

Backreaction of axion-SU(2) dynamics during inflation

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Nowadays, the search for primordial gravitational waves is mainly focused on the parity-odd polarization pattern in the CMB - the B-modes. A correct interpretation of B-mode measurements strongly relies on understanding their production mechanism. One intriguing scenario is gravitational waves generation by gauge fields. The tachyonic amplification of the gauge fields modes during inflation leads to significant backreaction on the background dynamics. In this talk, I will discuss how the backreaction on axion-SU(2) dynamics during inflation leads to a new dynamical attractor solution for the axion field and the vacuum expectation value of the gauge field. These findings are of particular interest to the phenomenology of axion-SU(2) inflation, redefining parts of the viable parameter space. The backreaction effects lead to characteristic oscillatory features in the primordial gravitational wave background that are potentially detectable with upcoming gravitational wave detectors.

Would you be interested in presenting a poster? (this will not impact the decision on your talk)

yes

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