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Gravitational waves from slow-roll inflation in Lorentz-violating Weyl gravity

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We consider a squared term of Weyl tensor in the Einstein-Hilbert's action. It is one kind of the theories about higher curvature invariants in the action as quantum corrections. In general, such additional terms generate ghost degrees of freedom. But the theory we consider here is ghost free by breaking local Lorentz symmetry. Using this theory, we consider gravitational waves from slow-roll inflation and calculate the power spectrum numerically. We compare the results with the study about de-Sitter expansion and the case of general relativity. Finally we consider gravitational waves from slow-roll inflation in standard Weyl gravity in which local Lorentz symmetry is not broken and there are ghost degrees of freedom.

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