

# Relativistic Quantum Waves (Klein-Gordon Equation

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# Chapter 1

## Deriving the KG Equation

### 1.1 double deriving

**Definition 1.1.1: Relativity: the mass shell**

$$p \cdot p = (mc)^2 \rightarrow (mc)^2 = \left(\frac{E}{c}\right)^2 - p_x^2 - p_y^2 - p_z^2$$

**Definition 1.1.2**

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