



1 Decay Scheme

Le Y-88 se désintègre par capture électronique et émission bêta plus vers des niveaux excités de Sr-88. Aucune transition vers le niveau fondamental de Sr-88 n'a été mise en évidence.

Y-88 decays by electron capture and beta plus emission towards excited levels of Sr-88. None transition towards the fundamental level of Sr-88 was shown.

2 Nuclear Data

$$T_{1/2}({}^{88}\text{Y}) : 106,626 \quad (21) \quad \text{d}$$

$$Q^+({}^{88}\text{Y}) : 3622,6 \quad (15) \quad \text{keV}$$

2.1 β^+ Transitions

	Energy keV	Probability × 100	Nature	lg <i>ft</i>
$\beta_{0,1}^+$	764,5 (15)	0,204 (11)	Unique 1st Forbidden	9,7

2.2 Electron Capture Transitions

	Energy keV	Probability × 100	Nature	lg <i>ft</i>	P _K	P _L	P _{M+}
$\epsilon_{0,4}$	37,6 (15)	0,048 (18)	Allowed	6,9	0,72 (4)	0,23 (4)	0,047 (9)
$\epsilon_{0,3}$	404,0 (15)	0,023 (4)	Unique 1st Forbidden	9,4			
$\epsilon_{0,2}$	888,5 (15)	94,50 (23)	Allowed	7	0,8725 (15)	0,1050 (14)	0,0195 (5)
$\epsilon_{0,1}$	1776,5 (15)	5,23 (23)	Unique 1st Forbidden	9,8	0,65 (15)	0,20 (5)	

2.3 Gamma Transitions and Internal Conversion Coefficients

	Energy keV	$P_{\gamma+ce}$ $\times 100$	Multipolarity	α_K (10^{-4})	α_L (10^{-4})	α_T (10^{-4})	α_π (10^{-4})
$\gamma_{3,2}(\text{Sr})$	484,368 (26)	0,0009	E1	10,8	1,17	12,3	
$\gamma_{4,2}(\text{Sr})$	850,647 (24)	0,048 (18)	(M1,E2)	7,4 (7)	0,8 (1)	8,3 (8)	
$\gamma_{2,1}(\text{Sr})$	898,041 (4)	93,93 (23)	E1	2,77 (20)	0,29 (3)	3,15 (23)	
$\gamma_{3,1}(\text{Sr})$	1382,409 (26)	0,016 (3)	M1+0,3%E2	2,6 (3)	0,28 (3)	2,9 (3)	
$\gamma_{1,0}(\text{Sr})$	1836,073 (13)	99,38 (3)	E2	1,35 (14)	0,15 (2)	1,52 (15)	2,3 (2)
$\gamma_{2,0}(\text{Sr})$	2734,132 (15)	0,614 (25)	E3	1,1 (2)	0,2 (1)	1,3 (2)	4,4 (4)
$\gamma_{3,0}(\text{Sr})$	3218,546 (49)	0,007 (2)	E2	0,55	0,1	0,65	

3 Atomic Data

3.1 Sr

ω_K	:	0,696	(4)
$\bar{\omega}_L$:	0,0262	(7)
n_{KL}	:	1,102	(4)

3.1.1 X Radiations

	Energy keV	Relative probability		
X _K	K α_2	14,098	52,05	
	K α_1	14,1652	100	
	K β_3	15,8252	}	
	K β_1	15,8359	}	
	K β_5''	15,969	}	24,69
	K β_2	16,0847	}	
	K β_4	16,104	}	3,21
X _L	L ℓ	1,6		
	L γ	- 2,2		

3.1.2 Auger Electrons

	Energy keV	Relative probability
Auger K		
KLL	11,59 – 12,13	100
KLX	13,50 – 14,14	36,7
KXY	15,39 – 16,07	3,37
Auger L	1,2 – 2,1	

4 Electron Emissions

		Energy keV		Electrons per 100 disint.
e _{AL}	(Sr)	1,2	- 2,1	102,9 (10)
e _{AK}	(Sr)			26,1 (5)
	KLL	11,59	- 12,13	}
	KLX	13,50	- 14,14	}
	KXY	15,39	- 16,07	}
ec _{1,0} ±	(Sr)	814,058	(15)	0,0228 (20)
ec _{2,1} K	(Sr)	881,936	(4)	0,0260 (19)
ec _{2,1} L	(Sr)	895,825	- 896,101	0,00272 (28)
ec _{2,0} ±	(Sr)	1712,080	(18)	0,00027 (4)
ec _{1,0} K	(Sr)	1819,968	(13)	0,0134 (14)
ec _{1,0} L	(Sr)	1833,857	- 1834,133	0,00149 (20)
ec _{2,0} K	(Sr)	2718,027	(15)	0,000068 (13)
ec _{2,0} L	(Sr)	2731,916	- 2732,192	0,000012 (6)
β _{0,1} ⁺	max:	764,5	(15)	0,204 (11)
β _{0,1} ⁺	avg:	359,4	(2)	

5 Photon Emissions

5.1 X-Ray Emissions

		Energy keV	Photons per 100 disint.	
XL	(Sr)	1,6 — 2,2	2,77 (8)	
XK α_2	(Sr)	14,098	17,30 (22)	} K α
XK α_1	(Sr)	14,1652	33,2 (4)	
XK β_3	(Sr)	15,8252	}	K β'_1
XK β_1	(Sr)	15,8359	}	
XK β_5''	(Sr)	15,969	}	
XK β_2	(Sr)	16,0847	}	
XK β_4	(Sr)	16,104	}	
			1,07 (4)	K β'_2

5.2 Gamma Emissions

	Energy keV	Photons per 100 disint.
$\gamma_{3,2}(\text{Sr})$	484,368 (26)	0,0009
γ^\pm	511	0,408 (22)
$\gamma_{4,2}(\text{Sr})$	850,643 (24)	0,048 (18)
$\gamma_{2,1}(\text{Sr})$	898,036 (4)	93,90 (23)
$\gamma_{3,1}(\text{Sr})$	1382,397 (26)	0,016 (3)
$\gamma_{1,0}(\text{Sr})$	1836,052 (13)	99,32 (3)
$\gamma_{2,0}(\text{Sr})$	2734,068 (14)	0,614 (25)
$\gamma_{3,0}(\text{Sr})$	3218,419 (22)	0,007 (2)

6 Main Production Modes

$$\left\{ \begin{array}{l} \text{Sr} - 88(\text{p,n})\text{Y} - 88 \\ \text{Possible impurities : Y} - 84, \text{Y} - 85, \text{Y} - 86, \text{Y} - 87, \text{Rb} - 83, \text{Rb} - 84, \text{Rb} - 86 \end{array} \right.$$

$$\left\{ \begin{array}{l} \text{Sr} - 88(\text{d,2n})\text{Y} - 88 \\ \text{Possible impurities : Y} - 84, \text{Y} - 87, \text{Sr} - 89 \end{array} \right.$$

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