+4.7751 *2*	[5](+)	(0)		2gΓn=105.7 meV *11*.
S(n)+4.7803 *4*	[4](−)	(1)	0.0821 *18*	2gΓn=58.6 meV *50*.
S(n)+4.798 *4*	(−)	(1)	0.0101 *7*	2gΓn=23.0 meV *14*.
S(n)+4.8146 *8*	[3](−)	(1)		2gΓn=23 meV *2*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	gΓnΓγ/Γ (eV)†	Comments
S(n)+4.82110 *6*	[5](+)	(0)	0.0914 *20*	2gΓn=428 meV *8*.
S(n)+4.8329 *2*	[4](+)	(0)	0.0323 *11*	2gΓn=82.2 meV *82*.
S(n)+4.8416 *2*	[5](+)	(0)	0.0238 *13*	2gΓn=71.0 meV *26*.
S(n)+4.86210 *7*	[4](+)	(0)	0.0819 *20*	2gΓn=258 meV *5*.
S(n)+4.8714 *2*	[4](+)	(0)	0.0392 *12*	2gΓn=99 meV *10*.
S(n)+4.8999 *9*	[5](−)	(1)	0.0161 *6*	2gΓn=18.9 meV *40*.
S(n)+4.9114 *4*	[5](−)	(1)	0.0191 *6*	2gΓn=37 meV *5*.
S(n)+4.92790 *7*	[5](+)	(0)	0.0577 *10*	2gΓn=264 meV *5*.
S(n)+4.9443 *4*	[5](−)	(1)	0.0118 *8*	2gΓn=27.5 meV *16*.
S(n)+4.950			0.0194 *7*	E(level): from 2000Gu13, resonance is not listed in 2018MuZY.
S(n)+4.9604 *1*	[4](+)	(0)	0.0590 *11*	2gΓn=144 meV *3*.
S(n)+4.9691 *4*	[4](−)	(1)	0.0260 *11*	2gΓn=52 meV *10*.
S(n)+4.9858 *8*	[5](−)	(1)	0.0074 *8*	2gΓn=16 meV *3*.
S(n)+4.9905 *3*	[5](+)	(0)	0.0410 *9*	2gΓn=109 meV *11*.
S(n)+5.00390 *7*	[5](+)	(0)	0.044 *1*	2gΓn=289 meV *6*, Γγ=0.141 eV *7*.
S(n)+5.0135 *1*	[4](+)	(0)	0.0463 *11*	2gΓn=155 meV *3*.
S(n)+5.0266 *4*	[5](−)	(1)	0.0198 *7*	2gΓn=52.0 meV *14*.
S(n)+5.0463 *1*	[5](+)	(0)	0.0536 *10*	2gΓn=165 meV *8*.
S(n)+5.0629 *2*	[5](+)	(0)	0.0576 *13*	2gΓn=78.5 meV *80*.
S(n)+5.0943 *2*	[4](+)	(0)		2gΓn=104.4 meV *10*.
S(n)+5.1180 *5*	[5](−)	(1)		2gΓn=47.1 meV *47*.
S(n)+5.1290 *5*	[5](−)	(1)		2gΓn=43.1 meV *43*.
S(n)+5.1371 *3*	[4](−)	(1)		2gΓn=65.8 meV *66*.
S(n)+5.1492 *5*	[4](+)	(0)		2gΓn=101 meV *10*.
S(n)+5.1535 *4*	[4](+)	(0)		2gΓn=122 meV *12*.
S(n)+5.1853 *5*	[4](−)	(1)		2gΓn=41.0 meV *41*.
S(n)+5.1933 *2*	[5](+)	(0)		2gΓn=124.3 meV *12*.
S(n)+5.2012 *3*	[4](+)	(0)		2gΓn=93.6 meV *94*.
S(n)+5.2086 *5*	[4](−)	(1)		2gΓn=44.7 meV *45*.
S(n)+5.2257 *7*	[4](−)	(1)		2gΓn=27.1 meV *27*.
S(n)+5.2439 *4*	[5](−)	(1)		2gΓn=50.2 meV *50*.
S(n)+5.2695 *3*	[4](+)	(0)		2gΓn=75.7 meV *76*.
S(n)+5.2777 *6*	[5](−)	(1)		2gΓn=51.9 meV *52*.
S(n)+5.2844 *6*	[4](−)	(1)		2gΓn=46.9 meV *47*.
S(n)+5.30750 *9*	[5](+)	(0)		2gΓn=526 meV *53*.
S(n)+5.3126 *3*	[5](+)	(0)		2gΓn=186 meV *19*.
S(n)+5.3244 *3*	[5](−)	(1)		2gΓn=66.6 meV *67*.
S(n)+5.3358 *3*	[4](+)	(0)		2gΓn=81.2 meV *81*.
S(n)+5.3590 *2*	[4](+)	(0)		2gΓn=132.3 meV *13*.
S(n)+5.3663 *3*	[5](+)	(0)		2gΓn=115.5 meV *12*.
S(n)+5.3788 *3*	[5](+)	(0)		2gΓn=82.2 meV *82*.
S(n)+5.3914 *3*	[5](−)	(1)		2gΓn=71.3 meV *71*.
S(n)+5.4059 *1*	[5](+)	(0)		2gΓn=217.8 meV *22*.
S(n)+5.4254 *1*	[4](+)	(0)		2gΓn=258.3 meV *26*.
S(n)+5.4354 *3*	[5](+)	(0)		2gΓn=88.4 meV *88*.
S(n)+5.4438 *4*	[4](−)	(1)		2gΓn=74.9 meV *75*.
S(n)+5.4751 *9*	[5](−)	(1)		2gΓn=27.6 meV *28*.
S(n)+5.4830 *3*	[4](+)	(0)		2gΓn=92.7 meV *93*.
S(n)+5.4930 *1*	[4](+)	(0)		2gΓn=215.1 meV *22*.
S(n)+5.5328 *1*	[4](+)	(0)		2gΓn=190.8 meV *19*.
S(n)+5.5505 *3*	[5](+)	(0)		2gΓn=78.8 meV *79*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	Comments
S(n)+5.56090 *9*	[4](+)	(0)	2gΓn=296 meV *3*.
S(n)+5.5800 *2*	[4](+)	(0)	2gΓn=163.8 meV *16*.
S(n)+5.60180 *9*	[4](+)	(0)	2gΓn=309.6 meV *31*.
S(n)+5.6232 *2*	[5](+)	(0)	2gΓn=154.0 meV *15*.
S(n)+5.6387 *12*	[4](−)	(1)	2gΓn=20.2 meV *20*.
S(n)+5.6653 *22*	[6](−)	(1)	2gΓn=11.0 meV *11*.
S(n)+5.6797 *3*	[4](+)	(0)	2gΓn=95.4 meV *95*.
S(n)+5.6903 *2*	[5](+)	(0)	2gΓn=171.6 meV *17*.
S(n)+5.6975 *3*	[5](+)	(0)	2gΓn=130.9 meV *13*.
S(n)+5.7267 *2*	[5](+)	(0)	2gΓn=177.1 meV *18*.
S(n)+5.74160 *6*	[5](+)	(0)	2gΓn=543.4 meV *54*.
S(n)+5.7544 *2*	[5](+)	(0)	2gΓn=160.6 meV *16*.
S(n)+5.7654 *3*	[5](+)	(0)	2gΓn=94.6 meV *95*.
S(n)+5.7767 *2*	[4](+)	(0)	2gΓn=117.0 meV *12*.
S(n)+5.7943 *11*	[5](−)	(1)	2gΓn=56 meV *56*.
S(n)+5.7990 *6*	[4](+)	(0)	2gΓn=124 meV *12*.
S(n)+5.8162 *1*	[5](+)	(0)	2gΓn=417 meV *42*.
S(n)+5.8234 *16*	[5](−)	(1)	2gΓn=24.1 meV *24*.
S(n)+5.8395 *2*	[5](+)	(0)	2gΓn=205 meV *21*.
S(n)+5.8456 *5*	[5](+)	(0)	2gΓn=10 meV *10*.
S(n)+5.8599 *8*	[6](−)	(1)	2gΓn=34.8 meV *35*.
S(n)+5.8785 *2*	[4](+)	(0)	2gΓn=207.0 meV *20*.
S(n)+5.8874 *3*	[5](+)	(0)	2gΓn=146.3 meV *15*.
S(n)+5.9049 *10*	[4](−)	(1)	2gΓn=37.0 meV *37*.
S(n)+5.9242 *3*	[5](+)	(0)	2gΓn=146.3 meV *15*.
S(n)+5.9313 *4*	[5](+)	(0)	2gΓn=104.5 meV *11*.
S(n)+5.9551 *2*	[5](+)	(0)	2gΓn=123.2 meV *12*.
S(n)+5.9800 *2*	[5](+)	(0)	2gΓn=317 meV *32*.
S(n)+5.9859 *3*	[5](+)	(0)	2gΓn=244 meV *24*.
S(n)+6.016 *11*	[5](−)	(1)	2gΓn=17 meV *17*.
S(n)+6.0246 *11*	[4](−)	(1)	2gΓn=36.4 meV *37*.
S(n)+6.0320 *5*	[5](+)	(0)	2gΓn=90.5 meV *91*.
S(n)+6.0678 *16*	[5](−)	(1)	2gΓn=32 meV *32*.
S(n)+6.0750 *2*	[4](+)	(0)	2gΓn=594 meV *59*.
S(n)+6.0819 *8*	[5](−)	(1)	2gΓn=60 meV *60*.
S(n)+6.12240 *6*	[5](+)	(0)	2gΓn=715.0 meV *72*.
S(n)+6.1462 *2*	[4](+)	(0)	2gΓn=135.0 meV *13*.
S(n)+6.1749 *1*	[5](+)	(0)	2gΓn=311.3 meV *31*.
S(n)+6.1875 *6*	[5](+)	(0)	2gΓn=102 meV *10*.
S(n)+6.1939 *4*	[5](+)	(0)	2gΓn=153 meV *15*.
S(n)+6.2058 *5*	[4](−)	(1)	2gΓn=67.4 meV *67*.
S(n)+6.2277 *2*	[5](+)	(0)	2gΓn=147.4 meV *15*.
S(n)+6.2695 *5*	[4](−)	(1)	2gΓn=65.7 meV *66*.
S(n)+6.2823 *10*	[4](−)	(1)	2gΓn=35.6 meV *36*.
S(n)+6.3014 *7*	[4](−)	(1)	2gΓn=47.9 meV *48*.
S(n)+6.3374 *3*	[5](+)	(0)	2gΓn=104.9 meV *11*.
S(n)+6.3528 *10*	[3](−)	(1)	2gΓn=28.3 meV *28*.
S(n)+6.3665 *4*	[4](−)	(1)	2gΓn=83.2 meV *83*.
S(n)+6.3805 *4*	[5](+)	(0)	2gΓn=86.3 meV *86*.
S(n)+6.4092 *9*	[5](−)	(1)	2gΓn=38.4 meV *38*.
S(n)+6.4353 *2*	[5](+)	(0)	2gΓn=240.9 meV *24*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)[†]	Jπ[#]	L[‡]	Comments
S(n)+6.4492 *2*	[4](+)	(0)	2gΓn=309 meV *31*.
S(n)+6.4587 *4*	[4](+)	(0)	2gΓn=173 meV *17*.
S(n)+6.4671 *12*	[4](−)	(1)	2gΓn=42 meV *42*.
S(n)+6.4845 *9*	[6](−)	(1)	2gΓn=39.9 meV *40*.
S(n)+6.5040 *4*	[4](−)	(1)	2gΓn=93.6 meV *94*.
S(n)+6.5456 *5*	[5](+)	(0)	2gΓn=345 meV *35*.
S(n)+6.5494 *10*	[5](+)	(0)	2gΓn=207 meV *21*.
S(n)+6.5592 *3*	[5](+)	(0)	2gΓn=295 meV *30*.
S(n)+6.5674 *3*	[4](+)	(0)	2gΓn=274 meV *27*.
S(n)+6.5751 *4*	[5](+)	(0)	2gΓn=189 meV *19*.
S(n)+6.5875 *3*	[5](+)	(0)	2gΓn=126.5 meV *13*.
S(n)+6.6048 *5*	[4](−)	(1)	2gΓn=85.3 meV *85*.
S(n)+6.6212 *9*	[5](−)	(1)	2gΓn=43.8 meV *44*.
S(n)+6.6433 *5*	[4](−)	(1)	2gΓn=76.6 meV *77*.
S(n)+6.6591 *5*	[5](−)	(1)	2gΓn=80.2 meV *80*.
S(n)+6.6821 *4*	[5](+)	(0)	2gΓn=123.2 meV *12*.
S(n)+6.6919 *8*	[5](−)	(1)	2gΓn=59.0 meV *59*.
S(n)+6.7059 *3*	[4](+)	(0)	2gΓn=393 meV *39*.
S(n)+6.7123 *20*	[5](−)	(1)	2gΓn=49 meV *49*.
S(n)+6.7209 *3*	[5](+)	(0)	2gΓn=281 meV *28*.
S(n)+6.7303 *3*	[5](+)	(0)	2gΓn=215.6 meV *22*.
S(n)+6.7635 *2*	[4](+)	(0)	2gΓn=244.8 meV *24*.
S(n)+6.8162 *4*	[4](+)	(0)	2gΓn=301 meV *30*.
S(n)+6.8215 *6*	[5](+)	(0)	2gΓn=189 meV *19*.
S(n)+6.8805 *4*	[4](+)	(0)	2gΓn=126.9 meV *13*.
S(n)+6.8919 *2*	[5](+)	(0)	2gΓn=211.2 meV *21*.
S(n)+6.9135 *21*	[4](−)	(1)	2gΓn=19.8 meV *20*.
S(n)+6.9362 *7*	[4](−)	(1)	2gΓn=76.7 meV *77*.
S(n)+6.9466 *2*	[5](+)	(0)	2gΓn=450 meV *45*.
S(n)+6.9548 *6*	[5](+)	(0)	2gΓn=111 meV *11*.
S(n)+7.0109 *6*	[5](−)	(1)	2gΓn=83.3 meV *83*.
S(n)+7.039 *12*	[5](−)	(1)	2gΓn=41.8 meV *42*.
S(n)+7.0601 *2*	[5](+)	(0)	2gΓn=211.2 meV *21*.
S(n)+7.0723 *1*	[4](+)	(0)	2gΓn=569 meV *57*.
S(n)+7.0839 *3*	[4](+)	(0)	2gΓn=184 meV *18*.
S(n)+7.0964 *9*	[4](+)	(0)	2gΓn=60.1 meV *60*.
S(n)+7.1160 *5*	[5](+)	(0)	2gΓn=102.5 meV *10*.
S(n)+7.1322 *7*	[4](+)	(0)	2gΓn=185 meV *19*.
S(n)+7.1382 *10*	[5](+)	(0)	2gΓn=195 meV *20*.
S(n)+7.1458 *5*	[4](+)	(0)	2gΓn=263 meV *26*.
S(n)+7.1566 *3*	[5](+)	(0)	2gΓn=182.6 meV *18*.
S(n)+7.1891 *3*	[4](+)	(0)	2gΓn=181 meV *18*.
S(n)+7.2096 *9*	[4](−)	(1)	2gΓn=66 meV *66*.
S(n)+7.2258 *11*	[5](−)	(1)	2gΓn=63 meV *63*.
S(n)+7.2345 *18*	[5](−)	(1)	2gΓn=38 meV *38*.
S(n)+7.2523 *5*	[5](−)	(1)	2gΓn=94.4 meV *94*.
S(n)+7.2664 *3*	[4](+)	(0)	2gΓn=185 meV *19*.
S(n)+7.2898 *9*	[4](−)	(1)	2gΓn=59.0 meV *59*.
S(n)+7.3049 *11*	[5](−)	(1)	2gΓn=56.1 meV *56*.
S(n)+7.31470 *34*	[4](+)	(0)	2gΓn=239 meV *24*.
S(n)+7.3258 *7*	[5](−)	(1)	2gΓn=91.3 meV *91*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)†	Jπ#	L‡	Comments
S(n)+7.3400 *2*	[5](+)	(0)	2gΓn=319.0 meV *32*.
S(n)+7.3541 *5*	[4](−)	(1)	2gΓn=116 meV *12*.
S(n)+7.3737 *4*	[4](+)	(0)	2gΓn=146 meV *15*.
S(n)+7.3840 *13*	[5](−)	(1)	2gΓn=48.5 meV *49*.
S(n)+7.4021 *5*	[5](+)	(0)	2gΓn=121.0 meV *12*.
S(n)+7.4144 *4*	[5](+)	(0)	2gΓn=163.9 meV *16*.
S(n)+7.4415 *2*	[4](+)	(0)	2gΓn=238 meV *24*.
S(n)+7.4658 *3*	[4](+)	(0)	2gΓn=195 meV *20*.
S(n)+7.4809 *4*	[4](+)	(0)	2gΓn=156 meV *16*.
S(n)+7.4968 *4*	[4](+)	(0)	2gΓn=295 meV *30*.
S(n)+7.5025 *8*	[4](+)	(0)	2gΓn=125 meV *13*.
S(n)+7.5393 *20*	[4](−)	(1)	2gΓn=29 meV *29*.
S(n)+7.5556 *13*	[6](−)	(1)	2gΓn=42.6 meV *43*.
S(n)+7.5943 *4*	[4](+)	(0)	2gΓn=140 meV *14*.
S(n)+7.6205 *5*	[5](+)	(0)	2gΓn=163 meV *16*.
S(n)+7.6305 *9*	[5](−)	(1)	2gΓn=81 meV *81*.
S(n)+7.6568 *6*	[5](−)	(1)	2gΓn=104 meV *10*.
S(n)+7.6765 *2*	[5](+)	(0)	2gΓn=275 meV *28*.
S(n)+7.7136 *1*	[5](+)	(0)	2gΓn=548 meV *55*.
S(n)+7.7333 *2*	[5](+)	(0)	2gΓn=339 meV *34*.
S(n)+7.7481 *3*	[4](+)	(0)	2gΓn=243 meV *24*.
S(n)+7.7607 *4*	[4](+)	(0)	2gΓn=206 meV *21*.
S(n)+7.7996 *2*	[4](+)	(0)	2gΓn=284 meV *28*.
S(n)+7.8144 *1*	[5](+)	(0)	2gΓn=614 meV *61*.
S(n)+7.8617 *3*	[5](+)	(0)	2gΓn=242 meV *24*.
S(n)+7.8839 *6*	[4](−)	(1)	2gΓn=104 meV *10*.
S(n)+7.8993 *1*	[5](+)	(0)	2gΓn=584 meV *58*.
S(n)+7.9226 *8*	[5](−)	(1)	2gΓn=119 meV *12*.
S(n)+7.9327 *4*	[4](+)	(0)	2gΓn=328 meV *33*.
S(n)+7.9421 *8*	[5](−)	(1)	2gΓn=125 meV *13*.
S(n)+7.9740 *6*	[5](+)	(0)	2gΓn=145 meV *15*.
S(n)+7.9844 *10*	[4](−)	(1)	2gΓn=83 meV *83*.
S(n)+7.9955 *4*	[4](+)	(0)	2gΓn=265 meV *27*.
S(n)+8.0068 *8*	[5](−)	(1)	2gΓn=107 meV *11*.
S(n)+8.0567 *4*	[4](+)	(0)	2gΓn=197 meV *20*.
S(n)+8.0760 *2*	[5](+)	(0)	2gΓn=660 meV *66*.
S(n)+8.0886 *5*	[5](+)	(0)	2gΓn=298 meV *30*.
S(n)+8.0970 *14*	[5](−)	(1)	2gΓn=86 meV *86*.
S(n)+8.1232 *5*	[5](−)	(1)	2gΓn=140 meV *14*.
S(n)+8.1407 *6*	[5](−)	(1)	2gΓn=117 meV *12*.
S(n)+8.1812 *10*	[5](−)	(1)	2gΓn=122 meV *12*.
S(n)+8.1894 *4*	[5](+)	(0)	2gΓn=298 meV *30*.
S(n)+8.2220 *6*	[4](+)	(0)	2gΓn=195 meV *20*.
S(n)+8.2306 *2*	[4](+)	(0)	2gΓn=639 meV *64*.
S(n)+8.2661 *20*	[5](−)	(1)	2gΓn=38 meV *38*.
S(n)+8.2809 *2*	[4](+)	(0)	2gΓn=390 meV *39*.
S(n)+8.2987 *7*	[4](−)	(1)	2gΓn=111 meV *11*.
S(n)+8.3326 *2*	[5](+)	(0)	2gΓn=413 meV *41*.
S(n)+8.3583 *3*	[5](+)	(0)	2gΓn=295 meV *30*.
S(n)+8.4067 *7*	[4](−)	(1)	2gΓn=145 meV *14*.
S(n)+8.4176 *3*	[4](+)	(0)	2gΓn=342 meV *34*.

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^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

E(level)[†]	Jπ[#]	L[‡]	Comments
S(n)+8.4954 *4*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=243 meV *24*.
S(n)+8.5203 *2*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=378 meV *38*.
S(n)+8.5441 *2*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=637 meV *64*.
S(n)+8.5652 *4*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=214 meV *21*.
S(n)+8.5886 *2*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=424 meV *42*.
S(n)+8.6250 *5*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=175 meV *18*.
S(n)+8.6643 *7*	[5]$^{(-)}$	(1)	$2g\Gamma_n$=123 meV *12*.
S(n)+8.7043 *1*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=855 meV *86*.
S(n)+8.7387 *2*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=628 meV *63*.
S(n)+8.7848 *1*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=909 meV *91*.
S(n)+8.8354 *4*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=265 meV *27*.
S(n)+8.8779 *4*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=273 meV *27*.
S(n)+8.8924 *3*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=423 meV *42*.
S(n)+8.9050 *15*	[5]$^{(-)}$	(1)	$2g\Gamma_n$=73 meV *73*.
S(n)+8.9610 *4*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=270 meV *27*.
S(n)+8.9775 *7*	[5]$^{(-)}$	(1)	$2g\Gamma_n$=136 meV *14*.
S(n)+9.0141 *5*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=246 meV *25*.
S(n)+9.0267 *6*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=199 meV *20*.
S(n)+9.0569 *1*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=976 meV *98*.
S(n)+9.0777 *7*	[5]$^{(-)}$	(1)	$2g\Gamma_n$=147 meV *15*.
S(n)+9.1126 *7*	[5]$^{(-)}$	(1)	$2g\Gamma_n$=154 meV *15*.
S(n)+9.1272 *11*	[4]$^{(-)}$	(1)	$2g\Gamma_n$=97 meV *97*.
S(n)+9.1683 *2*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=860 meV *86*.
S(n)+9.2166 *3*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=442 meV *44*.
S(n)+9.2317 *3*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=386 meV *39*.
S(n)+9.2572 *5*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=208 meV *21*.
S(n)+9.2765 *2*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=738 meV *74*.
S(n)+9.2933 *16*	[5]$^{(-)}$	(1)	$2g\Gamma_n$=74 meV *74*.
S(n)+9.3103 *3*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=496 meV *50*.
S(n)+9.3235 *7*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=203 meV *20*.
S(n)+9.3528 *4*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=278 meV *28*.
S(n)+9.3793 *9*	[5]$^{(-)}$	(1)	$2g\Gamma_n$=122 meV *12*.
S(n)+9.4021 *6*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=207 meV *21*.
S(n)+9.4336 *5*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=240 meV *24*.
S(n)+9.4516 *2*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=551 meV *55*.
S(n)+9.4754 *4*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=278 meV *28*.
S(n)+9.5202 *9*	[4]$^{(-)}$	(1)	$2g\Gamma_n$=122 meV *12*.
S(n)+9.5709 *10*	[5]$^{(-)}$	(1)	$2g\Gamma_n$=127 meV *13*.
S(n)+9.5865 *8*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=220 meV *22*.
S(n)+9.5978 *3*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=528 meV *53*.
S(n)+9.6281 *20*	[5]$^{(-)}$	(1)	$2g\Gamma_n$=78 meV *78*.
S(n)+9.6536 *6*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=205 meV *21*.
S(n)+9.6964 *6*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=241 meV *24*.
S(n)+9.7111 *7*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=217 meV *22*.
S(n)+9.7381 *2*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=945 meV *94*.
S(n)+9.8128 *6*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=248 meV *25*.
S(n)+9.8285 *3*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=576 meV *58*.
S(n)+9.8568 *6*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=233 meV *23*.
S(n)+9.9930 *4*	[4]$^{(+)}$	(0)	$2g\Gamma_n$=360 meV *36*.
S(n)+10.0190 *3*	[5]$^{(+)}$	(0)	$2g\Gamma_n$=537 meV *54*.

Continued on next page (footnotes at end of table)

^{99}Tc(n,γ),(n,n):resonances 2018MuZY,2020No07 (continued)

^{100}Tc Levels (continued)

† From 2018MuZY evaluation based on studies of 1982Ma27, 2000Gu13, and up to 1 keV in 2020No07. Energies and Γ_n widths from 2020No07 are mostly given under comments, where Γ_γ is set at 137.0 eV *70* unless otherwise listed.

‡ From 2018MuZY.

$4^+,5^+$ for s-wave (L=0) and $3^-,4^-,5^-,6^-$ for p-wave (L=1) resonance. Specific assignments, assumed or otherwise, are from 2018MuZY evaluation, unless otherwise indicated.

@ From 2020No07.

& For unresolved doublet in capture experiment.