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Low-temperature spin-Seebeck effect in the helimagnetic insulator Cu_2OSeO_3[1] ARTEM AKOPYAN, NARAYAN PRASAI, SUNXIANG HUANG, JOSHUA L. COHN, University of Miami, BENJAMIN TRUMP, GUY G. MARCUS, TYREL M. MCQUEEN, Johns Hopkins University — We report on measurements of the longitudinal spin-Seebeck effect in single crystals of the helimagnetic insulator Cu_2OSeO_3 in the range $0.5\text{K} \leq T \leq 15\text{K}$, using sputtered Pt thin films for spin-current detection. Simultaneous determination of magnon thermal conductivities for each specimen allows for a "calibration" of the spin current. The influence on the inverse spin-Hall signal of the helical-conical and conical-collinear magnetic phase transitions as well as different crystallographic orientations for the heat flow and applied magnetic field, will be discussed.

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