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The repulsive Casimir effect in Weyl semimetals[1] JUSTIN WILSON, ANDREW ALLOCCA, VICTOR GALITSKI, Univ of Maryland-College Park
— Weyl semimetals are a proposed topological material with broken time-reversal symmetry. Due to this, they experience a particular bulk Hall effect as well as a weak longitudinal conductance. In such a situation, one can see a repulsive Casimir effect between two Weyl semimetals (similar to what has been studied for topological insulators and quantum hall materials), and the effect can be tuned from attractive to repulsive with chemical potential or magnetic field. We consider, separately, a simplified bulk description and a thin film geometry taking into account the band structure.

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