

Gastgeber: Prof. Dr. Martin Dressel, Universität Stuttgart, Telefon: 0711 - 685-64946

Material realizations of quantum spin liquids

Alexander Tsirlin Universität Augsburg

Abstract

Quantum liquids host unusual properties, such as superfluidity of liquid helium. Liquid-like states of quantum spins have been of significant interest too and may offer direct access to strongly entangled states with fractionalized excitations. In this talk, I will discuss possible experimental realizations of quantum spin liquid states in bulk magnetic materials. Recent results on triangular antiferromagnets will be used to highlight which ingredients should and should not be present in a material to generate a spin-liquid state, and showcase a diversity of experimentally observed spin dynamics that may or may not be related to fractionalization.