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Smectic C* liquid crystal films are modeled by a relaxed Frank energy, where the elasticity splay and bend constants are positive but may differ. Our film is modeled by a two dimensional vector field on a planar domain where the field has fixed boundary data with degree $d > 0$.

We study the limiting pattern for a sequence of minimizers of the energy and prove that the pattern contains d degree one defects and that it has a either a radial or circular asymptotic form near each defect depending on the relative values of the elasticity constants. We further characterize a renormalized energy for the problem and show that it is minimized by the limit. (Received August 09, 2013)