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Quantum Gravitational Corrections to Gravity during Inflation
LINTAO TAN, University of Florida — Primordial inflation produces a vast ensemble of cosmological scale gravitons which can affect both the force of gravity and the propagation of gravitational radiation. I show how these effects can be studied by using the graviton self-energy to quantum correct the linearized Einstein equations. I demonstrate that the graviton self-energy has nine structure functions in a general cosmological background and I show how these structure functions change the linearized Einstein equations. I also present explicit one loop results for the nine structure functions on de Sitter background.

Lintao Tan
University of Florida

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