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The Electrostatic Gavimeter: An Alternative Way of Measuring Gravitational Acceleration DAVID KASHINSKI, PAUL QUINN, Kutztown University of PA — In the past, Earths gravitational acceleration g has been measured in many ways, including the use of a pendulum as well as other models involving the use of a mass and a spring. We have designed a new method incorporating a spring with a capacitor and a voltmeter. This capacitor model still uses a hanging mass on a spring, but alters the method of determining the change in position of the spring due to the gravitational acceleration. We relate the change in position to the potential difference across the capacitor needed to cause a discharge through parallel plates. By relating this voltage directly to the gravitaional acceleration,a new method of measuring g is obtained.

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