Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 108,2173 (2007)	1-Oct-2006

Q(β^-)=7052 *9*; S(n)=2950 *4*; S(p)=12083 *7*; Q(α)=−855 *4* 2012Wa38
Note: Current evaluation has used the following Q record 6.94E+3 123210 *13119700* syst 2003Au03.
ΔS(p): 320 syst (2003Au03).
Q(β^-n)=1870 *130* (syst,2003Au03).
2000Lh02: Measured Fission yield in n, p induced fission in ^{238}U.

^{137}Te Levels

Cross Reference (XREF) Flags

A ^{248}Cm SF decay

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
0.0	(7/2$^-$)	2.49 s *5*	A	%β^-=100; %β^-n=2.99 *16* $T_{1/2}$: from 1985Sa15. Other: 2.1 s *5* (1975As04); see also $T_{1/2}$=3.5 s *5* (1969ScZY), ≈4 s (1977Pf01). %β^-n: evaluated result from 1993Ru01. Jπ: From syst of N=85 isotones expected configuration=(ν $f_{7/2}$)^3 (2000Ur01,2002Ur04).
608.2‡	(11/2$^-$)		A	Jπ: configuration=(ν $f_{7/2}$)^3 or configuration=(ν $f_{7/2}$) ⊗ (2$^+$,N=84 core)(2000Ur01).
1100.8#	(13/2$^-$)		A	Jπ: possible configuration=((ν $h_{9/2}$)(ν $f_{7/2}$)^2) (2000Ur01).
1141.1‡	(15/2$^-$)		A	Jπ: configuration=(ν $f_{7/2}$)^3 or configuration=(ν $f_{7/2}$) ⊗ (2$^+$,N=84 core)(2000Ur01).
1477.4#	(17/2$^-$)		A	Jπ: possible configuration=((ν $h_{9/2}$)(ν $f_{7/2}$)^2) (2000Ur01).
1723.8‡	(19/2$^-$)		A	
1996.3#	(21/2$^-$)		A	Jπ: possible configuration=((ν $h_{9/2}$)(ν $f_{7/2}$)^2) (2000Ur01).
2490.0‡	(23/2$^-$)		A	
2731.7#	(25/2$^-$)		A	
3075.1‡	(27/2$^-$)		A	
3272.9#	(29/2$^-$)		A	
3627.3‡	(31/2$^-$)		A	

† From least-squares adjustment to Eγ's, assuming Δ(Eγ)=0.5 keV.
‡ Band(A): Yrast cascade-1, Excitations are interpreted as due to $\nu f^3_{7/2}$ valence neutrons and core vibrations coupled to these.
# Band(a): Yrast cascade-2 Excitations are interpreted as due to $\nu[h_{9/2}f^2_{7/2}]$ valence neutrons and core vibrations coupled to these.

γ(^{137}Te)

E_i(level)	J^π_i	E_γ	E_f	J^π_f	Mult.†	E_i(level)	J^π_i	E_γ	E_f	J^π_f	Mult.†
608.2	(11/2$^-$)	608.2	0.0	(7/2$^-$)	E2	1996.3	(21/2$^-$)	272.6	1723.8	(19/2$^-$)	D
1100.8	(13/2$^-$)	492.7	608.2	(11/2$^-$)				518.6	1477.4	(17/2$^-$)	Q
1141.1	(15/2$^-$)	532.8	608.2	(11/2$^-$)	E2	2490.0	(23/2$^-$)	493.7	1996.3	(21/2$^-$)	
1477.4	(17/2$^-$)	336.4	1141.1	(15/2$^-$)	M1			766.5	1723.8	(19/2$^-$)	
		376.6	1100.8	(13/2$^-$)		2731.7	(25/2$^-$)	241.8	2490.0	(23/2$^-$)	
1723.8	(19/2$^-$)	246.9	1477.4	(17/2$^-$)	D			735.2	1996.3	(21/2$^-$)	
		582.5	1141.1	(15/2$^-$)	Q	3075.1	(27/2$^-$)	343.4	2731.7	(25/2$^-$)	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

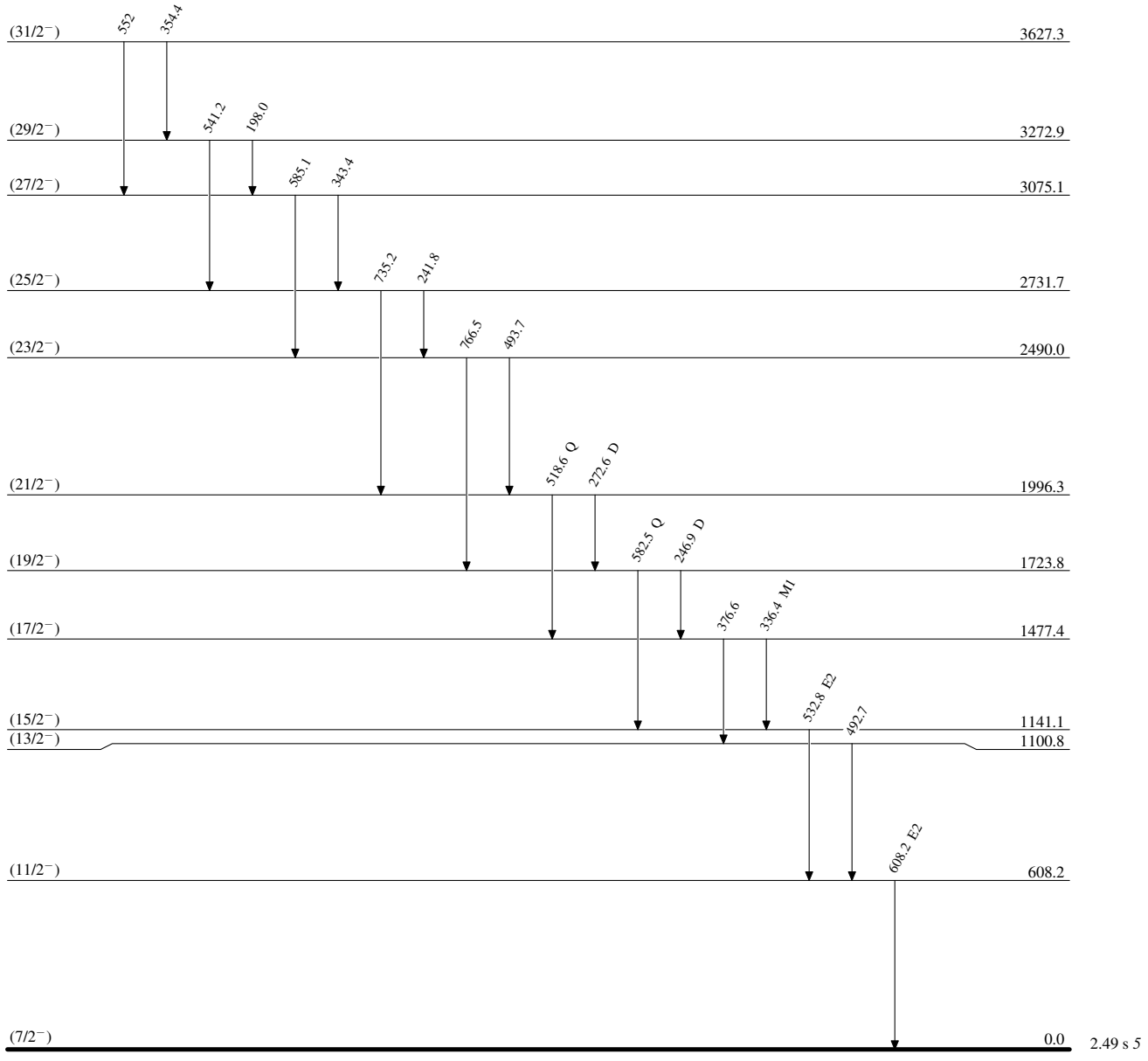
$\gamma(^{137}Te)$ (continued)

E_i(level)	J_i^π	E_γ	E_f	J_f^π
3075.1	$(27/2^-)$	585.1	2490.0	$(23/2^-)$
3272.9	$(29/2^-)$	198.0	3075.1	$(27/2^-)$
		541.2	2731.7	$(25/2^-)$
3627.3	$(31/2^-)$	354.4	3272.9	$(29/2^-)$
		552	3075.1	$(27/2^-)$

† From $\gamma\gamma(\theta)$,γ(lin pol) Q=stretched quadrupole, D=stretched dipole.

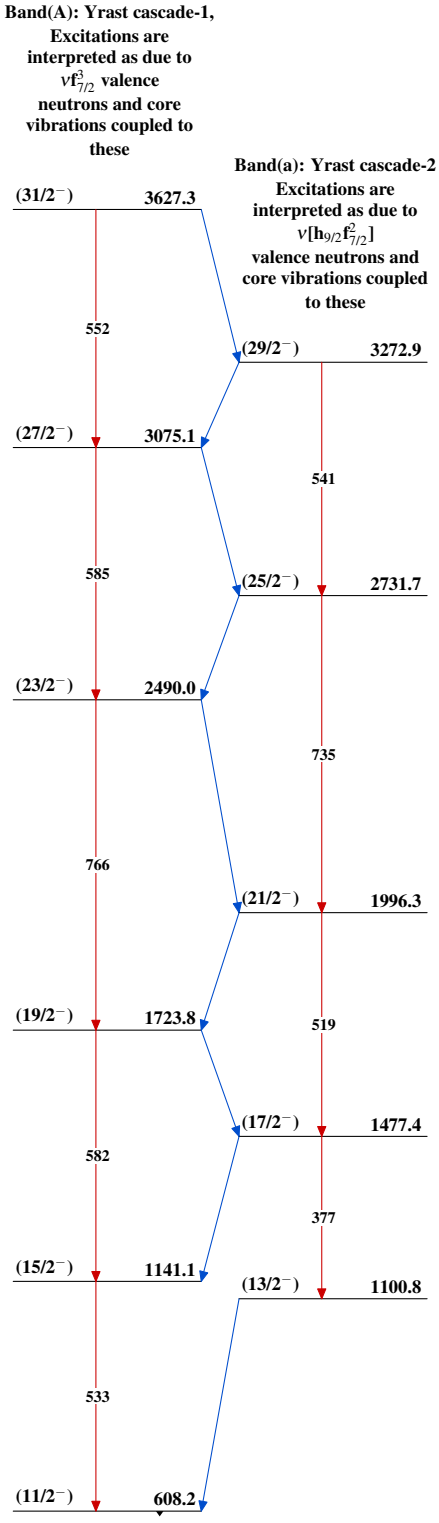
Adopted Levels, Gammas

Level Scheme



$^{137}_{52}Te_{85}$

Adopted Levels, Gammas



$^{137}_{52}Te_{85}$