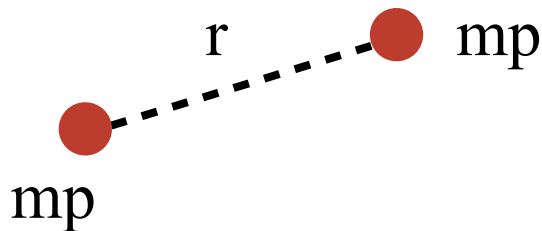


EM and Gravitation Interactions



Electromagnetic Energy

$$E = - \underbrace{\frac{e^2}{4\pi}}_{\text{GeV}} \frac{1}{r} \text{ GeV}$$

The diagram shows the equation $E = - \frac{e^2}{4\pi} \frac{1}{r}$. Arrows point from $\frac{e^2}{4\pi}$ and $\frac{1}{r}$ to 'GeV'. A bracket is under $\frac{e^2}{4\pi}$ with an arrow pointing to a box below.

Pure number: α
Its small: $1/137$

Gravitational Energy

$$E = - \underbrace{G_N}_{\text{GeV}} \frac{m_p^2}{r} \text{ GeV}^3$$

The diagram shows the equation $E = - G_N \frac{m_p^2}{r}$. Arrows point from G_N and $\frac{m_p^2}{r}$ to 'GeV' and 'GeV³' respectively. A bracket is under G_N with an arrow pointing to a box below.

Dimensionful number
 $G_N m_p^2 = 10^{-39}$