

6.4 Quantenfeldtheorie

$$\mathcal{L}(\psi_\nu, \psi_{\nu k}, \dot{\psi}_\nu)$$

$$d\mathcal{L} = \frac{\partial \mathcal{L}}{\partial \psi_\nu} \delta \psi_\nu + \frac{\partial \mathcal{L}}{\partial \psi_{\nu k}} \delta \psi_{\nu k} + \frac{\partial \mathcal{L}}{\partial \dot{\psi}_\nu} \delta \dot{\psi}_\nu$$

partielle Integration | Randterme vernachlässigen

$$\left(\sum_{k=1}^3 \frac{\partial}{\partial x_k} \frac{\partial \mathcal{L}}{\partial \psi_{\nu k}} \delta \psi_\nu - \frac{\partial}{\partial t} \frac{\partial \mathcal{L}}{\partial \dot{\psi}_\nu} \delta \psi_\nu \right)$$