

GAP GENERATION IN WEYL
SEMIMETALS IN A MODEL WITH LOCAL
FOUR-FERMION INTERACTION

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S u m m a r y

We study the gap generation in Weyl semimetals in a model with local four-fermion interaction. It is shown that there exists a critical value of coupling constant separating the symmetric and broken symmetry phases, and the corresponding phase diagram is described. The gap generation in a more general class of Weyl materials with small bare gap is studied, and the quasiparticle energy spectrum is determined. It is found that, in this case, the dynamically generated gap leads to the additional splitting of the quasiparticle energy bands.