



1 Decay Scheme

N-13 disintegrates by 99.8 % beta-plus transition to the ground state of the stable nuclide C-13.
l'azote 13 se désintègre à 99,8% par émission bêta-plus vers le niveau fondamental de carbone 13.

2 Nuclear Data

$T_{1/2}({}^{13}\text{N})$: 9,9670 (37) min
 $Q^+({}^{13}\text{N})$: 2220,45 (27) keV

2.1 β^+ Transitions

	Energy keV	Probability $\times 100$	Nature	lg ft
$\beta_{0,0}^+$	1198,45 (27)	99,818 (13)	Allowed	3,654

2.2 Electron Capture Transitions

	Energy keV	Probability $\times 100$	Nature	P _K	P _L
$\epsilon_{0,0}$	2220,45 (27)	0,182 (12)	Allowed	0,923 (7)	0,078 (7)

3 Atomic Data

3.1 C

$$\omega_K : 0,0026 \quad (3)$$

4 Photon Emissions

4.1 Gamma Emissions

	Energy keV	Photons per 100 disint.
γ^\pm	511	199,636 (26)

5 Electron Emissions

	Energy keV	Electrons per 100 disint.
$\beta_{0,0}^+$	max: 1198,45 (27)	99,818 (13)
$\beta_{0,0}^+$	avg: 493,0 (2)	

6 Main Production Modes

C – $^{12}(\text{d},\text{n})\text{N} - 13$
 C – $^{13}(\text{p},\text{n})\text{N} - 13$
 O – $^{16}(\text{p},\alpha)\text{N} - 13$
 O – $^{16}(\text{d},\text{n}\alpha)\text{N} - 13$
 N – $^{14}(\text{p},\text{d})\text{N} - 13$
 N – $^{14}(\text{n},2\text{n})\text{N} - 13$
 N – $^{14}(\gamma,\text{n})\text{N} - 13$
 N – $^{14}(\text{p},\text{pn})\text{N} - 13$
 C – $^{12}(\text{p},\gamma)\text{N} - 13$
 Be – $^9(\text{Li} - 6,2\text{n})\text{N} - 13$
 B – $^{11}(\alpha,2\text{n})\text{N} - 13$

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