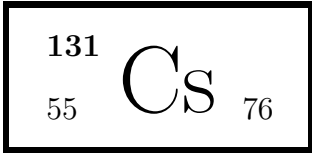


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1 Decay Scheme

¹³¹Cs undergoes 100% EC decay directly to the stable ground state of ¹³¹Xe. This very simple nuclear decay scheme consists of only one EC transition, along with arrays of atomic X-ray and Auger-electron emissions.

Le ¹³¹Cs décroît par capture électronique à 100 % vers l'état fondamental, stable, du ¹³¹Xe. Ce schéma de désintégration très simple ne comprend qu'une seule transition, suivie d'émissions de photons X et d'électrons Auger.

2 Nuclear Data

$T_{1/2}({}^{131}\text{Cs})$: 9,681 (16) d
 $Q^+({}^{131}\text{Cs})$: 358,00 (18) keV

2.1 Electron Capture Transitions

	Energy (keV)	Probability (%)	Nature	lg <i>ft</i>	P_K	P_L	P_M
$\epsilon_{0,0}$	358,00 (18)	100	allowed	5,580	0,83566 (30)	0,12757 (7)	0,02824 (12)

3 Atomic Data

3.1 Xe

ω_K : 0,888 (5)
 $\bar{\omega}_L$: 0,097 (5)
 n_{KL} : 0,902 (4)

3.1.1 X Radiations

	Energy (keV)	Relative probability		
X _{Ktot}	30,631 - 35,819	188		
Kα ₂	30,631	53,92	}	Kα
Kα ₁	30,978	100		
Kβ ₃	34,925	9,33	}	K'β ₁
Kβ ₁	34,993	18,14		
Kβ ₅ ''	35,252	0,090		
Kβ ₅ '	35,266	0,132		
KN	35,819 - 35,832	5,83		
KO	35,979 - 35,981	0,58		
X _{Ltot}	3,7956 - 5,2886	21,81		
X _{Mtot}	0,2769 - 1,0378	1,36		
X _{Ntot}	0,0929 - 0,2088	0,517		

3.1.2 Auger Electrons

	Energy (keV)	Relative probability
Auger K _{tot}	24,398 - 33,721	149,8
KLL	24,398 - 25,789	100
KLX	28,987 - 30,780	44,97
KXY	33,493 - 35,569	4,81
Auger L _{tot}	0,1350 - 4,5518	1 550
Auger M _{tot}	0,0146 - 0,7217	3 758
Auger N _{tot}	0,0018 - 0,0974	9 440

4 Electron Emissions

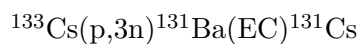
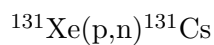
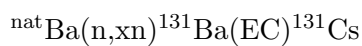
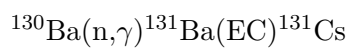
		Energy (keV)	Electrons (per 100 disint.)
eAN _{tot}	(Xe)	0,0018 - 0,0974	571 (171)
eAM _{tot}	(Xe)	0,0146 - 0,7217	227 (70)
eAL _{tot}	(Xe)	0,1350 - 4,5518	94 (14)
eAK _{tot}	(Xe)	24,398 - 33,721	9,1 (14)
	KLL	24,398 - 25,789	6,0 (9)
	KLX	28,987 - 30,780	2,72 (41)
	KXY	33,493 - 35,569	0,291 (44)

5 Photon Emissions

5.1 X-Ray Emissions

		Energy (keV)	Photons (per 100 disint.)		
XN _{tot}	(Xe)	0,0929 - 0,2088	0,21 (6)		
XM _{tot}	(Xe)	0,2769 - 1,0378	0,54 (16)		
XL _{tot}	(Xe)	3,7956 - 5,2886	8,6 (9)		
XK _{tot}	(Xe)	30,631 - 35,819	75 (7)		
XKα ₂	(Xe)	30,631	21,4 (21)	}	Kα
XKα ₁	(Xe)	30,978	39,6 (40)		
XKβ ₃	(Xe)	34,925	3,70 (37)	}	K'β ₁
XKβ ₁	(Xe)	34,993	7,2 (7)		
XKβ ₅ ''	(Xe)	35,252	0,0354 (35)		
XKβ ₅ '	(Xe)	35,266	0,052 (5)		
XKN	(Xe)	35,828	2,31 (23)		
XKO	(Xe)	35,980	0,229 (23)		

6 Main Production Modes



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