Concentration Phenomena of Two-Vortex Solutions
in a Chern-Simons Model

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Abstract. By considering an Abelian Chern-Simons model, we are led to study the existence of solutions of the Liouville equation with singularities on a flat torus. A non-existence and degree counting for solutions are obtained. The former result has an application in the Chern-Simons model.

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