Abstract Submitted
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Quantum Glass in Solid He?[1] ALEXANDER BALATSKY, MATTHIAS GRAF, LANL — Recent discovery of a possible supersolid state by Kim and Chan has stimulated an active debate about true nature of a low temperature state of solid ^{4}He. We will discuss possible glassy component that could be present in solid ^{4}He. We will focus on i) the role of tunneling systems (TS) as a component that freezes out at lowest temperatures and ii) interactions between TS. We will address possible quantum effects and the role of TS statistics in solid ^{4}He vs solid ^{3}He-^{4}He mixtures. Implications for the torsional oscillator and for thermodynamics will be discussed as well.

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