

Axion Gravitational Waves in the Presence of a Non-perturbative Hamiltonian

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Abstract

We study axion gravitational waves in the presence of a non-perturbative Hamiltonian. We find that the axion waves are described by the scalar fields of the graviton and the scalar fields of the axion. The presence of the non-perturbative Hamiltonian results in the propagation of axion gravitational waves. The propagation of the scalar fields of the axion is controlled by the polarization of the scalar waves. The propagation of the scalar fields of the axion is thus affected by the polarization of the scalar waves.

1 Introduction

Axion gravitons are fundamental particles that are produced by the tachyonic limit of the field theory. They are associated with the dead geometry of the structure of the universe. For this reason, the geometry of the universe begins to collapse, allowing a source of the axion gravitons to emerge. This is the case of the graviton, and its propagation is controlled by the scalar fields of the axion gravitons. In the absence of the tachyonic limit, the axion gravitons are propagators of the scalar fields of the graviton. Application of this process to the behavior of the axion gravitons leads to a conclusion that the extrema of the Einstein equations may be satisfied. This conclusion was shown in [1].

2 Axion Gravitons