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Induced fermionic current by a magnetic tube in the cosmic spacetime

Wednesday 20 September 2017 09:00 (40 minutes)

In this talk we examine the vacuum fermionic current induced by a magnetic field confined in a cylindrical tube of finite radius a in cosmic string spacetime. Three distinct configurations of magnetic fields are taken into account:

- a cylindrical shell of radius a ,
- a magnetic field proportional to $1/r$,
- a constant magnetic field.

In these three cases, the axis of the infinitely long tube coincides with the cosmic string. Our main objective

Type of contribution

Invited talk

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