

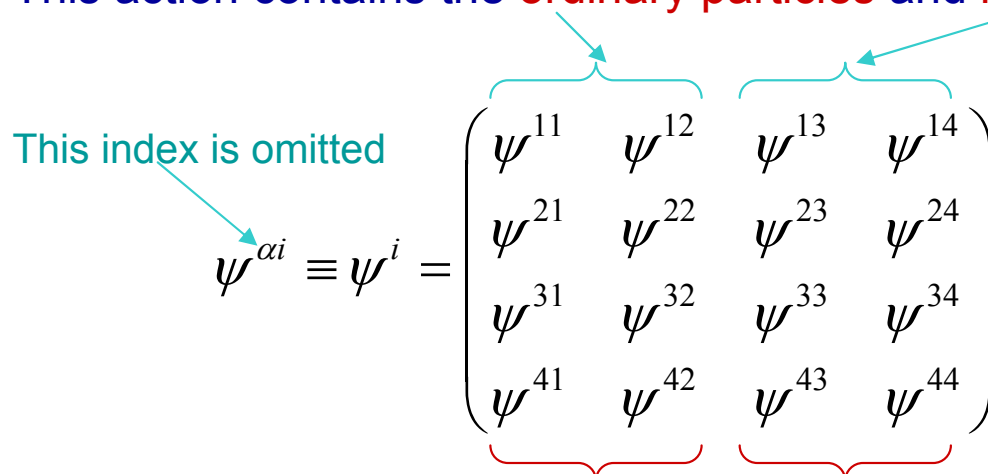
Gauge covariant action:

$$I = \int d^4x \bar{\psi}^i (i \gamma^\mu D_\mu - m) \psi^j z_{ij}$$

$i, j = 1, 2, 3, 4$

$$D_\mu \psi^i = \partial_\mu \psi^i + G_\mu^i{}_j \psi^j$$

This action contains the ordinary particles and mirror particles.



The **SU(2)** gauge group acting within the 1<sup>st</sup> and 2<sup>nd</sup> ideal can be the weak interaction gauge group for ordinary particles.

The **SU(2)** gauge group acting within the 3<sup>rd</sup> and 4<sup>th</sup> ideal can be interpreted as the weak interaction gauge group for mirror particles.

The corresponding two kinds of weak interaction gauge fields that can be transformed into each other by space inversion are contained in  $G_\mu^i{}_j$ .