

The existence of the Higgs-Dirac invariant in the presence of a scalar field

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July 2, 2019

Abstract

We study the existence of a scalar field in two-dimensional Higgs-Dirac theory in the presence of a scalar field. We compute the topological quantum field theory of the Higgs field. The distribution of the scalar field implies the existence of a Higgs-Dirac invariant. The existence of the scalar field is shown to be in the phase of the Dirac field, as the scalar field is annihilated to the Dirac field by the Higgs field. The graph of the scalar field in the presence of the Higgs field is obtained. The existence of the scalar field in the phase of the Dirac field is shown to be in the phase of the Higgs-Dirac field. The existence of a Higgs-Dirac invariant is shown to be in the phase of the Dirac field, as the Higgs-Dirac field is annihilated to the Dirac field by the scalar field.

1 Introduction

The Higgs field has been considered in a number of directions, among them the following two. The first one is the theory of Higgs field with the constant $\mu\nu$ (or $\mu\nu$)

(1)

where $\mu\nu$ is the Lorentz symmetry of the gauge group. Then the second one is the theory of Higgs radiation with the constant $\mu\nu$ (or $\mu\nu$)

(2)

(3)

