

Abstract

Rotational invariance is a well-established feature of low-energy physics. Violation of this symmetry must be extremely small today, but could have been larger in earlier epochs. In this talk, first I review a paper by Watanabe et.al in which they studied the statistical nature of primordial fluctuations from an anisotropic inflationary model which is realized by a vector field coupled to a neutral inflaton. Then motivated from above ideas I rely on a new inflationary model in which a charged scalar field is coupled to U(1) gauge feild with anisotropic background. To make a relation to observational cosmology, we will explore the perturbation to mentioned model. This work is in progress!