



1 Decay Scheme

Le calcium 45 se désintègre par émission bêta moins principalement vers le niveau fondamental de scandium 45.

Ca-45 disintegrates by beta minus emission to the Sc-45 ground state mainly.

2 Nuclear Data

$$T_{1/2}(^{45}\text{Ca}) : 162,64 \quad (11) \quad \text{d}$$

$$Q^-(^{45}\text{Ca}) : 258,0 \quad (7) \quad \text{keV}$$

2.1 β^- Transitions

	Energy keV	Probability $\times 100$	Nature	$\lg ft$
$\beta_{0,1}^-$	245,6 (7)	0,0020 (7)	Unique 1st Forbidden	10,3
$\beta_{0,0}^-$	258,0 (7)	99,9980 (7)	Allowed	6

2.2 Gamma Transitions and Internal Conversion Coefficients

	Energy keV	$P_{\gamma+ce}$ $\times 100$	Multipolarity	α_K	α_L	α_M	α_T
$\gamma_{1,0}(\text{Sc})$	12,40 (5)	0,0020 (7)	M2	362 (8)	53,4 (12)	6,63 (15)	423 (9)

3 Electron Emissions

		Energy keV	Electrons per 100 disint.
ec _{1,0} K	(Sc)	7,90 (5)	0,0017 (6)
$\beta_{0,1}^-$	max:	245,6 (7)	0,0020 (7)
$\beta_{0,1}^-$	avg:	91,7 (7)	
$\beta_{0,0}^-$	max:	258,0 (7)	99,9980 (7)
$\beta_{0,0}^-$	avg:	76,8 (7)	

4 Main Production Modes

- $\left\{ \begin{array}{l} \text{Ca} - 44(n,\gamma)\text{Ca} - 45 \quad \sigma : 0,88 (5) \text{ barns} \\ \text{Possible impurities : Ca} - 47 \end{array} \right.$
- $\left\{ \begin{array}{l} \text{Sc} - 45(n,p)\text{Ca} - 45 \\ \text{Possible impurities : Sc} - 44, \text{Sc} - 44m, \text{Sc} - 46, \text{K} - 42 \end{array} \right.$

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