

Abstract Submitted
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Time-reversal symmetry breaking states in bilayer graphene LIJUN ZHU, VIVEK AJI, CHANDRA VARMA, University of California, Riverside — The time-reversal symmetry breaking states in bilayer graphene which do not break translational symmetry can be classified by the spatial symmetry of the spontaneous current patterns. Among the four possible states, only one has anomalous Hall effect. In a simple model with near-neighbor interactions, we compare their energies in the mean-field approximation. We also compare which of the states is compatible with the observed gapped state in bilayer graphene.

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