

Abstract Submitted
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Inflationary secular loop corrections are real¹ SHINJINI BASU, RICHARD WOODARD, Univ of Florida - Gainesville — The existence of secular loop corrections due to inflationary gravitons is currently a matter of great debate. It is a widespread belief among the skeptics that secular loop corrections due to quantum gravity can be subsumed into a coordinate redefinition. This is certainly true for the infrared divergences caused by modes which are initially super-horizon, but there is no reason to assume it is true for the secular dependence arising from the continual passage of initially sub-horizon modes into the super-horizon regime. Assuming it in any case would make the apparent infrared logarithm corrections to any quantity simply the result of taking the expectation value of the tree order quantity at the transformed coordinates in the graviton vacuum. We call this belief the transformation ansatz and, in arXiv:1606.02417, we have compared its predictions against explicit one loop computations in Maxwell + Einstein and Dirac + Einstein on de Sitter background. In each case the ansatz fails.

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