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Numerical simulation of chiral magnetic phases in bidimensional lattices

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We model a bidimensional magnetic material with the classical Heisenberg Model of Ferromagnetism with the Dzyalonski-Moriya interaction and add geometric frustration in the form of triangular and honeycomb lattices. Using the metropolis algorithm, we probe the chiral magnetic phases emergent in these configurations in the B-T phase space and D-J phase space, measuring parameters like skyrmion number and static spin structure factor.

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