

## Topological Structure of Vortex Solution in Jackiw-Pi Model

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(Received: 2006-8-15; Revised: 2006-10-27)

**Abstract:** By using  $\varphi$ -mapping method, we discuss the topological structure of the self-duality solution in Jackiw-Pi model in terms of gauge potential decomposition. We set up relationship between Chern-Simons vortex solution and topological number, which is determined by Hopf index and Brouwer degree. We also give the quantization of flux in this case. Then, we study the angular momentum of the vortex, which can be expressed in terms of the flux.

PACS: 11.15.-q, 02.40.-k, 47.32.C-

Key words: topological structure, vortex, Jackiw-Pi model

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