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## The primordial power spectra in modified loop quantum cosmology

*Thursday, 8 July 2021 18:15 (15 minutes)*

In the talk, I will discuss the primordial power spectra in two modified models of loop cosmology. As compared with the standard loop quantum cosmology in a spatially flat Friedmann-Lemaître-Robertson-Walker (FLRW) universe, these two models arise from a separate treatment of the Lorentzian term in the Hamiltonian constraint. Both dressed metric approach and the hybrid approach are employed to numerically derive the power spectra in the two models. We find although both models predict consistent results with the current observations in the ultraviolet regime, there are indeed appreciable deviations in the intermediate and infrared regimes between the two models. Therefore, our results serve as a concrete example which explicitly shows how the quantization ambiguities can affect the phenomenological implications of the resultant quantized theories.

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