Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	A. A. Sonzogni	NDS 93,599 (2001)	1-Dec-2000

Q(β^-)=−5.80×10^3 *3*; S(n)=1.002×10^4 *6*; S(p)=1.43×10^3 *21*; Q(α)=2.19×10^3 *6* 2012Wa38
Note: Current evaluation has used the following Q record −6092 syst 10139 syst 1894 syst 1717 syst 1995Au04.
ΔQ(β^-)=499 keV.
ΔS(n)=499 keV.
ΔS(p)=359 keV.
ΔQ(α)=303 keV.

^{144}Tb Levels

Cross Reference (XREF) Flags

- A ^{144}Dy ε decay
- B ^{144}Tb IT decay (4.25 s)
- C (HI,xnγ)

E(level)‡	Jπ†	$T_{1/2}$	XREF	Comments
0.0	1+	≈1 s	AB	%ε+%β^+=100 $T_{1/2}$: from 1986Re11. Other: 1.5 s *10* (1982No08). Jπ: from log *ft* from 0+ parent, ≈4.6.
196.5 *3*	(1+)		A	Jπ: from log *ft* from 0+ parent.
283.9 *3*	(3+)		B	Jπ: level fed by an E3 transition from a (6−) level; γ to 1+ gs.
298.6 *3*	(1+)		A	Jπ: from log *ft* from 0+ parent.
396.9 *5*	(6−)	4.25 s *15*	BC	%IT=66 (1986Re11); %ε+%β^+=34 (1986Re11) $T_{1/2}$: from 1986Re11. Others: 4.5 s *5* (1982No08), 5 s *1* (1982So02). Jπ: from log *ft* to daughter's (5−) and (7−) levels.
475.5 *3*	(1+)		A	Jπ: from log *ft* from 0+ parent.
476.2 *5*	(8−)	2.8 μs *3*	C	Jπ: 79 keV γ to (6−) is E2. $T_{1/2}$: from 1996Sf01.
517.1 *5*	(9+)	0.67 μs *6*	C	Jπ: 41 keV γ to (8−) is E1. $T_{1/2}$: from 1996Sf01.
544.5 *6*	(10+)	<300 ns	C	Jπ: 27 keV γ to (9+) is M1. $T_{1/2}$: from 1996Sf01.
978.2# *6*	(11+)		C	
1127.2 *5*			C	
1209.0# *6*	(12+)		C	
1787.3# *6*	(13+)		C	
2154.7 *6*			C	
2183.1 *6*			C	
2260.7# *6*	(14+)		C	
2514.5 *6*	(13)		C	
2586.2@ *6*	(13)		C	
2741.9@ *6*	(14)		C	
2780.2# *6*	(15+)		C	
2918.0@ *6*	(15)		C	
2983.4 *6*	(16+)		C	
3129.9@ *7*	(16)		C	
3276.3@ *7*	(17)		C	
3433.1# *6*	(17+)		C	
3705.4@ *7*	(18)		C	

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Adopted Levels, Gammas (continued)

^{144}Tb Levels (continued)

E(level)‡	Jπ†	XREF
3712.7# *7*	(18+)	C
4058.3@ *7*	(19)	C
4631.5@ *8*	(20)	C
4664.6# *7*		C
5164.2@ *8*		C
5379.9# *8*		C

† High-spin data follows 1996Sf01 assignments based on R(DCO), ce values and systematics of N=79 isotones.
‡ From least squares fit.
# Band(A): ΔJ=1 band, based on 11+.
@ Band(B): ΔJ=1 band, based on 13.

γ(^{144}Tb)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.†	α‡	Comments
196.5	(1+)	196.5 *3*	100	0.0	1+			E_γ: from ε decay.
283.9	(3+)	283.9 *3*	100	0.0	1+	[E2]	0.0744	E_γ: from ε decay.
298.6	(1+)	298.6 *3*	100	0.0	1+			E_γ: from ε decay.
396.9	(6−)	113.0 *3*	100	283.9	(3+)	E3	22.7	α(K)=3.04 *10*; α(L)=14.9 *5*; α(M)=3.70 *11*; α(N+..)=1.03 *3* B(E3)(W.u.)=0.0275 *22* E_γ,Mult.: from it decay. Additional information 1.
475.5	(1+)	475.5 *3*	100	0.0	1+			
476.2	(8−)	79.3 *2*	100	396.9	(6−)	E2	6.35	B(E2)(W.u.)=0.196 *22* α(K)=2.00 *6*; α(L)=3.34 *10*; α(M)=0.792 *24*; α(N+..)=0.215 *7*
517.1	(9+)	40.8 *2*	100	476.2	(8−)	E1	0.58	B(E1)(W.u.)=3.4×10−6 *4*
544.5	(10+)	26.8 *6*	100	517.1	(9+)	M1	16.0	B(M1)(W.u.)>0.00021
978.2	(11+)	433.6 *2*	100	544.5	(10+)			
1127.2		651.1 *2*	100	476.2	(8−)			
1209.0	(12+)	230.7 *2*	55 *5*	978.2	(11+)			
		664.5 *2*	100 *7*	544.5	(10+)			
1787.3	(13+)	578.3 *2*	100 *5*	1209.0	(12+)			
		809.2 *3*	12.4 *13*	978.2	(11+)			
2154.7		1027.6 *3*	100	1127.2				
2183.1		1055.9 *3*	100 *40*	1127.2				
		1204.7 *3*	59 *36*	978.2	(11+)			
2260.7	(14+)	1051.7 *2*	100	1209.0	(12+)			
2514.5	(13)	331.4 *2*	41 *15*	2183.1				
		359.9 *3*	21 *11*	2154.7				
		1305.5 *2*	100 *22*	1209.0	(12+)			
2586.2	(13)	1377.0 *3*	100	1209.0	(12+)			
2741.9	(14)	155.7 *2*	19 *4*	2586.2	(13)			
		227.5 *2*	76 *17*	2514.5	(13)			
		954.6 *2*	100 *14*	1787.3	(13+)			
2780.2	(15+)	519.4 *2*	89 *20*	2260.7	(14+)			
		992.9 *2*	100 *16*	1787.3	(13+)			
2918.0	(15)	176.1 *2*	100	2741.9	(14)			
2983.4	(16+)	203.2 *2*	100 *8*	2780.2	(15+)			
		722.7 *2*	25 *6*	2260.7	(14+)			

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Adopted Levels, Gammas (continued)

$\gamma(^{144}Tb)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
3129.9	(16)	211.9 *2*	100	2918.0	(15)	4058.3	(19)	352.9 *2*	100 *17*	3705.4	(18)
3276.3	(17)	146.4 *2*	100	3129.9	(16)			782.0 *2*	16 *5*	3276.3	(17)
3433.1	(17^+)	449.7 *2*	100 *15*	2983.4	(16^+)	4631.5	(20)	573.2 *2*	100	4058.3	(19)
		652.7 *2*	40 *13*	2780.2	(15^+)	4664.6		951.9 *3*	100	3712.7	(18^+)
3705.4	(18)	429.1 *2*	100	3276.3	(17)	5164.2		532.7 *3*	100	4631.5	(20)
3712.7	(18^+)	279.5 *2*	90 *24*	3433.1	(17^+)	5379.9		715.3 *3*	100	4664.6	
		729.4 *2*	100 *17*	2983.4	(16^+)						

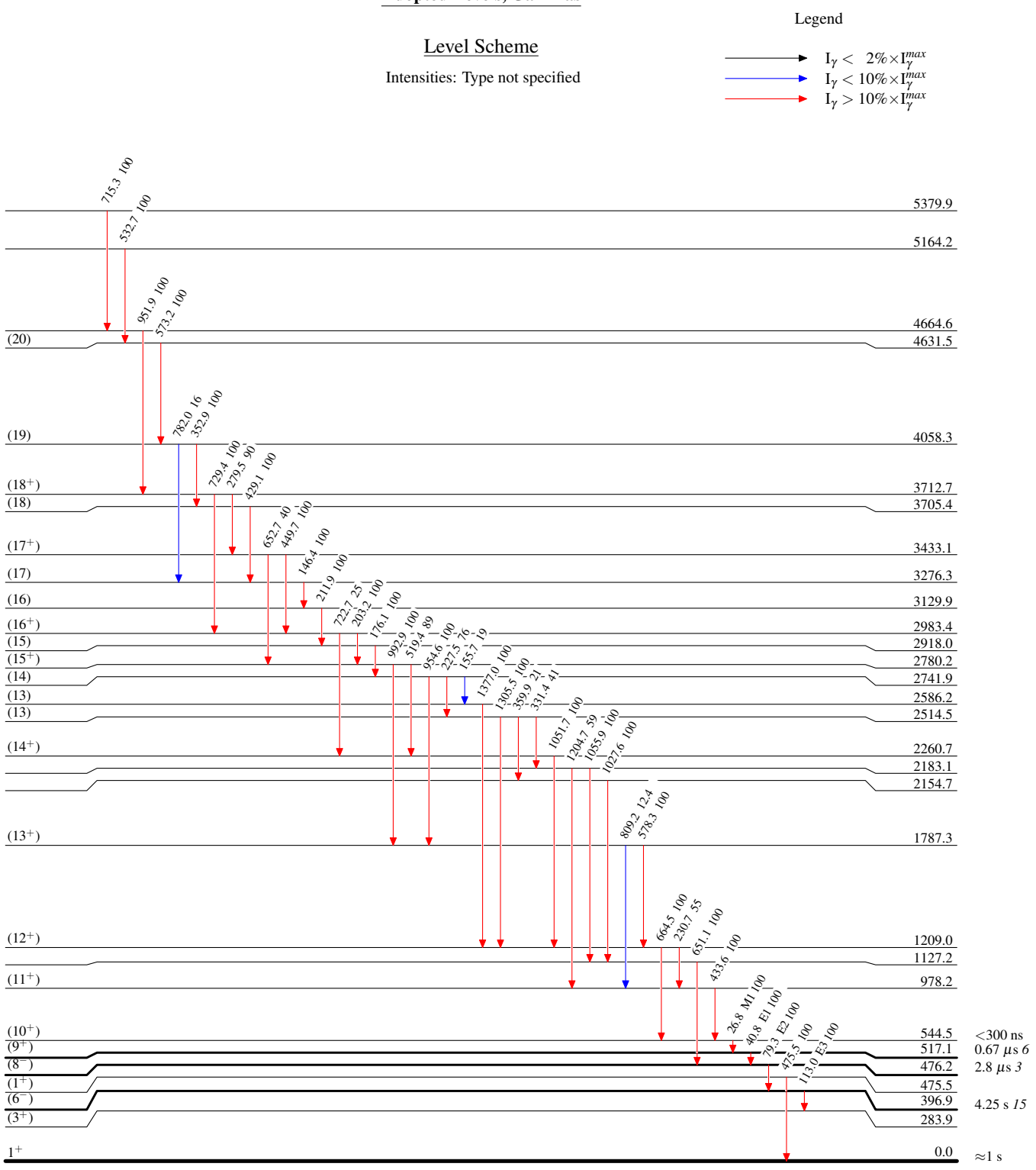
† From (HI,xnγ) except as noted.

‡ Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

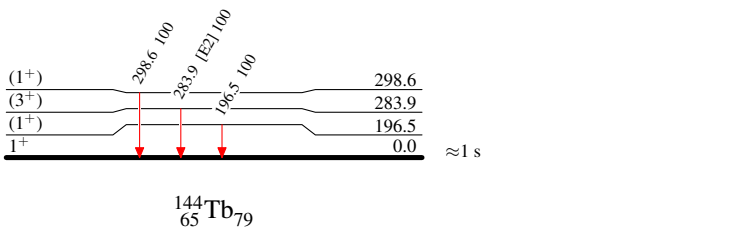


$^{144}_{65}Tb_{79}$

Adopted Levels, Gammas

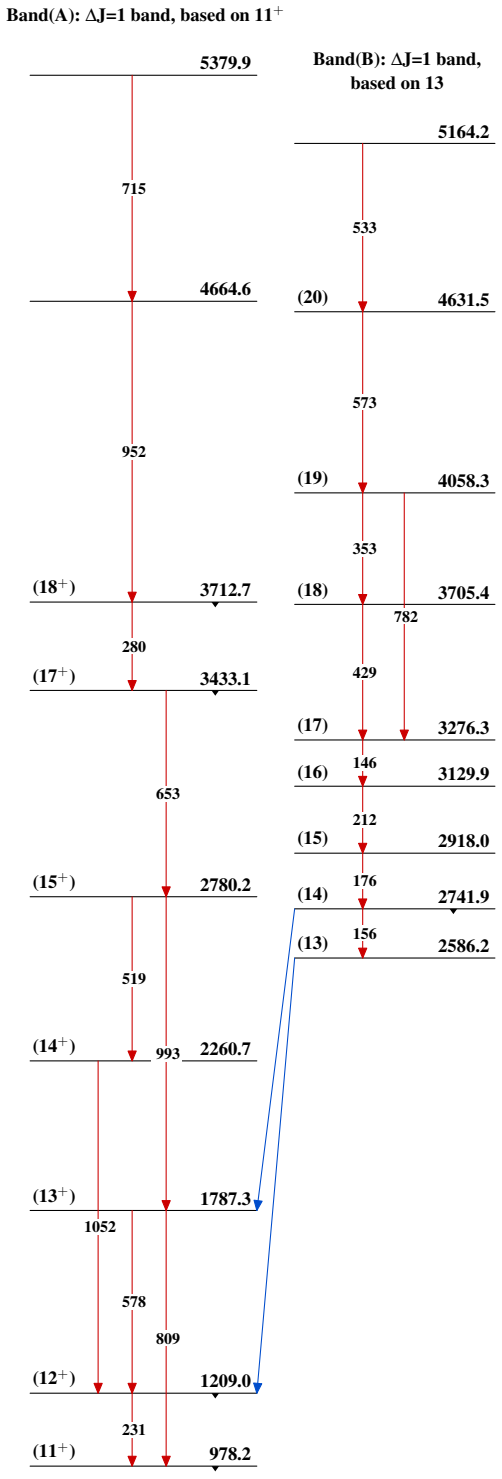
Level Scheme (continued)

Intensities: Type not specified



$^{144}_{65}Tb_{79}$

Adopted Levels, Gammas



$^{144}_{65}Tb_{79}$