

Abstract Submitted  
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**Analysis of Density Matrix Off Diagonal Correlations for NMR Spin Echoes in Dipolar Solids** JOHN CHALLIS, VADIM OGANEYSAN, Yale University — The experiments done by Barrett et al.\*\* have established that repeated pi pulses can slow longitudinal relaxation in a dipolar solid. This result clearly lies outside any independent spin approximation, and so off diagonal terms in the density matrix cannot be neglected. We have calculated the size and correlations of these terms as a first step in diagnosing the mechanism behind the slow decay. \*\* Dementyev et al. Phys. Rev. B 68, 153302 (2003)

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