

Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

Quantum oscillations in Weyl semimetals JAN BORCHMANN,
TAMI PEREG-BARNEA, McGill University — In this work we present recent progress on quantum oscillations of a Weyl semimetal in a slab geometry. Based on semiclassical arguments, it has been conjectured that the Fermi arcs present on the surface of the slab can lead to quantum oscillations with a characteristic dependence on the applied magnetic field as well as the thickness of the slab, which differ from the quantum oscillations in the bulk. To further investigate this we present results from a calculation via a Floquet formalism as well as a lattice quantum treatment of the problem. We present results on the oscillation frequency as well as the phase offset.

Jan Borchmann
McGill University

Date submitted: 04 Nov 2015

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