

Abstract Submitted  
for the MAR17 Meeting of  
The American Physical Society

**Quantum oscillations from Fermi sea** HRIDIS PAL, Univ of Paris  
- Sud 11 CNRS — Quantum oscillations are conventionally understood to arise from the Fermi level; hence, they are considered to be a proof of the existence of an underlying Fermi surface. Here, I show that in certain situations quantum oscillations can also arise from inside the Fermi sea. The necessary condition and possible scenarios for such unusual behavior will be pointed out. In particular, in strongly particle-hole asymmetric insulators, models of which have been recently used in the context of the topological Kondo insulator  $\text{SmB}_6$ , I show that oscillations have no connection with the gap, but arise from inside the filled band.

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Date submitted: 03 Nov 2016

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