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Low temperature specific heat characterization of the geometrically frustrated magnetic compound $Yb_2Ti_2O_7$ DAVID POMARANSKI, University of Waterloo, HANNA DABKOWSKA, CASEY MARJERRISON , McMaster University, KATE ROSS, Colorado State University, BRUCE GAULIN, McMaster University, JAN KYCIA, University of Waterloo — $Yb_2Ti_2O_7$ is a geometrically frustrated magnet that has been recently proposed as a quantum spin liquid (QSL) candidate. This would have an emergent U(1) gauge structure, supporting emergent quasiparticles and a continuum of gapless spin excitations, which would give rise to a cubic power law dependence of specific heat down to zero temperature.[L. Savary and L. Balents, Phys. Rev. B **87**, 205130 (2013)] Low temperature specific heat measurements have identified the presence of a sharp transition at 0.26 K.[K. A. Ross et al., Phys. Rev. B **84**, 174442 (2011)] We will present results quantifying the specific heat of a polycrystalline $Yb_2Ti_2O_7$ sample below the observed transition.

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