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Non Perturbative Renormalization Group for scalar fields in de Sitter space

Thursday, July 14, 2016 2:00 PM (30 minutes)

We address the issue of light scalar fields in de Sitter space using the non perturbative renormalization group. The derivative expansion used in flat space is adapted to this context. At lowest order, the Local Potential Approximation reproduces results of the stochastic approach. We discuss mass and coupling generation as well as radiative symmetry restoration. A simplified first order expansion shows that the flow is slowed down but yields the same IR physics, suggesting that a higher order computation is necessary to capture corrections to the stochastic approach.

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