

Abstract Submitted  
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**Novel Transitions in S=1 Spinor Condensates and XY Ashkin-Teller Universality**<sup>1</sup> SHAILESH CHANDRASEKHARAN, Duke University, DANIEL POLDOLSKY, University of Toronto, ASHVIN VISHWANATH, University of California, Berkeley — We study spin-1 polar spinor condensates with magnetic anisotropy, in two spatial dimensions at finite temperatures. The topological binding of vorticity to nematic disclinations leads to a rich phase diagram, which is captured by a U(1) version of the Ashkin-Teller model. In particular, a “cascaded” Kosterlitz-Thouless critical point, with two diverging scales, is predicted. Numerical simulations are performed to check our picture.

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