Contribution ID: **25** Type: **Poster**

Non-Commutative to Commutative Geometry Transformation and Origin of Cosmic Scale Viscosity

In this work we have discussed the origin of cosmic viscosity with the in of deformed cosmic phase space geometry. We have introduced the Non-Commutative(NC) deformed geometry and shown that the transformation from non-Riemannian geometry to Riemannian geometry (From Non-Commutative to Commutative(C) geometry) can provide the dissipation in cosmology. A single scalar field in deformed Non-Commutative cosmology can be dissociated into two scalar field models due to the transformation from NC-geometry to C-geometry. This dissociation mainly provides the radiation field with an interior viscosity-dependent interaction. Finally, we have provided the nature of phase space and their decomposition during the phase transition from single-field NC-geometry to Multi-field C-geometry.

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Session Classification: Cosmology

Track Classification: Cosmology