Sixteenth Marcel Grossmann Meeting



Contribution ID: 101

Type: Talk in the parallel session

Using Lorentz violation for early universe GW generation due to black hole destruction in the early universe as by Freeze

Tuesday, 6 July 2021 09:30 (20 minutes)

We are using information from a paper deriving a Lorentz-violating energy-momentum relation entailing an exact momentum cutoff as stated by G. Salesi . Salesi in his work allegedly defines Pre Planckian physics, whereas we restrict our given application to GW generation and DE formation in the first 10⁻³⁹s to 10⁻³³s or so seconds in the early universe. This procedure is inacted due to an earlier work whereas referees exhibited puzzlement as to the physical mechanism for release of Gravitons in the very early universe. The calculation is meant to be complementary to work done in the Book "Dark Energy" by M. Li, X-D. Li, and Y. Wang, and also a calculation for Black hole destruction as outlined by Karen Freeze, et. al. The GW generation will be when there is sufficient early universe density so as to break apart Relic Black holes but we claim that this destruction is directly linked to a Lorentz violating energy-momentum G. Salesi derived, which we adopt, with a mass m added in the G. Salesi energy momentum results proportional to a tiny graviton mass, times the number of gravitons in the first 10⁻⁴³ seconds

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Track Classification: Alternative Theories: Conformal Dilaton Gravity and Related Issues