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Ultra-cold atom experiment and strongly interacting Fermi system LI YAN, Stony Brook University, STONY BROOK COLLABORATION — Recent progresses in low temperature atomic experiment, especially the magnetic tunable inner-atom interaction via Feshbach resonance, give people a way to approach the study of low temperature and strongly interacting fermion system. In the strong interaction limit, i.e. the unitary limit range, system experiences BCS-BEC crossover, with universal thermodynamic properties. This kind of universality not only simplifies the theoretical research on strongly interacting fermion system but also help people to prove the uniqueness of strongly interacting system in ultra-cold atom experiment.

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