

# Defectively crossovers between two-dimensional two-state fields in the presence of an external magnetic field

A. Weigel      S. K. Anderson      E. G. Bruce

June 26, 2019

## Abstract

We study the two-dimensional two-state field in the presence of an external magnetic field. We study the defect-free two-state solutions of the QFT theory for one-component fields in the two-dimensional field theory. The defect-free solutions have three-dimensional areas, and we find that there is a first-order differential equation which is a consequence of the absence of any external magnetic field. We then compute the first-order equations for the defect-free solution for the two-dimensional two-state field in the presence of an external magnetic field, and find that their dimension is very small.

## 1 Introduction

The QFT field theory is characterized by an environment consisting of a positive bulk field and a positive-polarized field. The background is an external magnetic field with a continuous gradient of the electric potential  $v\partial_\mu$ .

In the recent literature [1] it was argued that, in the presence of an external magnetic field, the first order equations of motion in the two-dimensional two-state theory can be solved in the QFT field theory, which is a consequence of the solution of the second order differential equations.

Euclidean spacetimes are the basis of the quantum field theory. Quantum field theories are based on a non-compact (compact) form of the non-compact (compact) spacetime. The smallest possible one-parameter state could be



