Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

The Temperature Dependence of Macroscopic Sliding Friction[1]
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— We present measurements of the static and kinetic coefficients of friction of gold-plated copper on gold-plated copper and sapphire on sapphire as a function of temperature from 10K to 400K. The measurements were done by sliding a block down a controllable incline plane and using high-speed video to extract the acceleration. The large size of our optical cryostat allowed linear motion of 7.5 cm over which to measure the acceleration. Surfaces were baked under high vacuum at 400K, and data was taken as they cooled. Preliminary results indicate that the coefficient of friction for gold plated copper surfaces change by 10 percent from room temperature to 10K.

[1]This work has been supported by AFOSR MURI grant # FA9550-04-1-0381.

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Date submitted: 06 Dec 2005 Electronic form version 1.4