Vortex polygons and their stabilities in Bose-Einstein condensates and field theory

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We study vortex polygons and their stabilities in miscible two-component Bose-Einstein condensates, and find that vortex polygons are stable for the total circulation $Q \leq 5$, metastable for $Q = 6$, and unstable for $Q \geq 7$. As a related model in high-energy physics, we also study the vortex polygon of the baby-Skyrme model with an anti-ferromagnetic potential term, and compare both results.

Section: QG - Quantum gases

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