Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Temperature dependence of Casimir force JUN XU, University of California, Riverside, RODRIGO CASTILLO-GARZA, University of Texas,Austin, ROBERT SCHAFER, SHOMEEK MUKHOPADHYAY, UMAR MOHIDEEN, University of California, Riverside — Most of the experimental work till date on Casimir forces have been performed at or near room temperature. We report on our measurements of Casimir forces performed at liquid helium and liquid nitrogen temperatures using gold coated sphere and plate. These measurements were performed on a home built Atomic Force Microscope with a phase locked loop to track the frequency shift. We will discuss the results in the context of current theoretical understanding of temperature dependence in the sphere – plate geometry.

Shomeek Mukhopadhyay
University of California, Riverside

Date submitted: 11 Nov 2011 Electronic form version 1.4