

Bose and Fermi gases at large scattering lengths

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The possibility to tune interactions in ultracold gases by means of Feshbach resonances allows us to create and study novel few- and many-body quantum systems. I will present two examples of recent work in Innsbruck. In an ultracold Bose gas (Cs at 10nK), we study Efimov states and in particular the controversially discussed three-body parameter. In a strongly interacting Fermi-Fermi mixture (Li-6 and K-40) we have demonstrated hydrodynamic behavior, and we are currently exploring the physics of strongly interacting impurities by radio-frequency spectroscopy.