



1 Decay Scheme

Sr-82 decays by electron capture to the ground state of Rb-82 ($T_{1/2} = 1,2652$ (45) min). There is no decay to the excited level of Rb-82m ($T_{1/2} = 6,47$ h).

Le strontium 82 se désintègre par capture électronique vers le niveau fondamental du rubidium 82 ($T_{1/2}=1,2652$ (45) min), le niveau excité de période 6,47 h n'est pas atteint.

2 Nuclear Data

$T_{1/2}(^{82}\text{Sr})$:	25,347	(17)	d
$T_{1/2}(^{82}\text{Rb})$:	1,2652	(45)	min
$Q^+(^{82}\text{Sr})$:	178	(7)	keV

2.1 Electron Capture Transitions

	Energy (keV)	Probability (%)	Nature	lg ft	P_K	P_L	P_M
$\epsilon_{0,0}$	178 (7)	100	Allowed	4,7	0,859 (2)	0,116 (2)	0,022 (1)

3 Atomic Data

3.1 Rb

ω_K	:	0,674	(4)
$\bar{\omega}_L$:	0,0237	(6)
n_{KL}	:	1,125	(4)

3.1.1 X Radiations

	Energy (keV)		Relative probability
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X _K			
Kα ₂	13,3359		51,95
Kα ₁	13,3955		100
Kβ ₃	14,9519	}	24,34
Kβ ₁	14,9614		
Kβ ₅ ''	15,085		
Kβ ₂	15,1856	}	2,82
Kβ ₄	15,205		
 X _L			
Lℓ	1,484		
Lα	1,693 - 1,695		
Lη	1,543		
Lβ	1,752 - 1,954		
Lγ	1,831 - 2,051		

3.1.2 Auger Electrons

	Energy (keV)	Relative probability
Auger K		
KLL	10,987 - 11,503	100
KLX	12,782 - 13,381	35,8
KXY	14,556 - 15,172	3,2
Auger L		
	1,16 - 2,05	

4 Electron Emissions

	Energy (keV)	Electrons (per 100 disint.)
e _{AL} (Rb)	1,16 - 2,05	105,7 (5)
e_{AK} (Rb)		
KLL	10,987 - 11,503	} 28,0 (4)
KLX	12,782 - 13,381	
KXY	14,556 - 15,172	

5 Photon Emissions

5.1 X-Ray Emissions

		Energy (keV)	Photons (per 100 disint.)		
XL	(Rb)	1,484 - 2,051	2,52 (5)		
XK α_2	(Rb)	13,3359	16,79 (14)	}	K α
XK α_1	(Rb)	13,3955	32,32 (22)		
XK β_3	(Rb)	14,9519	7,87 (9)	}	K' β_1
XK β_1	(Rb)	14,9614			
XK β_5''	(Rb)	15,085			
XK β_2	(Rb)	15,1856	0,91 (4)	}	K' β_2
XK β_4	(Rb)	15,205			

6 Main Production Modes

- { Rb – nat(p,xn)Sr – 82
- { Possible impurities: Sr – 85
- { Rb – 85(p,4n)Sr – 82
- { Possible impurities: Sr – 85

7 References

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