^{47}Ti(n,γ) E=thermal 1984Ru06,1989Co01,1969Te06

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1984Ru06: thermal neutrons were produced from the HFR in Petten. Targets were 8.4 g TiO_2. γ rays were detected with a Ge(Li) detector for singles (0-2.5 MeV) and pair spectrometer arrangement (1.8-11.0 MeV). Measured Eγ, Iγ, nuclear orientation and circular polarization with polarized beam and polarized target. Deduced levels, J, γ ray branching ratios.

1989Co01: thermal neutrons were produced from the High Flux Reactor at ILL, Grenoble. Target was 79% enriched ^{47}Ti oxide. γ rays were detected with two Ge(Li) detectors. Measured Eγ, $\gamma\gamma(\theta)$. Deduced γ-ray multipolarities, mixing ratios. Comparisons with available data.

1969Te06: thermal neutrons were produced from the Israel Research reactor. Target was 0.3 g 66% enriched titanium oxide. γ rays were detected with a Ge(Li) detector and NaI(Tl) detectors. Measured Eγ, Iγ, $\gamma\gamma$-coin, $\gamma\gamma(\theta)$. Deduced levels, J, π, γ-ray multipolarities, mixing ratios.

1969Fe08: thermal neutrons were produced from the BR2 reactor at the SCK-CEN in Belgium. γ rays were detected with a Ge(Li) detector. Measured Eγ, Iγ. Deduced levels, γ ray branching ratios. Comparisons with available data.

1969TrZX: thermal neutrons were produced from the Swedish Reactor R2 at AB atomenergi, Studsvik. γ rays were detected with a Ge(Li) detector.

Others: 1969Ra10, 1963Dr02, 1959Kn53, 1958Gr01.

All information is from 1984Ru06, except as noted. 1969Te06 found no correlation (coefficient=0.2) between primary reduced γ intensities and L=1 transition strengths observed in (d,p). Decay scheme constructed with the aid of the Ritz combination and previous experiments. Others: 2003ChZS. See also 1993Bu04.

^{48}Ti Levels

E(level)†	J$^\pi$‡	Comments
0.0	0$^+$	
983.527 *4*	2$^+$	J$^\pi$: (1,2,3) from 1984Ru06.
2295.636 *8*	4$^+$	J$^\pi$: (2,3,4) from 1984Ru06.
2421.038 *9*	2$^+$	J$^\pi$: 2 from 1984Ru06, (1,2,3) from 1969Te06.
2997.21 *16*	0$^+$	
3223.937 *10*	3$^+$	J$^\pi$: (2,3) from 1984Ru06.
3239.749 *10*	4$^+$	J$^\pi$: (2,3,4) from 1984Ru06.
3333.24 *3*	6$^+$	
3358.817 *16*	3$^-$	
3370.852 *24*	2$^+$	
3616.807 *20*	2$^+$	J$^\pi$: 2 from 1984Ru06, (2,4) from 1969Te06.
3699.41 *8*	1$^{(-)}$	
3738.54 *11*	1$^+$	
3782.451 *17*	3$^-$,4$^-$	J$^\pi$: (2,3,4) from 1984Ru06.
3802.80 *9*	2$^-$	
3852.24 *3*	3$^-$	J$^\pi$: (1 to 4) from 1984Ru06.
4035.130 *15*	2$^+$	J$^\pi$: 2 from 1984Ru06.
4074.492 *19*	2$^+$	
4196.85 *3*	(2$^+$)	J$^\pi$: (1 to 4) from 1984Ru06.
4205.3 *5*	(1,2$^+$)	
4387.676 *19*	4$^+$	J$^\pi$: (2,3,4) from 1984Ru06.
4457.439 *11*	3$^+$	J$^\pi$: 3 from 1984Ru06, (2,3) from 1969Te06.
4580.70 *6*	3$^-$	
4719.116 *20*	4$^+$	J$^\pi$: (1 to 4) from 1984Ru06.
4757.73 *10*	(3$^-$)	
4783.30 *10*	(2$^+$,3,4$^+$)	
4792.27 *5*	(1$^-$,2,3$^-$)	
4794.27 *13*	(2$^+$)	
4910.57 *5*	(1$^+$,2$^+$)	
4924.88 *13*	(2,3,4)$^+$	

Continued on next page (footnotes at end of table)

^{47}Ti(n,γ) E=thermal 1984Ru06,1989Co01,1969Te06 (continued)

^{48}Ti Levels (continued)

E(level)[†]	J$^\pi$[‡]	Comments
4940.04 *14*	(2,3,4)$^+$	
5145.81 *5*	4$^+$	J$^\pi$: (3,4) from 1984Ru06.
5157.70 *14*	4$^+$	J$^\pi$: (2,3) from 1984Ru06 is discrepant.
5356.22 *11*	(2$^+$,3,4$^+$)	
5490.78 *14*	2$^+$	
5619.57 *8*	2$^+$	J$^\pi$: (1 to 4) from 1984Ru06.
5640.00 *4*	1$^+$	J$^\pi$: (1 to 3) from 1984Ru06.
5888.54 *5*	(1,2,3)	
6042.46 *4*	(2,3)	J$^\pi$: (2,3) from 1984Ru06.
6054.54 *20*	(0$^+$ to 4$^+$)	
6240.4 *4*	(4$^+$,5$^-$)	
6313.74 *22*	(4$^+$,5$^-$)	
6365.14 *9*	3$^-$	
6406.17 *11*	(1$^-$ to 5$^-$)	
6490.45 *8*	(2$^+$,3)	
6541.63 *8*	(0$^+$ to 4$^+$)	
6626.53 *14*	(0$^-$,1,2,3)	
6707.77 *18*	(2$^+$,3,4)	
6797.0 *3*	(1$^+$,2,3,4)	
6827.29 *20*	(2$^+$,3,4$^+$)	
6898.30 *20*	(1,2$^+$)	
6957.1 *3*	(1$^-$,2,3,4$^+$)	
6976.31 *18*	(1,2,3,4$^+$)	
7060.52 *18*	(0$^-$,1,2,3$^-$)	
7358.98 *6*	2$^+$	J$^\pi$: (2,3) from 1984Ru06.
7541.58 *8*	(2$^+$,3,4$^+$)	
7574.08 *18*	(2$^+$,3,4,5$^-$)	
7616.13 *10*	(1$^-$,2)	
(11626.66[#] *3*)	2$^-$,3$^-$[#]	

[†] From a least-squares fit to γ-ray energies, except for the capture state.

[‡] From Adopted Levels, except for the capture state. Supporting arguments and assignments from nuclear orientation and circular polarization (1984Ru06) and $\gamma\gamma(\theta)$ (1969Te06) are given under comments.

[#] Energy from S(p)=11626.66 *3* (2021Wa16), J^π from thermal capture on 5/2$^-$ target.

γ(^{48}Ti)

A strength of $\Sigma I\gamma E\gamma$=(0.824 *4*)×S(n) was placed out of a total observed strength of $\Sigma I\gamma E\gamma$=(0.868 *4*)×S(n). 26.2% *4* of the primary strength was found to be missing, assuming that the total strength to the g.s. is 100% (1984Ru06).

Coincidences shown on the drawing are from 1969Te06 or 1989Co01.

Considerable amount of Eγ and Iγ data are also available in 1969TrZX and 1969Fe08, and in good agreement with those in 1984Ru06, but are less precise and not listed here.

E_γ [†#]	I_γ [‡d]	E_i(level)	J^π_i	E_f	J^π_f	Mult.	δ	Comments
423.629 *9*	2.53 *13*	3782.451	$3^-,4^-$	3358.817	3^-			Mult.,δ: D+Q, δ=−0.24 *14* or <−3.7 if J=4 from $\gamma\gamma(\theta)$ in 1989Co01.
458.45 *16*	0.21 *4*	4196.85	(2^+)	3738.54	1^+			
802.87 *6*	0.323 *23*	3223.937	3^+	2421.038	2^+			
811.198 *17*	1.26 *7*	4035.130	2^+	3223.937	3^+			
834.736 *17*	1.22 *7*	4074.492	2^+	3239.749	4^+			
840.66 *3*	0.60 *4*	4457.439	3^+	3616.807	2^+			
928.290 *10*	2.26 *12*	3223.937	3^+	2295.636	4^+			
944.104 *7*	7.8 *4*	3239.749	4^+	2295.636	4^+			
972.91 *3*	0.78 *5*	4196.85	(2^+)	3223.937	3^+			
983.517 *4*	96 *5*	983.527	2^+	0.0	0^+	Q[@]		9204.7γ-983.53$\gamma(\theta)$: A_2=+0.011 *43* (1969Te06). 10641.9γ-983.53$\gamma(\theta)$: A_2=+0.133 *43* (1969Te06).
1037.599 *25*	0.91 *5*	3333.24	6^+	2295.636	4^+			
1063.19 *5*	0.71 *5*	3358.817	3^-	2295.636	4^+			
1086.51 *8*	0.37 *3*	4457.439	3^+	3370.852	2^+			
1092.3 *3*	0.105 *18*	4792.27	$(1^-,2,3^-)$	3699.41	$1^{(-)}$			
1140.94 *10*	0.66 *8*	4757.73	(3^-)	3616.807	2^+			
1158.7 *3*	0.22 *4*	5356.22	$(2^+,3,4^+)$	4196.85	(2^+)			
1182.56 *5*	0.49 *3*	5640.00	1^+	4457.439	3^+			
1195.83 *6*	0.74 *5*	3616.807	2^+	2421.038	2^+			
1221.81 *8*	0.316 *23*	4580.70	3^-	3358.817	3^-			
1233.33 *12*	0.196 *19*	4457.439	3^+	3223.937	3^+			
1293.71 *6*	0.50 *3*	4910.57	$(1^+,2^+)$	3616.807	2^+			
1312.096 *7*	32.4 *18*	2295.636	4^+	983.527	2^+	Q[&]	[&]	
1437.487 *10*	22.5 *13*	2421.038	2^+	983.527	2^+	D+Q[&]	+0.10[&] *4*	δ: other: +0.19≤δ≤+0.23, or −0.38≤δ≤−0.30, or −0.12≤δ≤−0.06 from 1437.5γ-983.5$\gamma(\theta)$, −0.23≤δ≤−0.19 for J(2421)=1 or +0.30≤δ≤+0.38 for J=2 or +0.06≤δ≤+0.12 for J=3 from 9204.7γ-1437.5$\gamma(\theta)$ (1969Te06). 1437.5γ-983.5$\gamma(\theta)$: A_2=−0.006 *27*, A_4=−0.004 *40* (1969Te06). 9204.7γ-1437.5$\gamma(\theta)$: A_2=−0.022 *25* (1969Te06).
1479.339 *18*	1.55 *9*	4719.116	4^+	3239.749	4^+			
1486.82 *3*	1.05 *6*	3782.451	$3^-,4^-$	2295.636	4^+			
1495.53 *21*	0.71 *4*	4719.116	4^+	3223.937	3^+			
1539.63 *18*	0.25 *3*	4910.57	$(1^+,2^+)$	3370.852	2^+			
1556.57 *5*	0.79 *5*	3852.24	3^-	2295.636	4^+			

$^{48}_{22}$Ti$_{26}$-3

γ(^{48}Ti) (continued)

E_γ [†#]	I_γ [‡d]	E_i(level)	J^π_i	E_f	J^π_f	Mult.	δ	Comments
1572.41 *17*	0.169 *18*	6365.14	3^-	4792.27	$(1^-,2,3^-)$			
1614.041 *19*	2.85 *16*	4035.130	2^+	2421.038	2^+			
1620.05 *18*	0.36 *4*	6976.31	$(1,2,3,4^+)$	5356.22	$(2^+,3,4^+)$			
1686.63 *9*	0.335 *25*	4910.57	$(1^+,2^+)$	3223.937	3^+			
1700.89 *16*	0.200[a] *20*	4924.88	$(2,3,4)^+$	3223.937	3^+			
[x]1750.49 *4*	0.88 *3*							
1790.7 *3*	0.15 *3*	5490.78	2^+	3699.41	$1^{(-)}$			
1906.08 *9*	0.50 *4*	5145.81	4^+	3239.749	4^+			
1921.63 *22*	0.97 *17*	5145.81	4^+	3223.937	3^+			
1933.9 *3*	0.62 *14*	5157.70	4^+	3223.937	3^+			
1967.78 *23*	0.83 *15*	6042.46	(2,3)	4074.492	2^+			
2013.66 *16*	0.233 *23*	2997.21	0^+	983.527	2^+			
2036.349 *13*	6.3 *4*	4457.439	3^+	2421.038	2^+			
2085.67 *16*	0.91 *16*	5888.54	(1,2,3)	3802.80	2^-			
2092.007 *19*	2.20 *13*	4387.676	4^+	2295.636	4^+			
2108.7 *3*	0.50 *11*	6827.29	$(2^+,3,4^+)$	4719.116	4^+			
2161.759 *14*	7.5 *5*	4457.439	3^+	2295.636	4^+			
2240.375 *19*	7.1 *4*	3223.937	3^+	983.527	2^+	D+Q[&]		δ: +2.4 *7* or +0.23 +*12*−*9* from γγ(θ) in 1989Co01.
2285.41 *19*	0.35 *4*	4580.70	3^-	2295.636	4^+			
2371.18 *8*	0.90 *6*	4792.27	$(1^-,2,3^-)$	2421.038	2^+			
2375.211 *19*	6.9 *4*	3358.817	3^-	983.527	2^+			
2387.249 *26*	2.74 *17*	3370.852	2^+	983.527	2^+	D+Q[&]	<0.5[&]	
2395.62 *11*	0.38 *3*	5619.57	2^+	3223.937	3^+			
2420.90 *4*	1.22 *8*	2421.038	2^+	0.0	0^+			
[x]2463.35 *12*	0.314 *20*							
2486.4 *5*	0.28 *7*	4783.30	$(2^+,3,4^+)$	2295.636	4^+			
2489.7 *4*	0.30 *7*	4910.57	$(1^+,2^+)$	2421.038	2^+			
2498.44 *14*	0.81 *8*	4794.27	(2^+)	2295.636	4^+			
2517.62 *24*	0.44 *7*	5888.54	(1,2,3)	3370.852	2^+			
2553.7 *3*	0.35 *6*	6406.17	$(1^-$ to $5^-)$	3852.24	3^-			
2629.1 *3*	0.36 *6*	4924.88	$(2,3,4)^+$	2295.636	4^+			
2633.20 *3*	9.3 *6*	3616.807	2^+	983.527	2^+	D+Q[&]	−0.10[&] *5*	E_γ: other: 2644 quoted in 1969Te06. δ: others: −0.25≤δ≤−0.22 or −0.31≤δ≤−0.28 from 2633.3γ-983.5γ(θ), +0.28≤δ≤+0.31 for J(3617)=2 or Mult=Q for J(3617)=2 from 8009.1γ-2633.3γ(θ) (1969Te06). 2633.3γ-983.5γ(θ): A_2=+0.056 *28*, A_4=−0.002 *41* (1969Te06). 8009.1γ-2633.3γ(θ): A_2=−0.114 *50* (1969Te06).
2644.5 *4*	0.23 *5*	4940.04	$(2,3,4)^+$	2295.636	4^+			
2687.52 *11*	0.49 *4*	6490.45	$(2^+,3)$	3802.80	2^-			
2715.81 *13*	0.85 *7*	3699.41	$1^{(-)}$	983.527	2^+			
2725.7 *5*	0.21 *5*	5145.81	4^+	2421.038	2^+			
2756.5 *7*	0.38 *9*	3738.54	1^+	983.527	2^+			

γ(^{48}Ti) (continued)

E_γ [†#]	I_γ [‡d]	E_i(level)	J^π_i	E_f	J^π_f	Mult.	Comments
2819.08 *13*	0.74 *6*	3802.80	2^-	983.527	2^+		
2850.01 *12*	0.84 *7*	5145.81	4^+	2295.636	4^+		
2858.8 *3*	0.31 *5*	7616.13	$(1^-,2)$	4757.73	(3^-)		
2868.59 *4*	3.29 *20*	3852.24	3^-	983.527	2^+		
[x]2885.1 *3*	0.33 *5*						
2888.9 *4*	0.22 *5*	6626.53	$(0^-,1,2,3)$	3738.54	1^+		
2907.7 *4*	0.21 *4*	6240.4	$(4^+,5^-)$	3333.24	6^+		
2941.0 *4*	0.42 *11*	6976.31	$(1,2,3,4^+)$	4035.130	2^+		
2980.4 *3*	0.23 *4*	6313.74	$(4^+,5^-)$	3333.24	6^+		
3070.4 *3*	0.22 *4*	5490.78	2^+	2421.038	2^+		
3090.82 *6*	1.79 *11*	4074.492	2^+	983.527	2^+		
3104.4 *4*	0.17 *4*	6957.1	$(1^-,2,3,4^+)$	3852.24	3^-		
[x]3121.4 *3*	0.26 *4*						
3186.35 *22*	0.31 *4*	7574.08	$(2^+,3,4,5^-)$	4387.676	4^+		
3198.44 *20*	0.37 *5*	5619.57	2^+	2421.038	2^+		
[x]3239.58 *18*	0.37 *3*						
3252.4 *8*	0.08 *3*	6490.45	$(2^+,3)$	3239.749	4^+		
3344.66 *9*	0.87 *6*	7541.58	$(2^+,3,4^+)$	4196.85	(2^+)		
3361.16 *20*	0.32 *4*	7060.52	$(0^-,1,2,3^-)$	3699.41	$1^{(-)}$		
3370.96 *13*	0.52 *4*	3370.852	2^+	0.0	0^+		
3403.83 *7*	2.58 *15*	4387.676	4^+	983.527	2^+		
3467.36 *21*	0.87 *13*	5888.54	$(1,2,3)$	2421.038	2^+		
3473.90 *9*	4.2 *4*	4457.439	3^+	983.527	2^+	D+Q [@]	E_γ: other: 3485 quoted in 1969Te06. δ: $-0.13\le\delta<-0.10$ from 3473.9γ-983.5$\gamma(\theta)$, $+0.28\le\delta\le0.31$ for J(4457)=2 or $+0.10\le\delta<+0.13$ for J=3 from 7168.7γ-3473.9$\gamma(\theta)$ in 1969Te06. 3473.9γ-983.5$\gamma(\theta)$: A_2=+0.018 *7*, A_4=+0.010 *16* (1969Te06). 7168.7γ-3473.9$\gamma(\theta)$: A_2=−0.033 *21* (1969Te06).
3483.5 *3*	0.21 *3*	6707.77	$(2^+,3,4)$	3223.937	3^+		
[x]3504.94 *21*	0.31 *3*						
[x]3548.8 *4*	0.17 *3*						
3573.9 *6*	0.09 *3*	6797.0	$(1^+,2,3,4)$	3223.937	3^+		
[x]3590.9 *6*	0.14 *3*						
3596.76 *17*	0.41 *4*	4580.70	3^-	983.527	2^+		
3616.8 *8*	0.10 *4*	3616.807	2^+	0.0	0^+		
3620.3 *3*	0.31 *4*	7358.98	2^+	3738.54	1^+		
3633.38 *25*	0.24 *3*	6054.54	$(0^+$ to $4^+)$	2421.038	2^+		
3699.11 *12*	0.57 *4*	3699.41	$1^{(-)}$	0.0	0^+		
[x]3714.3 *3*	0.18 *3*						
3738.35 *24*	0.60 *7*	3738.54	1^+	0.0	0^+		
3763.7 *3*	0.17 *3*	7616.13	$(1^-,2)$	3852.24	3^-		
3774.8 *6*	0.13 *3*	4757.73	(3^-)	983.527	2^+		
3799.64 *12*	0.56 *4*	4783.30	$(2^+,3,4^+)$	983.527	2^+		
3808.58 *7*	1.10 *7*	4792.27	$(1^-,2,3^-)$	983.527	2^+		

γ(^{48}Ti) (continued)

E_{γ} †#	I_{γ} ‡d	E_i(level)	J^{π}_i	E_f	J^{π}_f
^{x}3843.2 3	0.189 24				
3876.8 3	0.31 5	7616.13	$(1^-,2)$	3738.54	1^+
^{x}3886.5 3	0.212 23				
3901.4 7	0.075 22	6898.30	$(1,2^+)$	2997.21	0^+
3916.8 6	0.13 3	7616.13	$(1^-,2)$	3699.41	$1^{(-)}$
3956.17 16	0.34 3	4940.04	$(2,3,4)^+$	983.527	2^+
^{x}3973.83 22	0.244 23				
4010.33 11	0.58 4	(11626.66)	$2^-,3^-$	7616.13	$(1^-,2)$
^{x}4016.60 9	0.75 3				
4052.5 3	0.169 24	(11626.66)	$2^-,3^-$	7574.08	$(2^+,3,4,5^-)$
4069.47 10	0.68 5	6365.14	3^-	2295.636	4^+
4075.1 5	0.29 7	4074.492	2^+	0.0	0^+
4085.06 12	0.48 4	(11626.66)	$2^-,3^-$	7541.58	$(2^+,3,4^+)$
4134.85 23	0.37 5	7358.98	2^+	3223.937	3^+
4184.5 15	0.032 19	7541.58	$(2^+,3,4^+)$	3358.817	3^-
4196.63 13	0.49 4	4196.85	(2^+)	0.0	0^+
4204.7 5	0.101 21	4205.3	$(1,2^+)$	0.0	0^+
4267.47 6	1.34 7	(11626.66)	$2^-,3^-$	7358.98	2^+
^{x}4274.86 13	0.442 24				
^{x}4280.48 21	0.266 23				
4302.6 4	0.120 23	7541.58	$(2^+,3,4^+)$	3239.749	4^+
4316.8 5	0.108 23	7541.58	$(2^+,3,4^+)$	3223.937	3^+
^{x}4327.8 4	0.132 21				
4372.56 15	0.34 3	5356.22	$(2^+,3,4^+)$	983.527	2^+
^{x}4379.7 6	0.082 19				
4411.1 3	0.207 24	6707.77	$(2^+,3,4)$	2295.636	4^+
^{x}4429.1 3	0.140 19				
^{x}4452.3 4	0.35 4				
^{x}4455.6 5	0.18 4				
^{x}4492.6 4	0.090 17				
^{x}4499.54 10	0.393 21				
^{x}4517.4 8	0.043 16				
^{x}4527.61 19	0.185 18				
4536.0 4	0.087 18	6957.1	$(1^-,2,3,4^+)$	2421.038	2^+
4566.3 3	0.29 3	(11626.66)	$2^-,3^-$	7060.52	$(0^-,1,2,3^-)$
^{x}4631.10 20	0.274 20				
4649.9 5	0.106 20	(11626.66)	$2^-,3^-$	6976.31	$(1,2,3,4^+)$
4655.8 6	0.17 4	5640.00	1^+	983.527	2^+
4669.0 7	0.096 24	(11626.66)	$2^-,3^-$	6957.1	$(1^-,2,3,4^+)$
^{x}4697.9 5	0.096 18				
4728.06 21	0.262 24	(11626.66)	$2^-,3^-$	6898.30	$(1,2^+)$
4793.5 4	0.119 20	4794.27	(2^+)	0.0	0^+
4799.8 3	0.210 23	(11626.66)	$2^-,3^-$	6827.29	$(2^+,3,4^+)$
^{x}4805.98 22	0.265 21				
4829.7 3	0.201 24	(11626.66)	$2^-,3^-$	6797.0	$(1^+,2,3,4)$
4904.42 17	0.31 3	5888.54	(1,2,3)	983.527	2^+
4911.8 8	0.069 19	4910.57	$(1^+,2^+)$	0.0	0^+
4917.6[c] 3	0.169 21	(11626.66)	$2^-,3^-$	6707.77	$(2^+,3,4)$
4937.6 4	0.27 5	7358.98	2^+	2421.038	2^+
^{x}4956.0 3	0.176 19				
4999.97 14	0.38 3	(11626.66)	$2^-,3^-$	6626.53	$(0^-,1,2,3)$
5058.58 13	0.44 3	6042.46	(2,3)	983.527	2^+
^{x}5064.87 9	0.824 25				
5070.2 5	0.126 20	6054.54	$(0^+$ to $4^+)$	983.527	2^+
5084.76 8	0.64 4	(11626.66)	$2^-,3^-$	6541.63	$(0^+$ to $4^+)$
^{x}5129.2 8	0.064 17				
5135.89 8	0.71 4	(11626.66)	$2^-,3^-$	6490.45	$(2^+,3)$
^{x}5174.93 16	0.320 18				
5220.16 11	0.48 3	(11626.66)	$2^-,3^-$	6406.17	$(1^-$ to $5^-)$
5261.2 3	0.27 3	(11626.66)	$2^-,3^-$	6365.14	3^-
^{x}5305.95 15	0.419 22				
5312.6 3	0.73 13	(11626.66)	$2^-,3^-$	6313.74	$(4^+,5^-)$
^{x}5315.3 4	0.47 12				
^{x}5372.6 5	0.085 17				
5387.3 6	0.11 3	(11626.66)	$2^-,3^-$	6240.4	$(4^+,5^-)$
^{x}5457.4 5	0.107 17				
^{x}5484.9 5	0.103 17				
5506.4 7	0.16 5	6490.45	$(2^+,3)$	983.527	2^+
^{x}5509.51 25	0.47 6				
5558.1 3	0.45 5	6541.63	$(0^+$ to $4^+)$	983.527	2^+
5571.5 4	0.17 3	(11626.66)	$2^-,3^-$	6054.54	$(0^+$ to $4^+)$
5583.84 4	3.68 19	(11626.66)	$2^-,3^-$	6042.46	(2,3)
5639.9 10	0.4 5	5640.00	1^+	0.0	0^+
^{x}5710.4 5	0.090 17				
5737.71 5	1.60 9	(11626.66)	$2^-,3^-$	5888.54	(1,2,3)
^{x}5803.3 3	0.152 17				
^{x}5823.09 17	0.323 18				
5843.7 5	0.101 18	6827.29	$(2^+,3,4^+)$	983.527	2^+
5912.3 10	0.055 17	6898.30	$(1,2^+)$	983.527	2^+
^{x}5966.0 6	0.094 18				
5986.26 4	2.51 13	(11626.66)	$2^-,3^-$	5640.00	1^+
6006.73 11	0.91 6	(11626.66)	$2^-,3^-$	5619.57	2^+
^{x}6039.37 19	0.315 20				
^{x}6103.87 21	0.350 23				
6135.50 17	0.36 3	(11626.66)	$2^-,3^-$	5490.78	2^+
6269.85 20	0.68 7	(11626.66)	$2^-,3^-$	5356.22	$(2^+,3,4^+)$
6374.7 5	0.19 3	7358.98	2^+	983.527	2^+
6468.53 15	0.94 7	(11626.66)	$2^-,3^-$	5157.70	4^+

γ(^{48}Ti) (continued)

E_γ [†#]	I_γ [‡d]	E_i(level)	J^π_i	E_f	J^π_f
6480.39 *6*	4.08 *22*	(11626.66)	$2^-,3^-$	5145.81	4^+
[x]6634.6 *7*	0.111 *22*				
6685.6 *3*	0.208 *24*	(11626.66)	$2^-,3^-$	4940.04	$(2,3,4)^+$
6701.18 *24*	0.35 *3*	(11626.66)	$2^-,3^-$	4924.88	$(2,3,4)^+$
6715.50 *11*	0.76 *5*	(11626.66)	$2^-,3^-$	4910.57	$(1^+,2^+)$
6831.0 *3*	0.82 *15*	(11626.66)	$2^-,3^-$	4794.27	(2^+)
6834.11 *15*	1.77 *17*	(11626.66)	$2^-,3^-$	4792.27	$(1^-,2,3^-)$
6842.73 *20*	0.35 *3*	(11626.66)	$2^-,3^-$	4783.30	$(2^+,3,4^+)$
6906.97 *7*	1.36 *8*	(11626.66)	$2^-,3^-$	4719.116	4^+
7045.32 *12*	0.49 *3*	(11626.66)	$2^-,3^-$	4580.70	3^-
7168.70 *4*	17.1 *9*	(11626.66)	$2^-,3^-$	4457.439	3^+
7238.40 *5*	3.61 *19*	(11626.66)	$2^-,3^-$	4387.676	4^+
7419.6 *8*	0.11 *3*	(11626.66)	$2^-,3^-$	4205.3	$(1,2^+)$
7429.23 *8*	0.85 *5*	(11626.66)	$2^-,3^-$	4196.85	(2^+)
7590.81 *6*	3.32 *17*	(11626.66)	$2^-,3^-$	4035.130	2^+
7773.65 *7*	1.23 *7*	(11626.66)	$2^-,3^-$	3852.24	3^-
7843.52 *5*	2.48 *13*	(11626.66)	$2^-,3^-$	3782.451	$3^-,4^-$
7885.6 *9*	0.080 *14*	(11626.66)	$2^-,3^-$	3738.54	1^+
7926.4 *4*	0.119 *15*	(11626.66)	$2^-,3^-$	3699.41	$1^{(-)}$
8009.10 *5*	5.8 *3*	(11626.66)	$2^-,3^-$	3616.807	2^+
8255.20 *14*	0.44 *3*	(11626.66)	$2^-,3^-$	3370.852	2^+
8267.3 *3*	0.31 *4*	(11626.66)	$2^-,3^-$	3358.817	3^-
8386.14 *7*	1.22 *7*	(11626.66)	$2^-,3^-$	3239.749	4^+
8401.88 *12*	0.364 *22*	(11626.66)	$2^-,3^-$	3223.937	3^+
9204.69 *7*	6.5 *3*	(11626.66)	$2^-,3^-$	2421.038	2^+
9330.05 *13*	0.297 *18*	(11626.66)	$2^-,3^-$	2295.636	4^+
10641.92 *13*	1.71[b] *9*	(11626.66)	$2^-,3^-$	983.527	2^+

[†] From 1984Ru06, unless otherwise noted. Quoted values are from original values de-corrected for recoil and with following systematic uncertainties (as noted in 1984Ru06) added in quadrature: 2.6 ppm for Eγ<1800 keV from the ^{198}Au standard (1978Ke02) and 3.2 ppm for the rest.

[‡] Photons per 100 captures. Quoted values are from 1984Ru06, unless otherwise noted. Original uncertainties from 1984Ru06 are statistical only and a 5% systematic as noted in 1984Ru06 has been added in quadrature by the evaluator.

[#] Additional information 1.

[@] From γγ(θ) in 1969Te06.

[&] From γγ(θ) in 1989Co01.

[a] Discrepant with adopted Iγ(1701γ)/Iγ(2629γ)=0.22 *6*.

[b] 37% contribution from 2^- and 63% contribution from 3^- from γγ(θ) (1969Te06).

[c] Eγ differs from level-energy differences by 3 to 4 σ.

[d] Intensity per 100 neutron captures.

[x] γ ray not placed in level scheme.

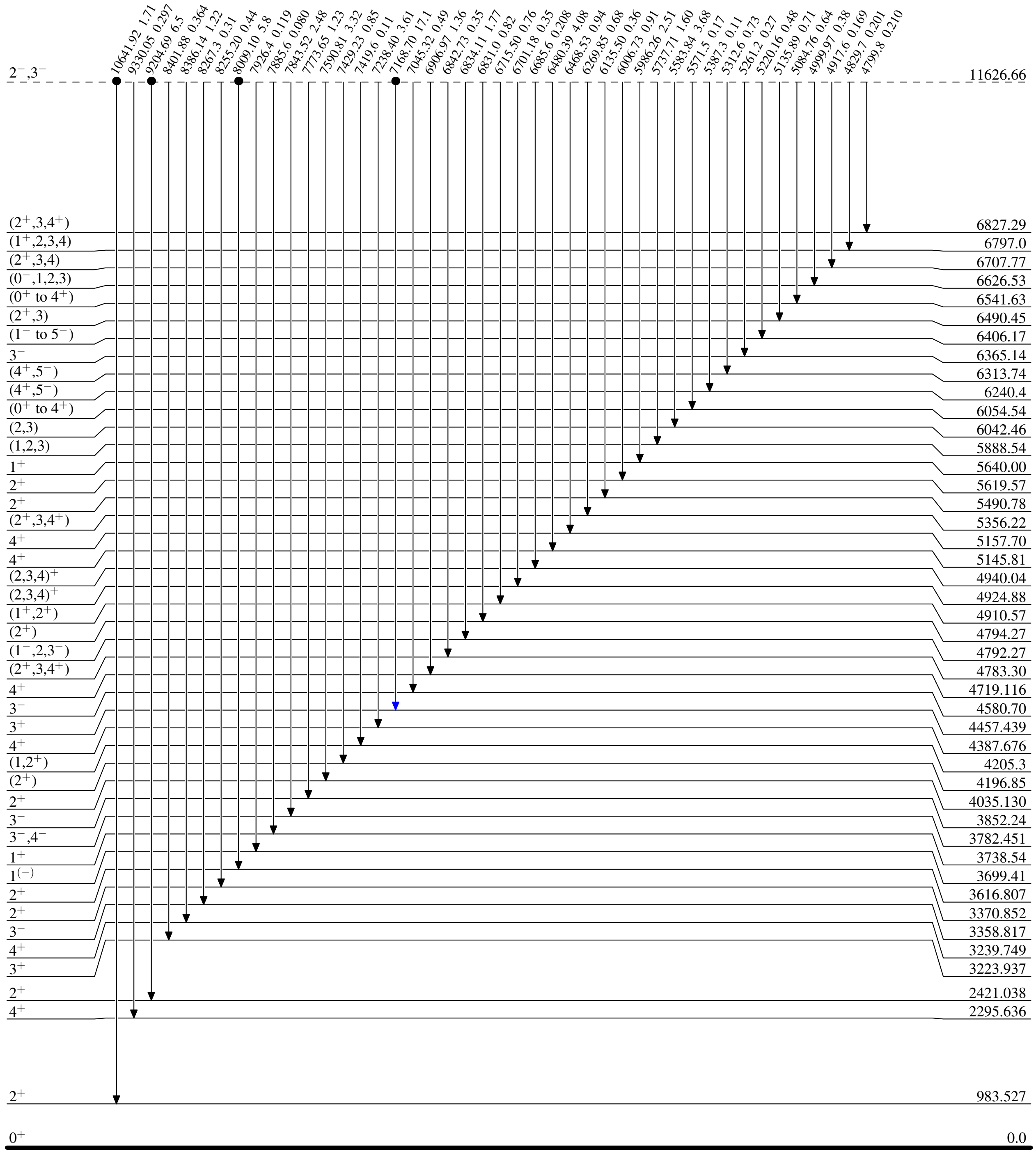
^{47}Ti(n,γ) E=thermal 1984Ru06,1989Co01,1969Te06

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
● Coincidence

Level Scheme

Intensities: per 100 neutron captures



$^{48}_{22}Ti_{26}$

^{47}Ti(n,γ) E=thermal 1984Ru06,1989Co01,1969Te06

Legend

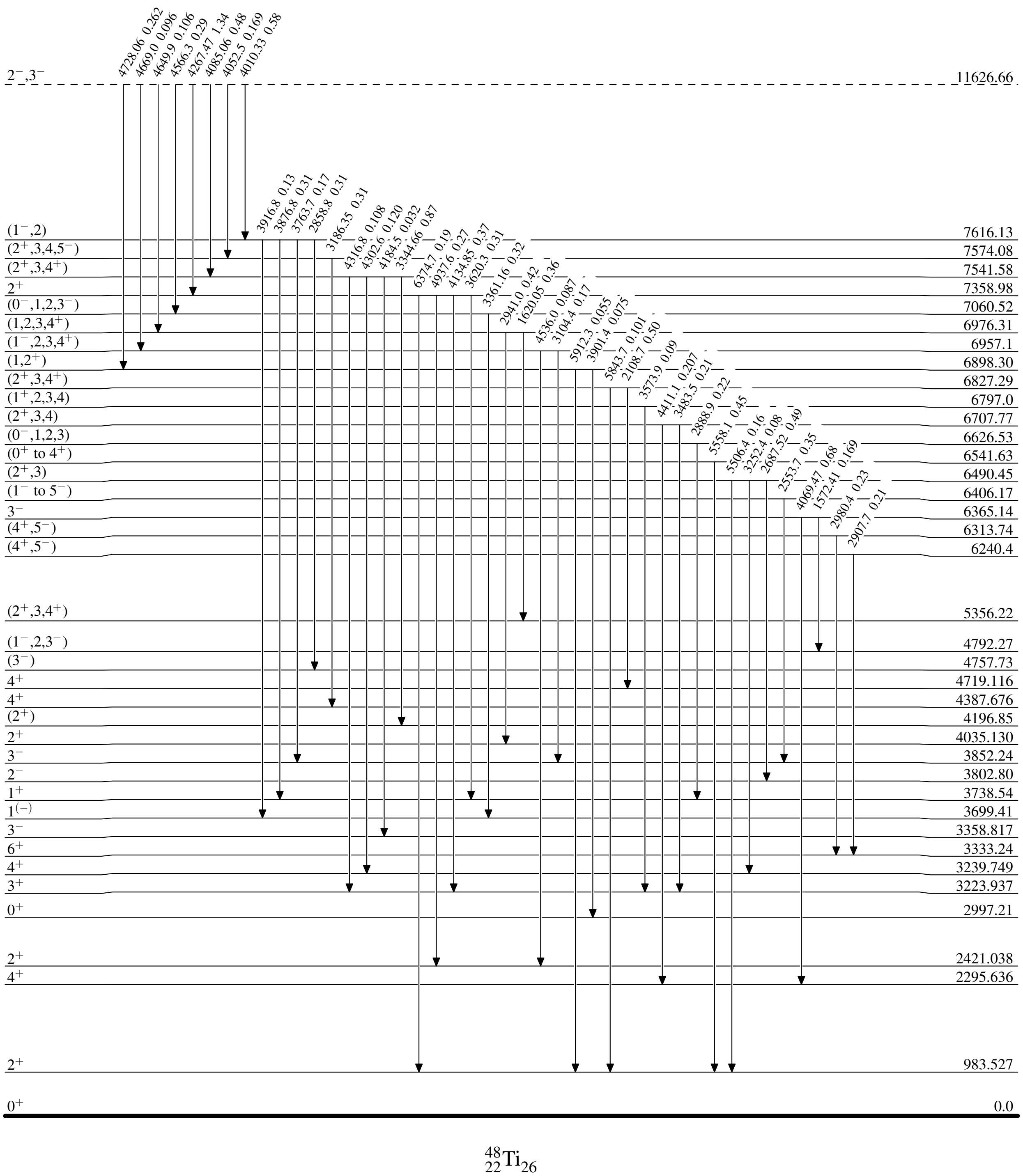
Level Scheme (continued)

Intensities: per 100 neutron captures

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

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

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



$^{48}_{22}Ti_{26}$

$^{47}Ti(n,\gamma)$ E=thermal 1984Ru06,1989Co01,1969Te06

Legend

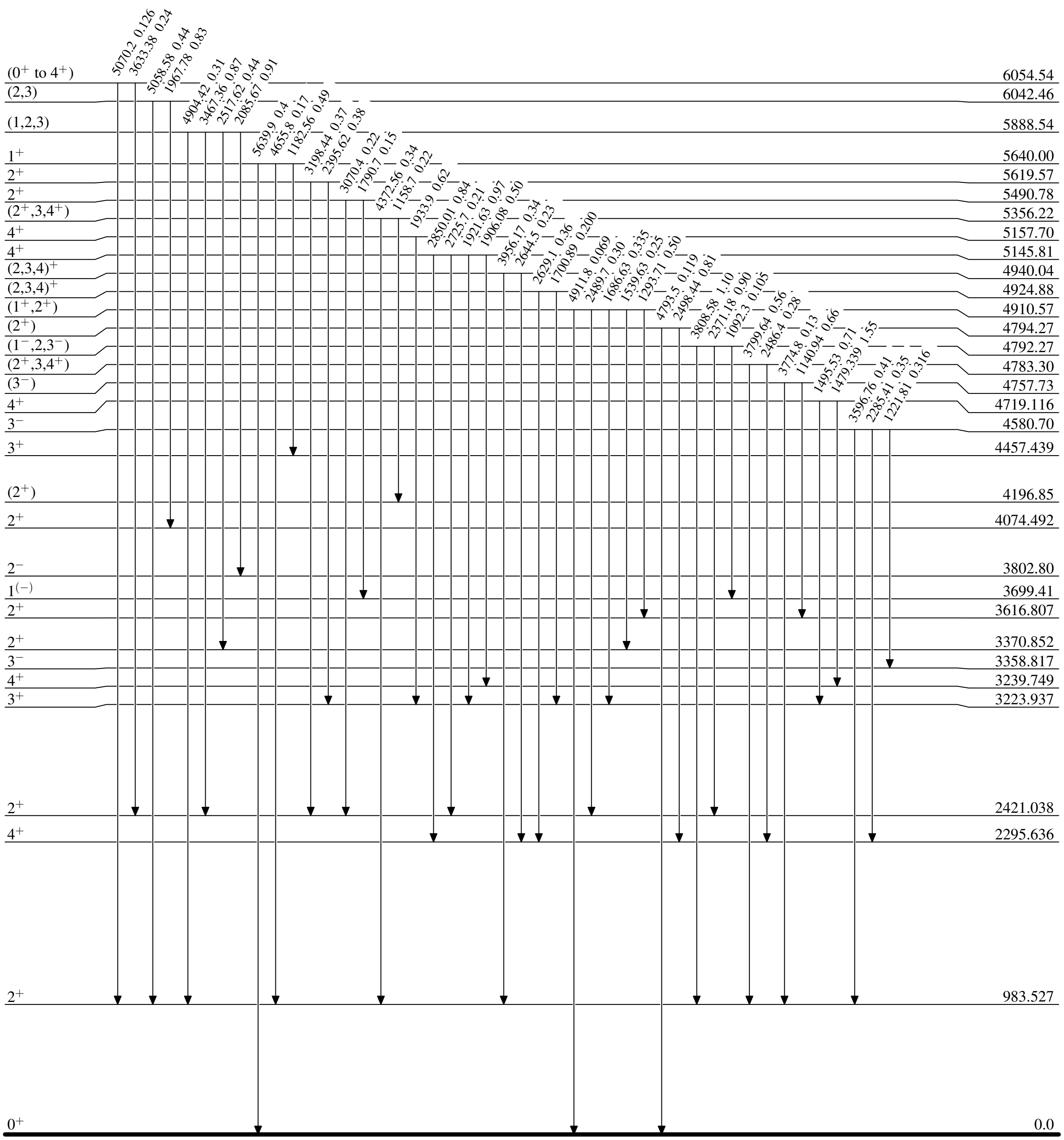
$I_\gamma < 2\% \times I_\gamma^{max}$

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

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

Level Scheme (continued)

Intensities: per 100 neutron captures



$^{48}_{22}Ti_{26}$

^{47}Ti(n,γ) E=thermal 1984Ru06,1989Co01,1969Te06

Level Scheme (continued)

Intensities: per 100 neutron captures