



Contribution ID: 2

Type: **not specified**

Hydrodynamic attractors for strongly correlated fermions

Monday 23 September 2024 09:40 (40 minutes)

In heavy ion collisions, hydrodynamic attractors can describe out-of-equilibrium dynamics before hydrodynamics is expected to be valid. We describe how such behavior might be observed in real time in ultracold atomic Fermi gases. We present an efficient way to compute Green functions in real frequency beyond the derivative expansion and discuss how the system relaxes toward equilibrium. On relevant time scales, the dynamics is well represented by an analytical attractor solution that is valid at shorter times before the onset of Navier-Stokes hydrodynamics. The attractor represents an asymptotic series at long times and is complemented by nonhydrodynamic modes.

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