

Abstract Submitted
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Band Structure, Density Waves, and the Third Invariant¹ DAVID RABSON, JOHN HUESMAN, University of South Florida — There are three types of invariants in crystals. The first two, corresponding to electronic degeneracies, are well known, but the third is novel, realized in incommensurate crystals of non-minimal rank. Since the first two invariants have consequences in band structure, it is natural to look there for the third type as well. Rather than developing an atomic or tiling model with the third type of symmetry, we introduce a tight-binding approach based on a density-wave pattern, which is easy to generate from the Rokhsar-Wright-Mermin phase functions.

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