^{130}Te(^{6}Li,3nγ) 1979Ga01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov and A. Rodionov, F. G. Kondev	NDS 112, 855 (2011)	31-Oct-2010

1979Ga01: ^{130}Te(^{6}Li,3nγ), E=32 MeV; measured Eγ, Iγ, $\gamma\gamma$, $\gamma(\theta)$ (θ=90-150°), pulsed-beam delayed $\gamma\gamma$ coin.; deduced levels, J^π, rotational bands. Van de Graaff, Ge(Li) detectors.
Other: 1989Ma18, ^{130}Te(^{7}Li,Xγ)^{133}Cs, E(lab)=27 MeV.

^{133}Cs Levels

E(level)†	Jπ‡	$T_{1/2}$	E(level)†	Jπ‡	E(level)†	Jπ‡
0.0@	7/2+#	stable	1071.4& *3*	11/2−	2295.2@ *6*	19/2+
80.95 *24*	5/2+#		1430.0@ *5*	15/2+	2528.4 *6*	(21/2)
384.3 *4*	3/2+#		1604.2 *5*	(15/2−)	2643.5 *7*	(23/2)
632.7@ *3*	11/2+		1745.1& *5*	15/2−	2834.3 *8*	(25/2)
705.39 *23*	9/2+		1923.3 *6*	(19/2)		
768.0 *3*	9/2+		1951.8 *6*	(17/2)		

† From a least-squares fit to Eγ's.
‡ From $\gamma(\theta)$ and γ multipolarities, except as noted.
# From Adopted Levels.
@ Band(A): Band A based on 7/2+ g.s.
& Band(B): Band B based on 11/2− state.

γ(^{133}Cs)

Eγ†	Iγ†	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	Comments
80.9 *3*	>100	80.95	5/2+	0.0	7/2+		
115.1 *3*	12 *2*	2643.5	(23/2)	2528.4	(21/2)	D	$\gamma(\theta)$: A_2=−0.29 *5*, A_4=0.04 *5*.
190.8 *3*	5 *1*	2834.3	(25/2)	2643.5	(23/2)	D+Q	$\gamma(\theta)$: A_2=−0.52 *8*, A_4≈0.
233.2 *3*	31 *3*	2528.4	(21/2)	2295.2	19/2+	D	$\gamma(\theta)$: A_2=−0.15 *4*, A_4=0.05 *7*.
303.4# *3*	19#	384.3	3/2+	80.95	5/2+	D+Q	$\gamma(\theta)$: A_2=−0.39 *9*.
303.4# *3*	19#	1071.4	11/2−	768.0	9/2+	D+Q	$\gamma(\theta)$: A_2=−0.39 *9*.
319.1 *3*	47 *5*	1923.3	(19/2)	1604.2	(15/2−)	Q	$\gamma(\theta)$: A_2=0.12 *3*, A_4=−0.01 *3*.
347.6 *3*	13 *2*	1951.8	(17/2)	1604.2	(15/2−)	D+Q	$\gamma(\theta)$: A_2=−0.62 *6*, A_4≈0.
366.1 *3*	98 *10*	1071.4	11/2−	705.39	9/2+	D	$\gamma(\theta)$: A_2=−0.18 *2*, A_4=0.05 *3*.
532.8 *3*	71 *7*	1604.2	(15/2−)	1071.4	11/2−	E2	$\gamma(\theta)$: A_2=0.31 *3*, A_4=−0.01 *5*.
624.4 *3*	103 *10*	705.39	9/2+	80.95	5/2+	E2	$\gamma(\theta)$: A_2=0.23 *2*, A_4=−0.06 *3*.
632.7 *3*	100	632.7	11/2+	0.0	7/2+	E2	$\gamma(\theta)$: A_2=0.23 *2*, A_4=−0.04 *4*.
673.7 *3*	19 *2*	1745.1	15/2−	1071.4	11/2−	E2	$\gamma(\theta)$: A_2=0.46 *33*, A_4≈0.
705.5 *3*	53 *5*	705.39	9/2+	0.0	7/2+		
767.9 *3*	33 *3*	768.0	9/2+	0.0	7/2+	D	$\gamma(\theta)$: A_2=−0.17 *4*, A_4=0.04 *6*.
797.3 *3*	65 *7*	1430.0	15/2+	632.7	11/2+	E2	$\gamma(\theta)$: A_2=0.24 *2*, A_4=−0.08 *3*.
865.2 *3*	37 *4*	2295.2	19/2+	1430.0	15/2+	E2	$\gamma(\theta)$: A_2=0.23 *4*, A_4=0.08 *5*.

† From 1979Ga01. ΔEγ=0.3 was assigned to each γ-ray according to author's statement that uncertainties of Eγ within 0.3 keV.
‡ From $\gamma(\theta)$.
# Multiply placed with undivided intensity.

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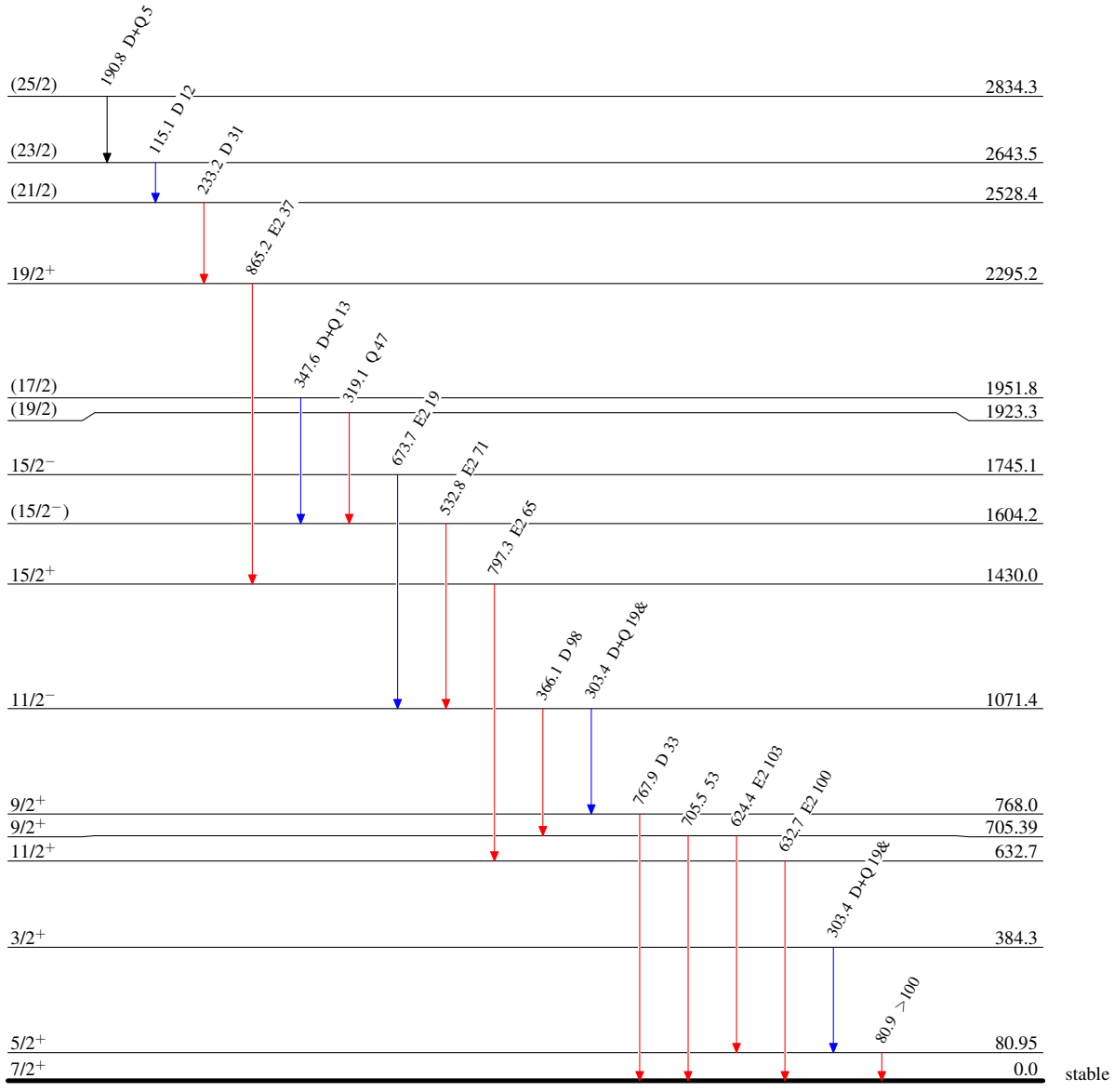
Level Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

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



$^{133}_{55}Cs_{78}$

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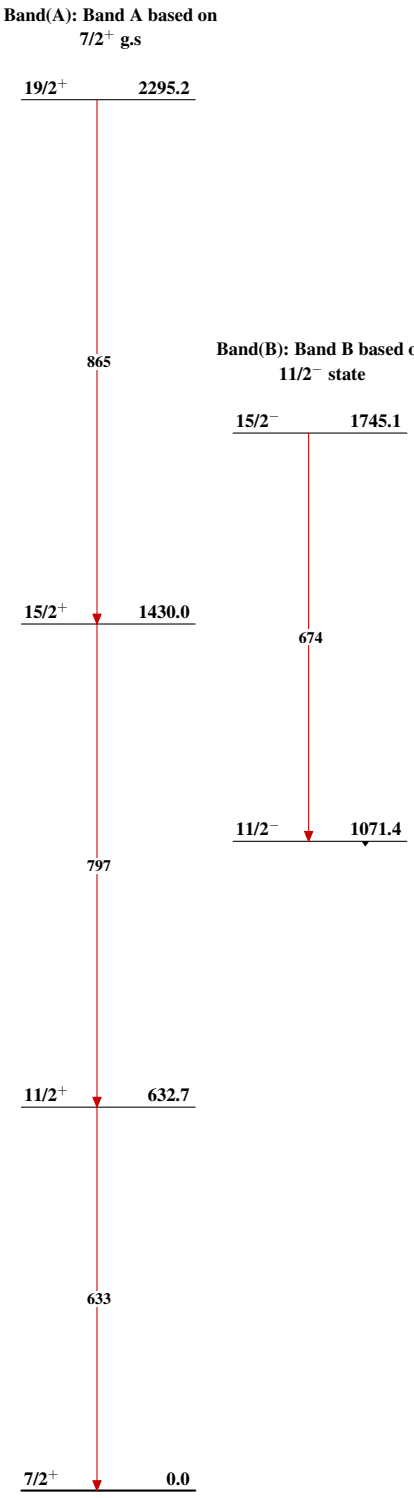

$^{133}_{55}Cs_{78}$