

Abstract Submitted  
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**Thermal Conductivity due to Magnon Heat Transport in  $\text{Ca}_{2+x}\text{Y}_{2-x}\text{Cu}_5\text{O}_{10}$** <sup>1</sup> RAHEEM BELLO, Department of Physics, Department of Astronomy University of Texas, ISAAC MANZANERA ESTEVE, JOHN MARKERT, Department of Physics, University of Texas — In the spin-chain structure  $\text{Ca}_{2+x}\text{Y}_{2-x}\text{Cu}_5\text{O}_{10}$ , the thermal conductivity in some samples is observed to exhibit two peaks attributed to the thermal transport contributions by phonons and magnons. We have built a thermal conductivity probe, with a 2D rotation stage, to study the magnon contribution to the thermal conductivity of ceramic samples over the range 4–300 K. We plan to measure changes in the magnon contribution by varying the orientation of the lattice with respect to the magnetic field. We have prepared a set of samples with small deviations in oxygen stoichiometry to examine the effects of the defects on magnon thermal transport.

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