

1- and 2-loop diagrams in de Sitter and anti de Sitter

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I present a general approach to de Sitter and anti de Sitter Quantum Field Theory based on the analyticity properties of the correlation functions which are closely similar to the ones which are equivalent to the positivity of the spectrum of the hamiltonian in every Lorentz frame Minkowski QFT (that is, the spectral condition). In this context I present an important family of plane waves well adapted to the de Sitter geometry and discuss the harmonic analysis of propagators in terms of them. Applications include the Kallen-Lehmann representations and 1-loop and two-loop calculations in the dimensional regularization in both the de Sitter and the anti de Sitter cases.

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