

# Unités SI dans la Théorie T0

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# Chapitre 1

## Unités SI

### 1.1 Introduction

Le Système International d'Unités (SI) définit les unités de base de la physique. La théorie T0 offre une perspective unifiée sur ces unités.

### 1.2 Unités de base

1. Mètre (m) - longueur
2. Kilogramme (kg) - masse
3. Seconde (s) - temps
4. Ampère (A) - courant électrique
5. Kelvin (K) - température
6. Mole (mol) - quantité de matière
7. Candela (cd) - intensité lumineuse

### 1.3 Unités naturelles T0

Dans la théorie T0, nous utilisons les unités naturelles :

$$\hbar = c = k_B = 1 \quad (1.1)$$

#### title

Le paramètre  $\xi$  permet de relier les unités naturelles aux unités SI :

$$[L]_{SI} = \xi^n \cdot [L]_{nat} \quad (1.2)$$

### 1.4 Constantes fondamentales

Les constantes fondamentales en unités SI et leur expression en termes de  $\xi$  :

1. Vitesse de la lumière :  $c = 299\,792\,458 \text{ m/s}$
2. Constante de Planck :  $\hbar = 1,055 \times 10^{-34} \text{ J} \cdot \text{s}$

3. Charge élémentaire :  $e = 1,602 \times 10^{-19} \text{ C}$

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