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Quantum and Classical Spin Dynamics in Silicon NMR YANQUN DONG[1], RONA RAMOS, KENNETH MACLEAN, ANATOLY DEMENTYEV, DALE LI, SEAN BARRETT, Yale University Department of Physics — Recent Si29 NMR measurements [A.E. Dementyev, D. Li, K. MacLean, S.E. Barrett, Phys. Rev. B, 68, 153302(2003)] revealed several surprises, such as unexpectedly long tails and even-odd asymmetry in CPMG data. To understand these phenomena, we implemented a series of simulations with increasing levels of sophistication designed to reflect the actual experimental conditions (e.g. including H1 field inhomogeneity, finite pulse duration, etc.). I will present the simulations, compare them with our data and discuss the implications.

[1]Please arrange this presentation in the same section with another two submitted by Rona Ramos and Dale Li(Sean Barrett's group, Yale University),and please arrange this one as the second of the three. Thanks.

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