

$^{78}\text{Y}$   $\varepsilon$  decay (5.8 s) 1998Uu01

Type	Author	History	Citation	Literature Cutoff Date
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Parent:  $^{78}\text{Y}$ :  $E=0+x$ ;  $J^\pi=(5^+)$ ;  $T_{1/2}=5.8$  s 6;  $Q(\varepsilon)=10650$  SY;  $\% \varepsilon + \% \beta^+$  decay=100.0

$^{78}\text{Y}$ -E:  $X \leq 500$  keV (1998Uu01).

$^{78}\text{Y}$ - $Q(\varepsilon)$ : 10650 400 (syst, 2009AuZZ, 2003Au03). 2001Ga24 estimate 10500 400 from half-life and decay mode. 2007WeZX estimate 10940 200 from  $^{78}\text{Y}$  half-life and  $ft$  value from systematics of  $0^+$  to  $0^+$  superallowed  $\beta$  transitions.

$^{78}\text{Y}$ - $T_{1/2}$ : From timing of  $\gamma$  rays. Weighted average of 5.7 s +7-6 (2007WeZX, 2002Fa13, 2001Ki13) and 5.8 s 6 (1998Uu01).

$^{78}\text{Y}$ - $\% \varepsilon + \% \beta^+$  decay: Assumed  $\% \varepsilon + \% \beta^+ = 100$ .

1998Uu01:  $^{40}\text{Ca}(^{40}\text{Ca}, \text{pn})$ ,  $E=125$  MeV. Measured  $\beta^+$ ,  $\gamma$ ,  $\beta^+\gamma(t)$ ,  $T_{1/2}$ .

2001Ki13, 2002Fa13, 2007WeZX:  $^{112}\text{Sn}$  ions, 1 GeV/nucleon, on Be target, fragments isotopically separated. Si stack detectors. The decay scheme is not known well, the normalizations and log  $ft$  values are only approximate.

 $^{78}\text{Sr}$  Levels

E(level)	$J^\pi^\dagger$
0.0	$0^+$
279	$2^+$
783	$4^+$
1496	$6^+$

$^\dagger$  From 'Adopted Levels'.

 $\varepsilon, \beta^+$  radiations

E(decay)	E(level)	Log $ft$	$I(\varepsilon + \beta^+)^\dagger$
(9154 SY)	1496	>5.4	<50
(9867 SY)	783	>5.4	<70

$^\dagger$  Absolute intensity per 100 decays.

 $\gamma(^{78}\text{Sr})$ 

$E_\gamma$	$I_\gamma^\dagger$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$
279	100	279	$2^+$	0.0	$0^+$
504	90 10	783	$4^+$	279	$2^+$
713	40 10	1496	$6^+$	783	$4^+$

$^\dagger$  Absolute intensity per 100 decays.

${}^{78}\text{Y}$   $\epsilon$  decay (5.8 s) 1998Uu01Decay Scheme

Legend

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$   
 —→  $I_\gamma < 10\% \times I_\gamma^{\text{max}}$   
 —→  $I_\gamma > 10\% \times I_\gamma^{\text{max}}$

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