

# Anisotropic dipole antisymmetric symmetric Klein-Gordon model with fermionic scalar fields

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## Abstract

In the Klein-Gordon model with fermionic scalar fields, we investigate the effect of the anisotropic dipole asymmetry between the scalar fields and the scalar fields. We study the effect of the anisotropic dipole symmetry in the scalar field and the scalar field factor on the energy-momentum tensor, and the energy density of the scalar fields. We also investigate the effect of the anisotropic dipole symmetry on the energy-momentum tensor, the energy density of the scalar fields, and the energy density of the scalar fields.

## 1 Introduction

In the earlier work [1], the authors looked at the effect of the anisotropic dipole symmetry on the energy density of the scalar fields. They showed that the energy density of the scalar fields drops off linearly as the distance from the background  $\alpha \rightarrow 0$  for weak and moderate anisotropy, and this effect is related to the mass of the scalar fields. In the present work, however, we restrict ourselves to the case of weak anisotropy for which the corresponding energy density is large compared to the distance between the background  $\alpha \rightarrow 0$ . We will see that the energy density of the scalar fields is related to the mass of the scalar fields in the general case.

## 2 Physical description

## 3 The anisotropic dipole symmetry

### 3.1 Introduction

In the earlier work [1], the authors looked at the effect of the anisotropic dipole symmetry on the mass of the scalar fields. They showed that the energy density of the scalar fields drops off linearly as the distance between the background  $\alpha \rightarrow 0$  for weak and moderate anisotropy, and this effect is related to the mass of the scalar fields. In the present work, however, we restrict ourselves to the case of weak anisotropy for which the corresponding energy density is small compared to the distance between the background  $\alpha \rightarrow 0$ . We will see that the energy density of the scalar fields is related to the mass of the scalar fields in the general case.

## 4 Anisotropic dipole symmetry

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Anisotropic dipole symmetry [1],  $P_\eta$ , is the symmetry under which a dipole is symmetric under the moduli field. It is a symmetry under which dipoles are symmetric for all the moduli fields  $\beta_i, \alpha_i \Delta^i$ . It is a symmetry that is consistent with the Chevalley limit [1] since the dipoles are always symmetric under the moduli field. For this reason it is also called anisotropic. Anisotropic dipole symmetry is in constant coherence with the lattice geometry. Therefore it is a non-perturbative Dirichlet symmetry.

In order to obtain anisotropic dipole symmetry, we have to find the spectrum of the dipoles. We will examine the spectrum of the dipoles in this section.

