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Spin dynamics in the frozen state of the dipolar spin ice material $\text{Dy}_2\text{Ti}_2\text{O}_7$ H.M. REVELL, L.R. YARASKAVITCH, S. MENG, University of Waterloo, K.A. ROSS, H.M.L. NOAD, McMaster University, H.A. DABKOWSKA, Brockhouse Institute for Materials Research, B.D. GAULIN, McMaster University, J.B. KYCIA, University of Waterloo — Low temperature magnetic ac susceptibility measurements of single crystal dipolar spin ice $\text{Dy}_2\text{Ti}_2\text{O}_7$ are presented. The measured dynamics qualitatively agree with simulations based on current magnetic monopole theory, but not with thermal relaxation measurements, whose dynamics freeze out at a slower rate. The relaxation is found to exhibit thermally activated Arrhenius behavior with an activation energy of 9.79 K. A comparison between the measurement results of $\text{Ho}_2\text{Ti}_2\text{O}_7$ and $\text{Dy}_2\text{Ti}_2\text{O}_7$ will also be made.

Prefer Oral Session
 Prefer Poster Session

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