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Far infrared time domain terahertz spectroscopic study of Ho2Ti2O7 LIDONG PAN, R. VALDES AGUILAR, Department of Physics & Astronomy, Johns Hopkins University, R.J. CAVA, Department of Chemistry, Princeton University, S.M. KOOHPAYEH, Institute for Quantum Matter, Department of Physics & Astronomy, Johns Hopkins University, N. PETER ARMITAGE, Department of Physics & Astronomy, Johns Hopkins University — We report a far infrared time domain terahertz spectroscopic study of the spin ice material holmium titanate. The complex dielectric constant was obtained in the terahertz frequency range. Several low energy excitations were identified from the optical spectra. We will discuss the possible nature of those excitations and their relevance to the spin ice physics.



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