

<sup>128</sup>Sb β<sup>-</sup> decay (10.41 min) 1971Mc10

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Zoltan Elekes and Janos Timar		NDS 129, 191 (2015)	28-Feb-2015

Parent: <sup>128</sup>Sb: E=0.0+x; J<sup>π</sup>=5<sup>+</sup>; T<sub>1/2</sub>=10.41 min 18; Q(β<sup>-</sup>)=4363 19; %β<sup>-</sup> decay=96.4 10  
<sup>128</sup>Sb-%β<sup>-</sup> decay: see <sup>128</sup>Sb IT decay.  
 1971Mc10: <sup>235</sup>U(n,F) on-line mass separation; Ge γ, scintillator-scintillator βγ(t).  
 1971Ki22: <sup>128</sup>Te(n,p) mass separation; Ge G.

<sup>128</sup>Te Levels

E(level)	J <sup>π</sup>	T <sub>1/2</sub>	Comments
0.0	0 <sup>+</sup>	7.7×10 <sup>24</sup> y 4	
743.24 4	2 <sup>+</sup>	3.30 ps 3	
1497.14 6	4 <sup>+</sup>		
1811.15 7	6 <sup>+</sup>	0.48 ns 3	T <sub>1/2</sub> : from βγ(t) (1971Mc10).
2405.29 11	(4 <sup>+</sup> ,5,6 <sup>+</sup> )		
2598.76 10			
2655.15 22			
2852.0 3	(4 <sup>+</sup> ,5,6 <sup>+</sup> )		

β<sup>-</sup> radiations

E(decay)	E(level)	Iβ <sup>-†</sup>	Comments
(1511 19)	2852.0	1.6 3	
(1708 19)	2655.15	4.1 5	
(1764 19)	2598.76	8.9 12	
(1958 19)	2405.29	4.7 8	
2580 40	1811.15	80.9 24	E(decay): from (β)(314γ) coincidence. Other: 2580 70 from (β)(754γ) coincidence (1977Lu06).

† For absolute intensity per 100 decays, multiply by 0.96 10.

γ(<sup>128</sup>Te)

Normalization: Σ I(γ+ce) to g.s.=96.4 % 10.

E <sub>γ</sub>	I <sub>γ</sub> <sup>†‡</sup>	E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>	Mult. <sup>‡</sup>	Comments
193.5 7	1.0 5	2598.76		2405.29 (4 <sup>+</sup> ,5,6 <sup>+</sup> )			
314.00 5	92 5	1811.15	6 <sup>+</sup>	1497.14 4 <sup>+</sup>		E2	B(E2)(W.u.)=11.1 8
594.1 1	3.4 5	2405.29	(4 <sup>+</sup> ,5,6 <sup>+</sup> )	1811.15 6 <sup>+</sup>			
743.24 4	100	743.24	2 <sup>+</sup>	0.0 0 <sup>+</sup>		E2	
753.90 4	100 2	1497.14	4 <sup>+</sup>	743.24 2 <sup>+</sup>		E2	
787.60 7	7.4 10	2598.76		1811.15 6 <sup>+</sup>			
844.0 3	2.3 4	2655.15		1811.15 6 <sup>+</sup>			
908.3 2	2.4 3	2405.29	(4 <sup>+</sup> ,5,6 <sup>+</sup> )	1497.14 4 <sup>+</sup>			
1040.9 3	1.0 2	2852.0	(4 <sup>+</sup> ,5,6 <sup>+</sup> )	1811.15 6 <sup>+</sup>			
<sup>x</sup> 1098.4 8	0.3 2						
1101.8 8	0.4 2	2598.76		1497.14 4 <sup>+</sup>			
<sup>x</sup> 1141.7 3	0.8 2						
1158.0 3	1.8 2	2655.15		1497.14 4 <sup>+</sup>			
1354.6 5	0.6 2	2852.0	(4 <sup>+</sup> ,5,6 <sup>+</sup> )	1497.14 4 <sup>+</sup>			

Continued on next page (footnotes at end of table)

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 $^{128}\text{Sb} \beta^-$  decay (10.41 min) [1971Mc10](#) (continued) $\gamma(^{128}\text{Te})$  (continued)

<u><math>E_\gamma</math></u>	<u><math>I_\gamma</math></u> <sup>†#</sup>	<u><math>E_i(\text{level})</math></u>
<sup>x</sup> 1585.2 10	0.3 2	
<sup>x</sup> 1608.5 10	0.5 2	

†  $I_\gamma$ 's are taken from [1971Mc10](#), but  $I_\gamma(314\gamma)=95.2$  is replaced by 92.5 in order to achieve intensity balance at 1497-keV  $4^+$  state (evaluators).

‡ From Adopted Levels, Gammas.

# For absolute intensity per 100 decays, multiply by 0.965.

<sup>x</sup>  $\gamma$  ray not placed in level scheme.

$^{128}\text{Sb}$   $\beta^-$  decay (10.41 min) 1971Mc10

## Decay Scheme

Intensities:  $I_{(\gamma+ce)}$  per 100 parent decays

## Legend

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

