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Understanding the Magnetic Dynamics of MnTe using Muon Spin Relaxation EMMA ZAPPALA, CHRISTIANA ZAUGG, BEN FRANDBEN, Brigham Young University — MnTe is an antiferromagnetic semiconductor with potential technological applications as a high-performance thermoelectric material and a platform for spintronics. Its magnetic properties are crucial for both these applications. To understand the magnetic structure and dynamics better, we studied MnTe with muon spin relaxation (μ SR), a technique that is highly sensitive to magnetic properties. We collected μ SR data for a variety of temperatures through its magnetic transition of 307 K and fit mathematical functions to the resulting data, finding the appearance of two different short term oscillation frequencies that dampen as the material cools to around 100 K and reappear as it cools past 50 K.

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