

Abstract Submitted  
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**Chiral Magnets Under a Tilted Magnetic Field: Noncircular Skyrmions** AVADH SAXENA, SHI-ZENG LIN, Los Alamos National Lab — The equilibrium and dynamical properties of skyrmions in thin films of chiral magnets are studied in the presence of oblique magnetic fields. The shape of an individual skyrmion is found to be noncircular and the skyrmion density decreases with the tilt angle (from the normal of the film). Consequently, the interaction between two skyrmions depends on the relative angle between them besides their separation. Under a perpendicular magnetic field a triangular lattice of skyrmions is formed which is distorted into a centered rectangular lattice when the magnetic field is tilted. For low skyrmion densities a chainlike structure of skyrmions is formed. The dynamical response (including the Hall angle of motion) of the noncircular skyrmions is found to depend on the direction of external currents.

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