

Topological Vortices in Superfluid Films

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Abstract: We study the topological structure of the vortex system in a superfluid film. Explicit expressions for the vortex density and velocity field as functions of the superfluid order parameter are derived. The evolution of vortices is also studied from the topological properties of the superfluid order parameter field.

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Key words: vortex, superfluid films

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