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Aspects of Superconducting Strings

I will examine Abrikosov–Nielsen–Olesen (ANO) vortex strings in variants of Abelian Higgs models. In the large flux limit, the equations governing them simplify, and the resulting giant strings realize two sharply distinct phases. I will explore qualitative features of these strings and identify patterns in their physical properties. I'll also discuss the spectrum of small fluctuations and the associated low energy effective action. I will end by comparing these results to features of confining strings in Yang Mills theory.

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