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Aharonov-Bohm Oscillations in Singly Connected Disordered Conductors

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Abstract:

I will present the results of a recent work with I. Aleiner and V. Vinokur. In it we showed that the transport and thermodynamic properties of a singly connected disordered conductor exhibit quantum Aharonov-Bohm oscillations as a function of the total magnetic flux through the sample. The oscillations are associated with the interference contribution from a special class of electron trajectories confined to the surface of the sample.