Contributed Talk

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Title: Asymptotic Hamiltonian diagonalization in hybrid (loop) quantum cosmology

Abstract: We explain how to select a natural vacuum state for scalar and tensor perturbations in the context of hybrid quantum cosmology by identifying variables that are optimally adapted to the evolution of the entire cosmology, in the sense that the Hamiltonian that generates the dynamics of the perturbations remains diagonal. We check that the asymptotic conditions that follow from this diagonalization allow us to select the standard vacuum in Minkowski and in de Sitter spacetime.