

Abstract Submitted  
for the OSS17 Meeting of  
The American Physical Society

**Effects of Inclusion Particle Properties on the Viscoelastic Properties of Silica/Polydimethylsiloxane Composites**<sup>1</sup> NATHANIEL ORNDORF, RICHARD VALLERY, Grand Valley State University — Polymers are an important class of materials that are a part of many of our everyday products, as well as a key component in the development of new materials and technology. Polymer composites are often used in products because they offer economical and physical advantages over other materials, including the pure polymer. Although commonly used, the effects of inclusion properties (such as size, shape, material, etc.) on the composite's material properties is not fully understood. In this study, an apparatus was built in order to study the viscoelastic properties of Silica/Polydimethylsiloxane(PDMS) composites of varying filler volume fractions and particle sizes.

<sup>1</sup>We would like to thank the Office of Undergraduate Research and Physics Department at Grand Valley State University for funding this research.

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Date submitted: 07 Apr 2017

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