

Abstract Submitted
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Casimir forces in sphere-plane and cylindrical-plane geometries

QUN WEI, WOO-JOONG KIM, MICHAEL BROWN-HAYES, Dartmouth College, DIEGO DALVIT, Los Alamos, HAYDEN BROWNELL, ROBERTO ONOFRIO, Dartmouth College — We report on the status of an experiment aimed at measuring the Casimir force in cylinder-plane geometry. In order to characterize the apparatus, we have first performed small distance electrostatic calibrations in the sphere-plane geometry free from parallelism issues. This has allowed us to better identify various general issues on the measurement of the Casimir force, such as the distance dependence of the residual (contact) potential, and the delicate assessment of the absolute distance. Recent electrostatic calibrations in the cylinder-plane geometry after an upgrade of the parallelization system will be also reported.

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