

Abstract Submitted  
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**Heat transport by delocalized spin excitations in  $\text{SmB}_6$**  MICHAEL SUTHERLAND, Cavendish Laboratory, Cambridge University, UK, WILL TOEWS, Department of Physics and Astronomy, University of Waterloo, Canada, XIAOYE CHEN, Cavendish Laboratory, Cambridge University, UK, M. CIOMAGA HATNEAN, G BALAKRISHNAN, Department of Physics, University of Warwick, UK, Y.T. HSU, SUCHITRA SEBASTIAN, Cavendish Laboratory, Cambridge University, UK, ROB HILL, Department of Physics and Astronomy, University of Waterloo, Canada — Measurements of thermal conductivity at low temperatures may offer insights into the low-energy landscape of excitations in the bulk of a material. Here we report thermal transport data in the canonical Kondo insulator,  $\text{SmB}_6$ . In zero magnetic field, we find that the heat transport below  $T=1$  K can be entirely accounted for by phonons, consistent with an insulating state with no long-range magnetic order. With the application of a magnetic field however, new heat carriers are introduced which are neither electrons nor phonons. We discuss these results within the framework of delocalized spin excitations, supporting a gapping of the charge, but not the spin degrees of freedom in the bulk of  $\text{SmB}_6$ .

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