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Thermal Conductivity of Superfluid Helium in Porous Vycor Glass[1] WILLIAM TIERNAN, Mesa State College, SILVIA IONESCU, University of Massachusetts at Amherst, MICHAEL RAY, University of Massachusetss at Amherst, ROBERT HALLOCK, University of Massachusetts at Amherst — We report measurements of the thermal conductivity of superfluid helium in porous vycor glass. Measurements were performed at selected temperatures from 1.4 to 2.2 K and at helium pressures between 1 and 23 bar. Comparison with empty cell thermal conductivity measurements show that the superfluid contribution to thermal conductivity is very small. Our results are consistent with predictions that the normal He component should be clamped in the ∼7 nm vycor pores and demonstrates that our sample had no larger channels to provide a normal fluid counterflow.

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