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Neutron Time of Flight phonon spectra of Cu₂O and Ag₂O powders BARRY WINN, Brookhaven National Laboratory, MARK HAGEN, Oak Ridge National Laboratory, STEVE SHAPIRO, Brookhaven National Laboratory — Negative thermal expansion materials cuprite (Cu₂O) and Ag₂O share the same structure (space group *Pn3m*). Here, we report inelastic neutron time of flight measurements of room temperature powder samples of each system, using the Pharos chopper spectrometer at LANSCE, at up to 100 meV energy transfer. For Cu₂O, high energy optical phonons are observed between 60 and 80 meV, while for Ag₂O, these phonons are observed between 50 and 70 meV. Results are compared to previous work, and to recent neutron triple axis spectrometer results for Cu₂O, and their relevance to negative thermal expansion is discussed.

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