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New Aspects of Non Commutative Space-time Cosmology

New cosmological aspects of Seiberg-Witten noncommutative geometry (NCG) are discussed and an FRW like model is presented. The NCG black hole apparent horizon is determined and the corresponding Hawking temperature is obtained by a Kodama like observer via the tunelling effect. Moreover, it is shown that because of the torsion and anisotropy generated by NCG, a new mechanism explaining leptogenesis is proposed and the related leptonic asymmetry is calculated. Finally,some cosmological parameters are presented and an alternative explanation of the accelerated expansion of the universe is given in the context of this approach.

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