

AC transport in ultracold Fermi gases.

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In this talk we will discuss the response of a gas of ultracold atoms to a periodic drive. We will discuss how exact results obtained at low and high frequencies can be used to find the response of the gas at arbitrary frequencies and that this interpolation scheme is in good agreement with quantum gas microscope experiments. In particular, the resistivity of the cloud evolves linearly with temperature, a behaviour similar to bad metals in condensed matter physics.

- [1] Unitarity Saturated Collisional Resistivity of Strongly Interacting Metals, F. Corapi, R. T. Learn, B. Driesen, A. Lefebvre, X. Leyronas, F. Chevy, C. J. Fujiwara, J. H. Thywissen, Phys. Rev. Lett. 136, 213401 (2026)