

場の量子論 p163check6.6

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$$\xi' = \exp\{i\vec{\theta} \cdot \frac{\vec{\sigma}}{2} - \vec{\eta} \cdot \frac{\vec{\sigma}}{2}\} \xi \quad (1)$$

$$(\xi^\dagger)' = \exp\{-i\vec{\theta} \cdot \frac{\vec{\sigma}}{2} - \vec{\eta} \cdot \frac{\vec{\sigma}}{2}\} \xi^\dagger \quad (2)$$

$$\zeta' = \exp\{i\vec{\theta} \cdot \frac{\vec{\sigma}}{2} + \vec{\eta} \cdot \frac{\vec{\sigma}}{2}\} \zeta \quad (3)$$

$$(\zeta^\dagger)' = \exp\{-i\vec{\theta} \cdot \frac{\vec{\sigma}}{2} + \vec{\eta} \cdot \frac{\vec{\sigma}}{2}\} \zeta^\dagger \quad (4)$$

$$(\xi^\dagger \zeta)' = \xi^\dagger \zeta \quad (5)$$

$$(\zeta^\dagger \xi)' = \zeta^\dagger \xi \quad (6)$$

$$(\xi^\dagger \xi)' = \exp\{-\vec{\eta} \cdot \vec{\sigma}\} \xi^\dagger \xi \quad (7)$$

$$(\zeta^\dagger \zeta)' = \exp\{\vec{\eta} \cdot \vec{\sigma}\} \zeta^\dagger \zeta \quad (8)$$

参考文献

- [1] 坂本眞人著「場の量子論-不変性と自由場を中心にして」(裳華房,2014,ISBN9784785325114)