

Abstract Submitted  
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**Anomalous nuclear magnetic resonance spectra in powdered  $\text{Bi}_2\text{Se}_3$**  D.M. NISSON, A.P. DIOGUARDI, P. KLAVINS, X. PENG, D. YU, N.J. CURRO, Department of Physics, University of California, Davis, CURRO COLLABORATION — We present  $^{209}\text{Bi}$  NMR spectra and relaxation rate data on single crystal and powder samples of the topological insulator material  $\text{Bi}_2\text{Se}_3$ , including data on nanoscale powders with percentages of surface nuclei on the order of 2%. Powder samples are measured as-prepared, annealed to relieve mechanical strains, and fixed in epoxy to prevent alignment of grains with the applied magnetic field of 9 T. Our results reveal anomalous behavior in both the angular dependence of the single crystal spectra and in the powder spectra. All powder spectra display features not accounted for by summation of spectra of single crystal orientations.

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