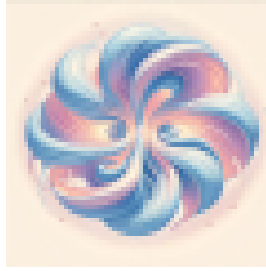


The 8th International Conference on Chirality, Vorticity and Magnetic Field  
in Quantum Matter



ID de Contribution: 81

Type: **Flash Talk (Plenary) + Poster**

## **Helicity conservation for process of fermion production in Coulomb field on de Sitter universe**

*lundi 22 juillet 2024 18:15 (5 minutes)*

Fermion production in an external Coulomb field on de Sitter expanding universe is studied. The amplitude and probability of pair production in an external Coulomb field are computed and the cases of large/small values of the expansion factor comparatively with the particle mass are studied. We obtain from our calculations that the modulus of the momentum is no longer a conserved quantity. We find that in the de Sitter space there are probabilities for production processes where the helicity is no longer conserved.

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**Classification de Session:** Flash talk and posters