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### **Universal phase diagram of a strongly interacting polarized Fermi gas**

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The recent combined theoretical and experimental breakthroughs in the field of ultra-cold Fermi systems have permitted the clarification of the ground state properties of an ensemble of attractive fermions with equal spin populations. However, many open questions remain concerning the behavior of polarized systems, where the different spin states are unequally populated. The various theoretical models imply a wide range of different scenarios and phase diagram, while two recent experiments performed at Rice and MIT present contradictory results. We will present an analysis of the ground state of an ensemble of fermions with unequal spin population in the regime of infinite scattering length. To address this problem, we will make use of universality which is characteristic of this strongly interacting regime and leads to simple scaling laws for the different physical quantities describing the system. We will in particular show that this problem is closely related to the study of an impurity imbedded in a non interacting Fermi sea of polarized atoms.