

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Observation of Anomolously Long-Lived Spin Echoes in a Dense Dipolar Spin System RONA RAMOS, YANQUN DONG, DALE LI, SEAN BARRETT, Yale University, Department of Physics — Continuing the investigation of anomalously long-lived spin echoes found in multipulse ^{29}Si NMR experiments, similar proton NMR experiments were performed on adamantane ($\text{C}_{10}\text{H}_{16}$, a molecular solid that tumbles about its fcc lattice sites). In contrast to the dilute dipolar silicon samples from previous experiments [A.E. Dementyev, D. Li, K. MacLean, S.E. Barrett, Phys. Rev. B 68, 153302 (2003).], adamantane presents a densely populated, strongly coupled proton spin system in which to probe the basis of this puzzle. Despite these changes, this phenomenon, which defies conventional NMR theory, still remains. This talk will discuss the results of these experiments and its impact on our current understanding of this behavior.

Rona Ramos
Yale University, Department of Physics

Date submitted: 05 Dec 2005

Electronic form version 1.4