

Topological Numbers and Edge State of Hierarchical State in Rapidly Rotating Ultracold Atoms

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(Received: 2004-5-18; Revised: )

Abstract: The effective theory for the hierarchical fractional quantum Hall (FQH) effect is proposed. We also derive the topological numbers K matrix and t vector and the general edge excitation from the effective theory. One can find that the two issues in rapidly rotating ultracold atoms are similar to those in electron FQH liquid.

PACS: 03.75.Lm

Key words: edge state, topological number

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