^{46}Ti(p,p′γ),(pol P,P′γ)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 91, 1 (2000)	15-Jul-2000

E=5.5 MeV (1976ReZP); annular Si detector for p at θ≈180°, γ detector not specified; measured p′γ(θ) in (pol P,P′γ), determined δ.
E=7 MeV (1972As01); Ge(Li) detector; $T_{1/2}$ from DSA analysis.
E=5.489, 5.508 MeV (1971Ga08); Ge(Li) detector; measured γ(θ) and γ linear polarization.
E=8 MeV (1968Ho18,1968So04); Ge(Li) plus NaI Compton-suppression spectrometer at θ=90°; Si detector at θ=175° plus NaI detector; measured Eγ, Iγ, pγ(θ).
E=6.5-6.8 MeV (1968Le04,1966Le17); Ge(Li) detector at θ=90°; annular Si detector at θ≈180° for p, NaI for γ; measured Eγ, Iγ, pγ(θ).
E=5 MeV (1967Ch22); NaI detectors; measured γγ(θ).
Others: 1971Ki17, 1966Mo18.

^{46}Ti Levels

E(level)	J^π [@]	$T_{1/2}$ [†]	E(level)	J^π [@]	$T_{1/2}$ [†]	E(level)	$T_{1/2}$ [†]
0.0	0^+		3168.0 *1*	1^- [#]	49 fs *9*	3737.9 *3*	
889.19 *7*	2^+		3235.7 *2*	2^+ [#]	13 fs *2*	3845.0 *5*	8.5 fs *25*
2009.81 *12*	4^+		3441.2 *20*			3890 *2*	
2611.0 *2*	0^+		3569.4 *3*		50 fs *+19−16*	3905.6 *3*	22 fs *4*
2961.8 *2*	2^+ [#]	49 fs *8*	3571.7 *2*			4020 [‡]	
3058.6 *2*	3^- [#]	>0.4 ps	3723.9 *4*		33 fs *+16−11*	4316 *1*	<31 fs

† From 1972As01.
‡ Doublet (1968Le04).
# Based on γ(θ) and γ linear polarization (1971Ga08).
@ From Adopted Levels, except as noted.

γ(^{46}Ti)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult. [b]	δ [b]	Comments
889.19	2^+	889.19 *7*		0.0	0^+			
2009.81	4^+	1120.62 *8*		889.19	2^+			
2611.0	0^+	1721.81 *12*		889.19	2^+			
2961.8	2^+	2072.6 *2*	95.8 *6*	889.19	2^+	E2+M1	−1.21 *14*	B(M1)(W.u.)=0.020 *5*; B(E2)(W.u.)=18 *4* δ: weighted average of −1.1 *1* (1976ReZP), −3.1 *9* (1971Ga08), −1.54 *15* (1968Le04), −1.07 *15* (1967Ch22).
		2962.3 [# *7*	4.2 *6*	0.0	0^+			
3058.6	3^-	96.5 [c]	10 [a] *3*	2961.8	2^+			Existence based on coincidence data (1968Ho18,1968So04).
		1048.8 *1*	90 [a] *3*	2009.81	4^+	E1(+M2)	0.11 *3*	B(E1)(W.u.)<0.001; B(M2)(W.u.)<78 δ: from 1971Ga08; others: −0.02 *10* (1968Le04), 0.0 *1* (1968Ho18).
		2169 [#c]	<3	889.19	2^+			
3168.0	1^-	2278.8 *2*	54.7 *9*	889.19	2^+	D+Q	0.00 *4*	
		3168.1 *1*	45.3 *9*	0.0	0^+			
3235.7	2^+	2346.5 *2*	84.2 *11*	889.19	2^+	D+Q		δ: +0.08 *15* (1968Le04), −0.10 *14* (1971Ga08).
		3235.7 [# *7*	15.8 *11*	0.0	0^+			

Continued on next page (footnotes at end of table)

^{46}Ti(p,p′γ),(pol P,P′γ) (continued)

γ(^{46}Ti) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Comments
3441.2		382.4[#] *7*	74 *3*	3058.6	3^-	I_γ: weighted average of values from 1968Ho18 and 1968Le04.
		1430.4[#] *15*	26 *3*	2009.81	4^+	I_γ: weighted average of values from 1968Ho18 and 1968Le04.
3569.4		1559.6 *2*	100	2009.81	4^+	
3571.7		2682.5 *2*	100	889.19	2^+	
3723.9		2834.7 *4*	100	889.19	2^+	
3737.9		3737.9 *3*	100	0.0	0^+	
3845.0		2955.8 *4*	100	889.19	2^+	
3890		720[@]	80[&] *7*	3168.0	1^-	
		2990[@]	20[&] *7*	889.19	2^+	
3905.6		1290[@]	20[&]	2611.0	0^+	
		1890[@] *c*	<14[&]	2009.81	4^+	
		3016.3 *4*	20[&]	889.19	2^+	
		3905.7 *4*	46[&]	0.0	0^+	
4020		860[@]	37[&] *3*	3168.0	1^-	
		2030[@]	18[&] *3*	2009.81	4^+	
		3140[@]	37[&] *3*	889.19	2^+	
		4020[@]	8[&] *3*	0.0	0^+	
4316		4316 *1*	100	0.0	0^+	

[†] From 1972As01, except as noted.
[‡] % photon branching from each level; weighted average derived by 1972As01 from results in 1971Ga08, 1968Ho18, 1968Le04, 1967Ch22, except as noted.
[#] From 1968Ho18.
[@] From 1968Le04; ΔE not given.
[&] From 1968Le04.
[a] Deduced from pγ-coin (1968Ho18,1968So04).
[b] From analysis of γ(θ) and γ linear polarization.
[c] Placement of transition in the level scheme is uncertain.

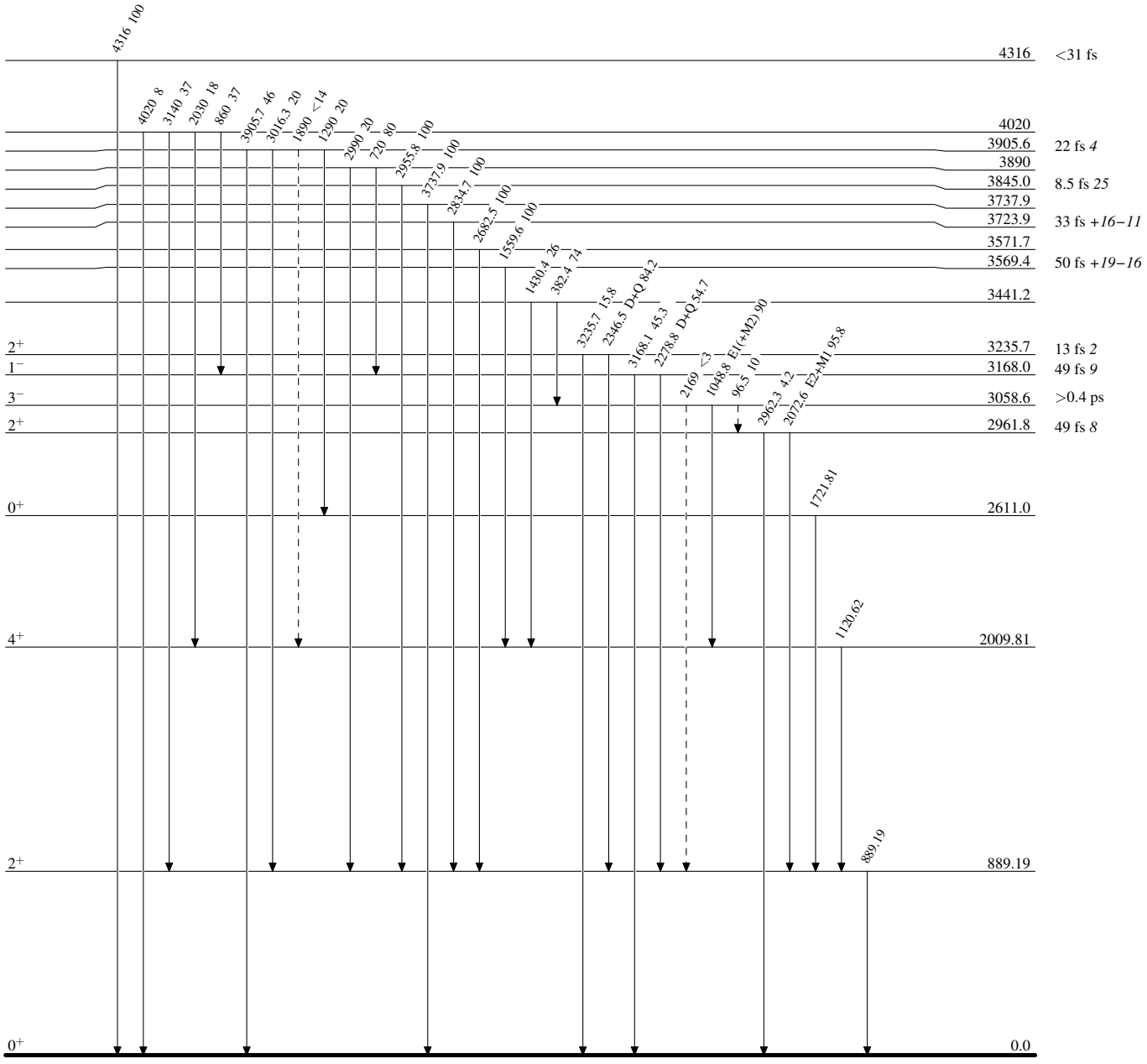
^{46}Ti(p,p′γ),(pol P,P′γ)

Legend

Level Scheme

Intensities: % photon branching from each level

– – – – – – ► γ Decay (Uncertain)



$^{46}_{22}Ti_{24}$