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Low energy dynamics of spinor condensates AUSTEN LAMACRAFT, University of Virginia — We present a derivation of the low energy Lagrangian governing the dynamics of the spin degrees of freedom in a spinor Bose condensate, for any phase in which the average magnetization vanishes. This includes all phases found within mean-field treatments except for the ferromagnet, for which the low energy dynamics has been discussed previously. The Lagrangian takes the form of a sigma model for the rotation matrix describing the local orientation of the spin state of the gas.

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