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Competing instabilities of a Dipolar Fermi Gas AHMET KELES,
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University — Recent experiments in the cold atom Fermi gas have explicitly shown
the deformation of the Fermi surface in the presence of long range dipolar inter-
actions. Motivated by this, we investigate the competing instabilities of a dipolar
Fermi gas within the functional renormalization group. We analyze the flow of the
effective action in the particle-particle as well as particle-hole channel, consider the
self energy term, and discuss the interplay of different instabilities at low tempera-
tures.

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