^{100}Mo(^{3}He,pnγ) 1997Sa01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2006

^{101}Tc Levels

E(level)	J^{π}[†]	$T_{1/2}$	Comments
0.0[‡]	$9/2^+$	14.22 min *1*	
9.32 *5*	$7/2^+$		
15.64 *8*	$5/2^+$		
207.43 *9*	$1/2^-$		
288.32[#] *8*	$3/2^-$		J^{π}: $1/2^-$ or $3/2^-$ from L=1 (^{3}He,d) fed by Dipole from $5/2^-$.
394.37[#] *8*	$5/2^-$		
500.36 *8*	$5/2^-$		
515.08 *7*	$5/2^+$		
533.50 *5*	$7/2^+$		
588.99[‡] *5*	$11/2^+$		
606.52 *9*	$1/2^+,3/2^+$		
616.00 *9*	$3/2^-$		
618.30[#] *8*	$7/2^-$		
622.02 *9*	$1/2^-,3/2^-$		
642.19[‡] *9*	$13/2^+$		
669.34 *9*	$3/2^-,(5/2^-)$		
676.47 *9*	$5/2^-$		
711.33 *12*	$3/2^+,5/2^+$		
777.57 *11*	$7/2^-$		
884.40[#] *9*	$9/2^-$		
980.44 *9*	$3/2^-,5/2^-$		
1028.17 *10*	$3/2^+$		
1034.04 *9*	$5/2^-,(7/2^-)$		
1042.48 *9*	$9/2^-$		
1102.90 *11*	$7/2^-,(3/2^-,5/2^-)$		
1170.60 *9*	$11/2^-$		
1174.97 *13*			
1187.41 *14*	$3/2^-,5/2^-$		
1191.37 *14*	$5/2^-,7/2^-$		
1232.05 *13*			
1249.53 *11*			
1264.59 *9*	$13/2^+,(15/2^+)$		
1270.88 *11*			
1295.09 *13*	$9/2^+,11/2^+$		
1319.75 *10*	$3/2^+,5/2^+$		
1322.9 *2*	$5/2^+,7/2^+,9/2^+$		
1331.09[‡] *13*	$15/2^+,(13/2^+)$		
1399.6[‡] *3*	$17/2^+$		
1420.4 *3*	$7/2^-,9/2^-,11/2^-$		
1421.7 *3*	$3/2^+,5/2^+$		
1441.85 *13*			
1477.9 *3*	$7/2^-$		
1498.72[#] *10*	$11/2^-,13/2^-$		
1520.97 *14*			
1534.69 *11*	$9/2^+,13/2^+$		
1558.79 *11*			
1564.89 *12*			

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^{100}Mo(^{3}He,pnγ) 1997Sa01 (continued)

^{101}Tc Levels (continued)

E(level)
1579.40 *13*
1594.75 *12*
1806.33 *13*
1844.00 *14*
1892.5 *10*
1928.79 *12*

† J^{π} as given by 1997Sa01, based on the gammas decay properties derived from DCO and excitation functions.
‡ Band(A): π $g_{9/2}$ band.
# Band(B): negative-parity band. Possible π $p_{1/2}$ configuration.

γ(^{101}Tc)

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
9.32		9.32	$7/2^+$	0.0	$9/2^+$		E_γ: from Adopted Levels, gammas.
15.60		15.64	$5/2^+$	0.0	$9/2^+$		E_γ: from Adopted Levels, gammas.
80.76 *5*	1000	288.32	$3/2^-$	207.43	$1/2^-$		
106.01 *5*	20	500.36	$5/2^-$	394.37	$5/2^-$		
106.05 *5*	213	394.37	$5/2^-$	288.32	$3/2^-$		
117.84 *5*	45	618.30	$7/2^-$	500.36	$5/2^-$		
169.2 *1*	15	669.34	$3/2^-$,$(5/2^-)$	500.36	$5/2^-$		
176.3 *1*	18	676.47	$5/2^-$	500.36	$5/2^-$		
191.92		207.43	$1/2^-$	15.64	$5/2^+$		E_γ: from Adopted Levels, gammas.
196.0 *5*	38	711.33	$3/2^+$,$5/2^+$	515.08	$5/2^+$		
212.06 *5*	352	500.36	$5/2^-$	288.32	$3/2^-$	D	
221.1 *5*	8	616.00	$3/2^-$	394.37	$5/2^-$		E_γ: The 221γ is placed from an 742 level in decay studies.
224.0 *1*	141	618.30	$7/2^-$	394.37	$5/2^-$		
256.4 *1*	6	1034.04	$5/2^-$,$(7/2^-)$	777.57	$7/2^-$		
265.0 *1*	6	1042.48	$9/2^-$	777.57	$7/2^-$		
266.02 *5*	62	884.40	$9/2^-$	618.30	$7/2^-$		
275.0 *1*	31	669.34	$3/2^-$,$(5/2^-)$	394.37	$5/2^-$		
277.5 *5*	100	777.57	$7/2^-$	500.36	$5/2^-$		
282.0 *1*	24	676.47	$5/2^-$	394.37	$5/2^-$		
286.10 *5*	16	1170.60	$11/2^-$	884.40	$9/2^-$		
311.16 *5*	39	980.44	$3/2^-$,$5/2^-$	669.34	$3/2^-$,$(5/2^-)$		
327.8 *1*	12	1498.72	$11/2^-$,$13/2^-$	1170.60	$11/2^-$		
327.9 *1*	28	616.00	$3/2^-$	288.32	$3/2^-$		
329.90 *5*	77	618.30	$7/2^-$	288.32	$3/2^-$		
333.63 *5*	105	622.02	$1/2^-$,$3/2^-$	288.32	$3/2^-$		
358.37 *5*	9	980.44	$3/2^-$,$5/2^-$	622.02	$1/2^-$,$3/2^-$		
362.1 *1*	5	980.44	$3/2^-$,$5/2^-$	618.30	$7/2^-$		
364.6 *1*	13	1034.04	$5/2^-$,$(7/2^-)$	669.34	$3/2^-$,$(5/2^-)$		
378.74 *5*	256	394.37	$5/2^-$	15.64	$5/2^+$		
380.99 *5*	134	669.34	$3/2^-$,$(5/2^-)$	288.32	$3/2^-$		
385.1 *1*	35	394.37	$5/2^-$	9.32	$7/2^+$		
386.2 *1*	7	1270.88		884.40	$9/2^-$		
393.6 *1*	9	1421.7	$3/2^+$,$5/2^+$	1028.17	$3/2^+$		
408.65 *5*	150	616.00	$3/2^-$	207.43	$1/2^-$		
415.79 *5*	27	1034.04	$5/2^-$,$(7/2^-)$	618.30	$7/2^-$		
424.13 *5*	29	1042.48	$9/2^-$	618.30	$7/2^-$		
469.07 *5*	137	676.47	$5/2^-$	207.43	$1/2^-$		

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^{100}Mo(^{3}He,pnγ) 1997Sa01 (continued)

$\gamma(^{101}Tc)$ (continued)

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Comments
480.8 *1*	3	1102.90	$7/2^-$,$(3/2^-,5/2^-)$	622.02	$1/2^-$,$3/2^-$	
484.75 *5*	51	500.36	$5/2^-$	15.64	$5/2^+$	E_γ: a 491γ is seen in all decay studies.
490.0 *1*	71	884.40	$9/2^-$	394.37	$5/2^-$	
499.56 *5*	35	515.08	$5/2^+$	15.64	$5/2^+$	
505.7 *1*	158	515.08	$5/2^+$	9.32	$7/2^+$	
514.9 *1*	28	1191.37	$5/2^-$,$7/2^-$	676.47	$5/2^-$	
515.1 *1*	22	515.08	$5/2^+$	0.0	$9/2^+$	E_γ: The 515γ is placed from an 1122 level in decay studies.
524.18 *5*	56	533.50	$7/2^+$	9.32	$7/2^+$	
533.50 *5*	145	533.50	$7/2^+$	0.0	$9/2^+$	
533.6 *1*	12	1034.04	$5/2^-$,$(7/2^-)$	500.36	$5/2^-$	
536.1 *1*	12	1420.4	$7/2^-$,$9/2^-$,$11/2^-$	884.40	$9/2^-$	
542.2 *1*	17	1042.48	$9/2^-$	500.36	$5/2^-$	
552.31 *5*	57	1170.60	$11/2^-$	618.30	$7/2^-$	
562.7 *1*	5	1232.05		669.34	$3/2^-$,$(5/2^-)$	
566.4 *1*	4	1594.75		1028.17	$3/2^+$	
571.4 *1*	19	1187.41	$3/2^-$,$5/2^-$	616.00	$3/2^-$	
579.67 *5*	39	588.99	$11/2^+$	9.32	$7/2^+$	
586.1 *1*	6	980.44	$3/2^-$,$5/2^-$	394.37	$5/2^-$	
588.98 *5*	163	588.99	$11/2^+$	0.0	$9/2^+$	
590.80 *5*	180	606.52	$1/2^+$,$3/2^+$	15.64	$5/2^+$	
594.7 *1*	31	1270.88		676.47	$5/2^-$	
602.60 *5*	14	618.30	$7/2^-$	15.64	$5/2^+$	
602.6 *1*	8	1102.90	$7/2^-$,$(3/2^-,5/2^-)$	500.36	$5/2^-$	
608.2 *1*	7	1319.75	$3/2^+$,$5/2^+$	711.33	$3/2^+$,$5/2^+$	
614.39 *5*	20	1498.72	$11/2^-$,$13/2^-$	884.40	$9/2^-$	
622.4 *1*	17	1264.59	$13/2^+$,$(15/2^+)$	642.19	$13/2^+$	
631.1 *1*	5	1249.53		618.30	$7/2^-$	
639.7 *1*	16	1034.04	$5/2^-$,$(7/2^-)$	394.37	$5/2^-$	
642.2 *1*	200	642.19	$13/2^+$	0.0	$9/2^+$	
642.2 *1*	8	1420.4	$7/2^-$,$9/2^-$,$11/2^-$	777.57	$7/2^-$	
652.9 *1*	16	1295.09	$9/2^+$,$11/2^+$	642.19	$13/2^+$	
673.4 *1*	15	1844.00		1170.60	$11/2^-$	
674.6 *1*	5	1174.97		500.36	$5/2^-$	
675.6 *1*	21	1264.59	$13/2^+$,$(15/2^+)$	588.99	$11/2^+$	
688.9 *1*	23	1331.09	$15/2^+$,$(13/2^+)$	642.19	$13/2^+$	
695.0 *1*	11	1579.40		884.40	$9/2^-$	
695.6 *2*	115	711.33	$3/2^+$,$5/2^+$	15.64	$5/2^+$	
713.0 *1*	18	1319.75	$3/2^+$,$5/2^+$	606.52	$1/2^+$,$3/2^+$	
741.9 *5*	11	1331.09	$15/2^+$,$(13/2^+)$	588.99	$11/2^+$	
749.3 *1*	6	1249.53		500.36	$5/2^-$	
757.37 *5*	46	1399.6	$17/2^+$	642.19	$13/2^+$	
772.5 *1*	7	1441.85		669.34	$3/2^-$,$(5/2^-)$	
789.4 *1*	12	1322.9	$5/2^+$,$7/2^+$,$9/2^+$	533.50	$7/2^+$	
805.1 *5*	8	1319.75	$3/2^+$,$5/2^+$	515.08	$5/2^+$	
815.18 *5*	37	1421.7	$3/2^+$,$5/2^+$	606.52	$1/2^+$,$3/2^+$	
844.5 *1*	5	1520.97		676.47	$5/2^-$	
883.6 *1*	7	1594.75		711.33	$3/2^+$,$5/2^+$	
940.0 *5*	4	1558.79		618.30	$7/2^-$	
945.7 *1*	7	1534.69	$9/2^+$,$13/2^+$	588.99	$11/2^+$	
977.5 *1*	8	1477.9	$7/2^-$	500.36	$5/2^-$	
1012.4 *1*	96	1028.17	$3/2^+$	15.64	$5/2^+$	
1049.8 *1*	20	1564.89		515.08	$5/2^+$	
1164.9 *5*	6	1558.79		394.37	$5/2^-$	
1199.8 *1*	6	1806.33		606.52	$1/2^+$,$3/2^+$	
1286 *1*	6	1892.5		606.52	$1/2^+$,$3/2^+$	
1413.7 *1*	5	1928.79		515.08	$5/2^+$	

^{100}Mo(^{3}He,pnγ) 1997Sa01

Level Scheme

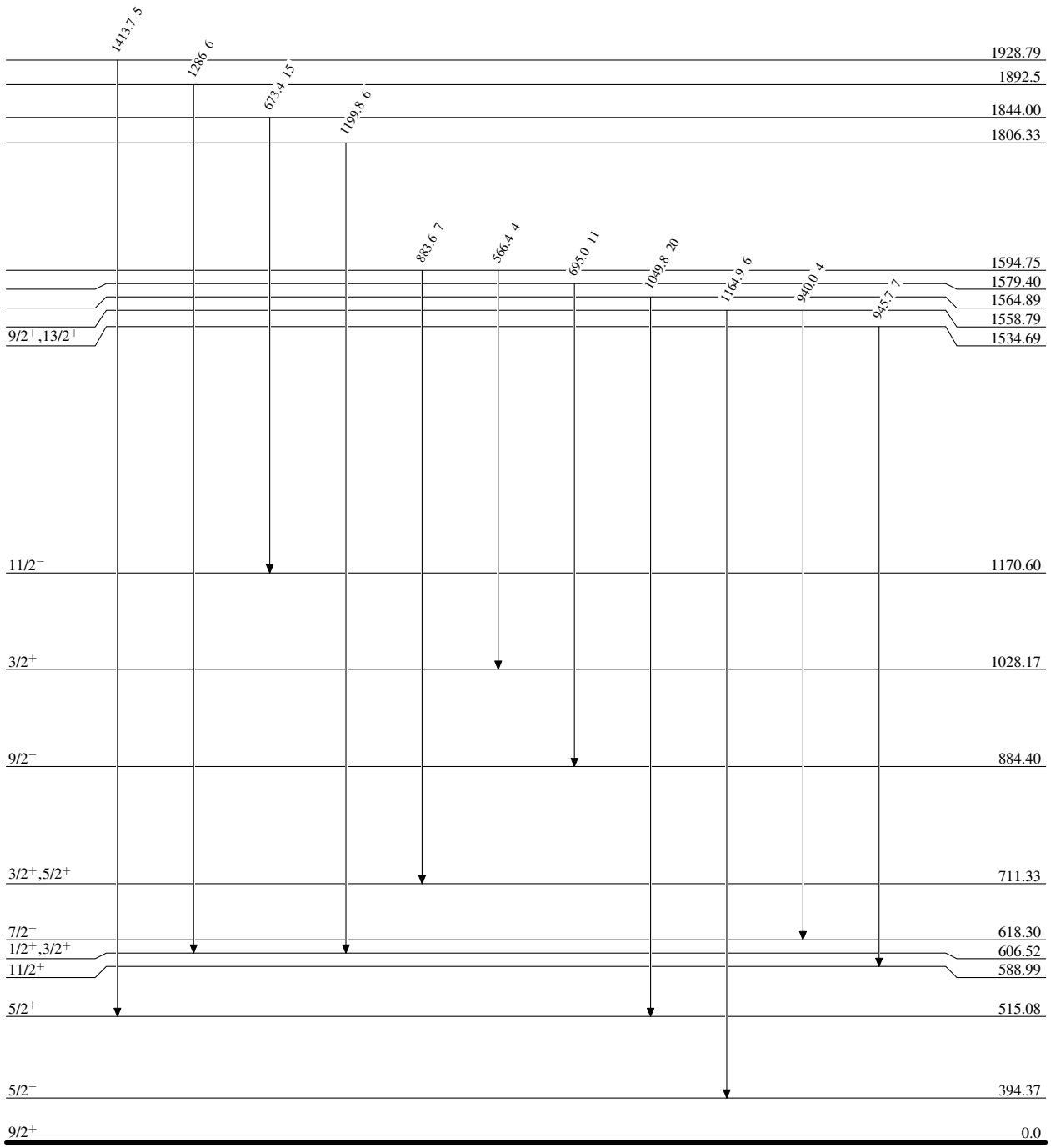
Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{101}_{43}Tc_{58}$

^{100}Mo(^{3}He,pnγ) 1997Sa01

Level Scheme (continued)

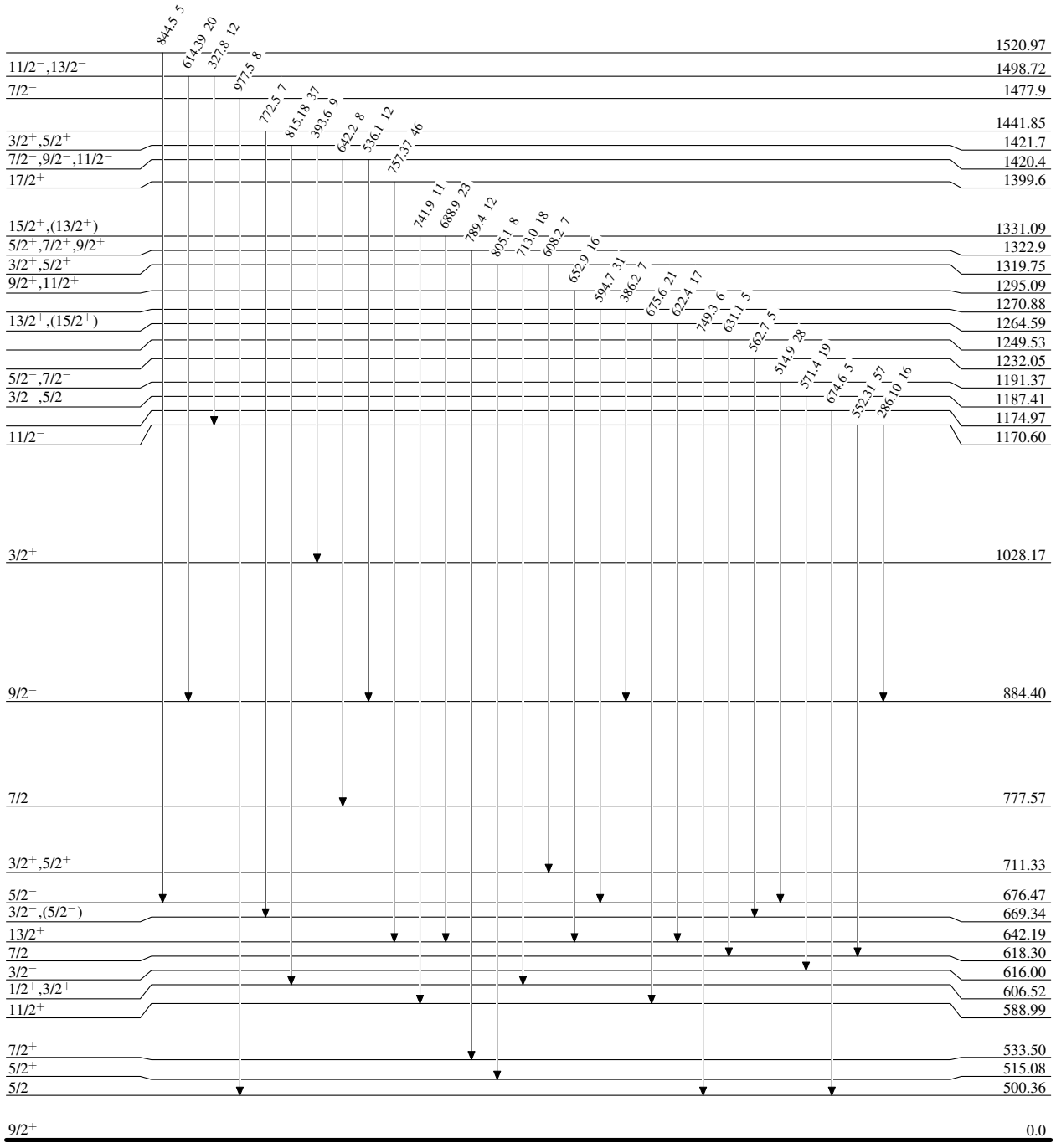
Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{101}_{43}Tc_{58}$

^{100}Mo(^{3}He,pnγ) 1997Sa01

Level Scheme (continued)

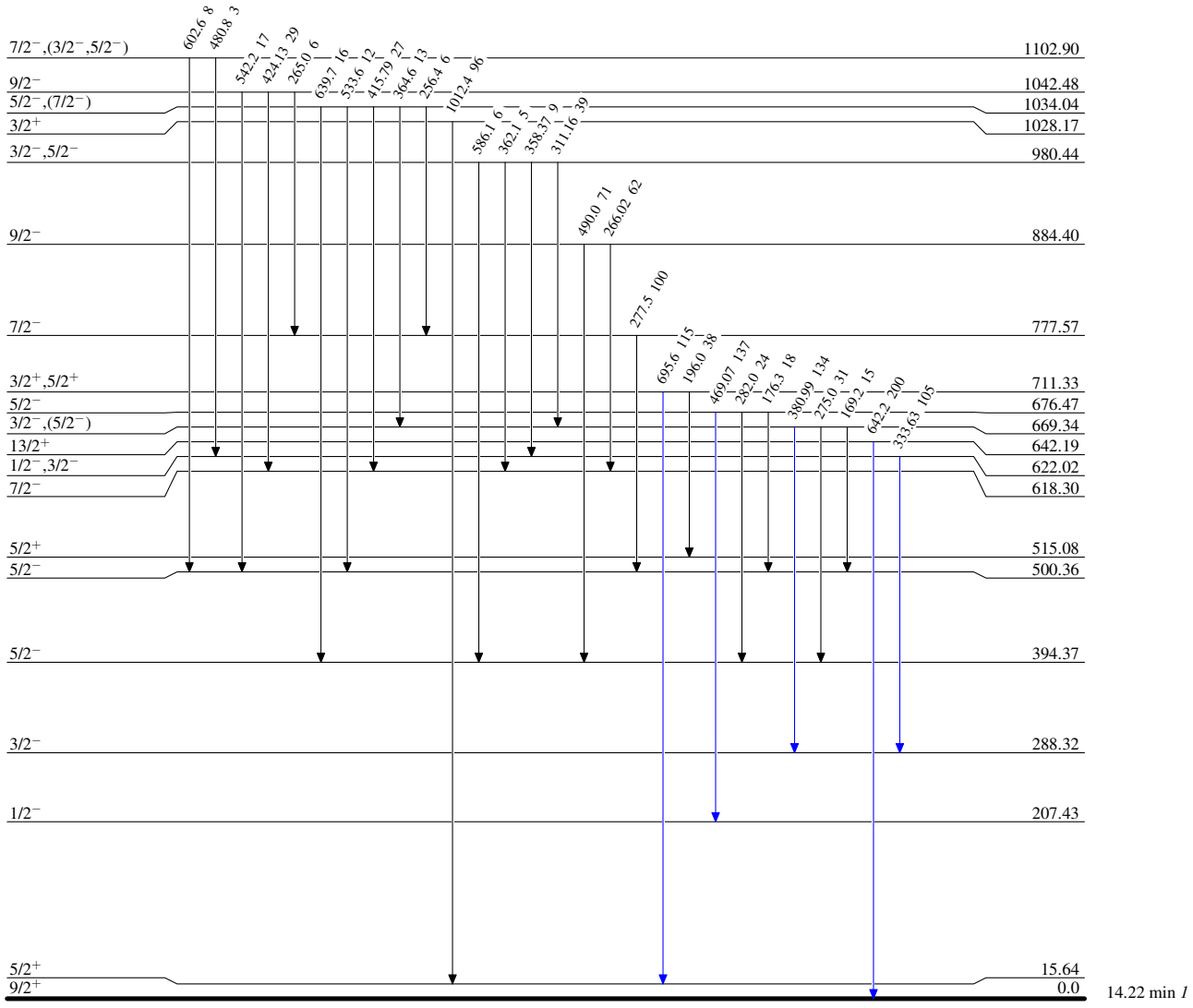
Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

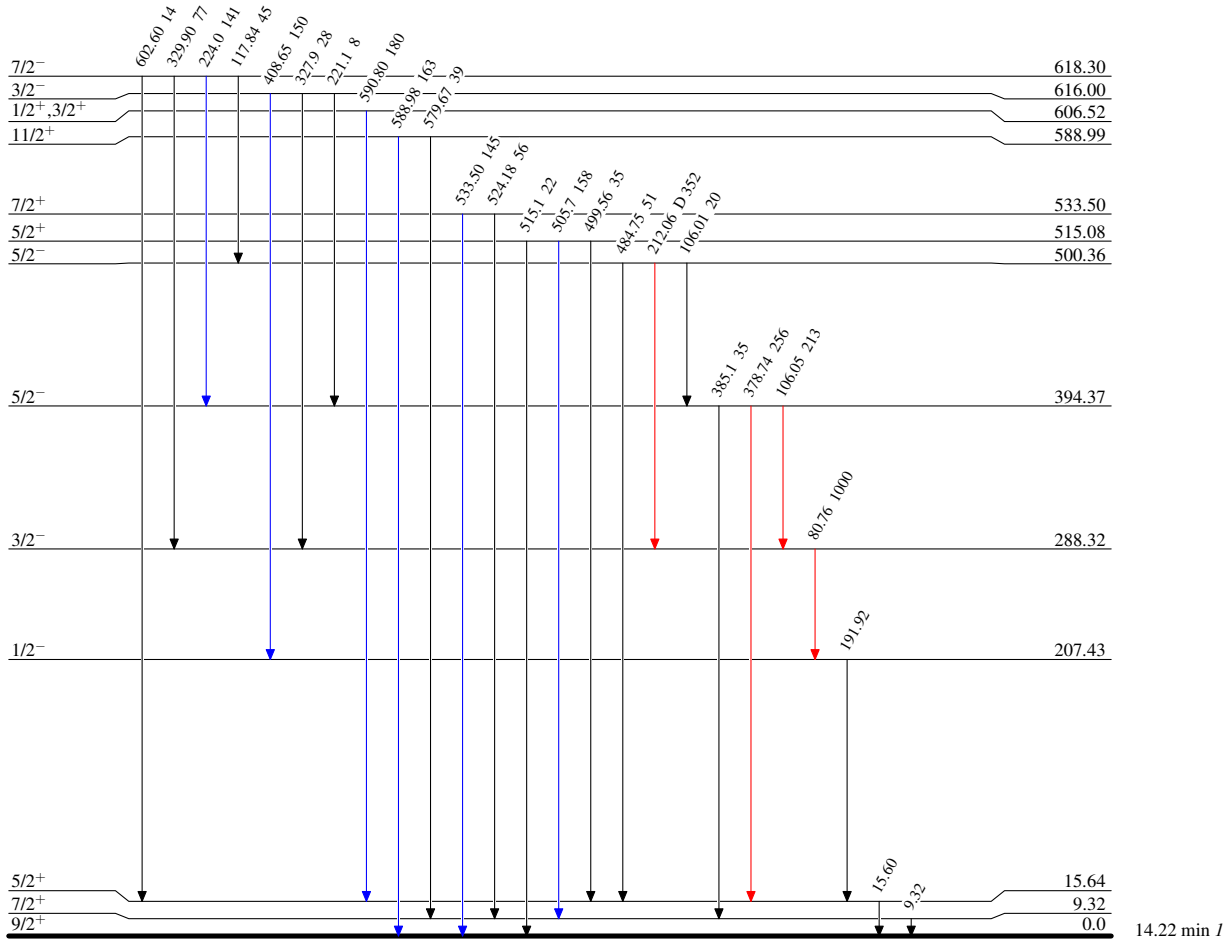


$^{101}_{43}Tc_{58}$

^{100}Mo(^{3}He,pnγ) 1997Sa01

Level Scheme (continued)

Intensities: Type not specified



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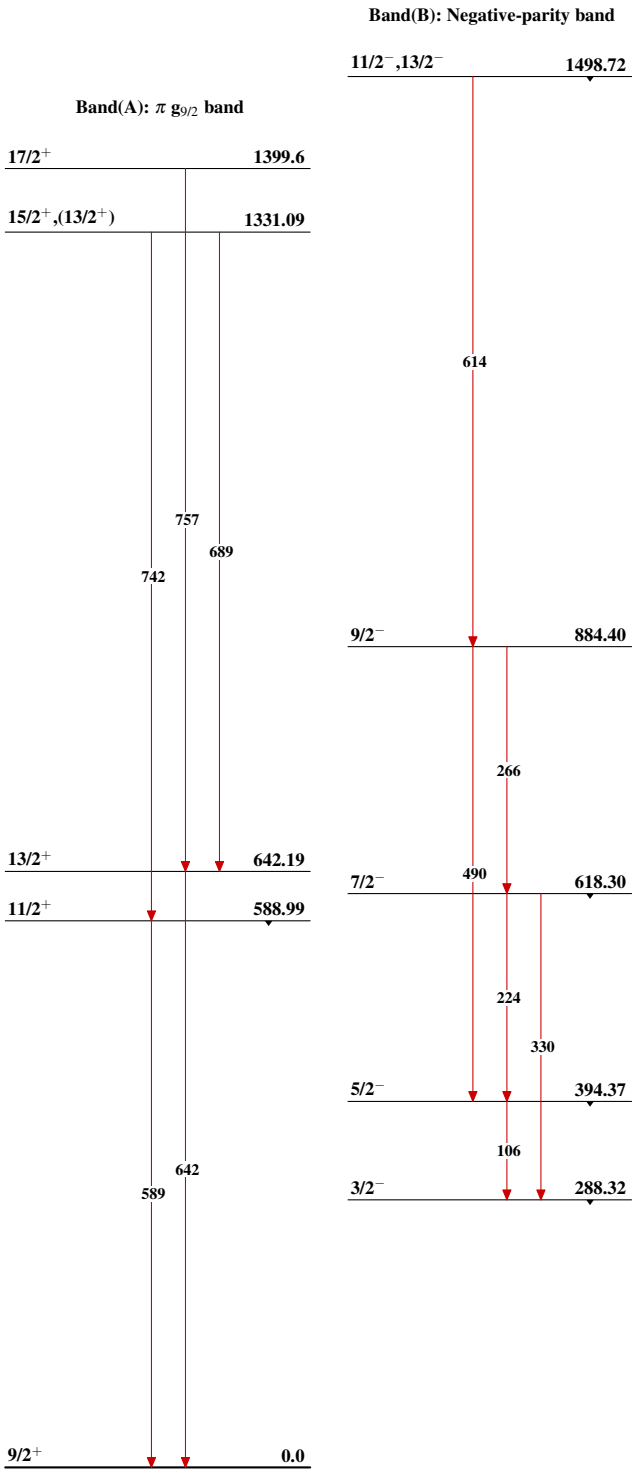
^{100}Mo(^{3}He,pnγ) 1997Sa01



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