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**Name(s): Hyland, Derrek; Jackson, Brandon; Keller, Brian; and Paxson, Andrew**

**Education Institution(s): University of Minnesota, Milwaukee School of Engineering, Virginia Polytechnic Institute and State University, University of Alaska Fairbanks**

**Major(s): Aerospace and Mechanical Engineering**

**NASA MSFC Mentor: Philip Franklin**

**Org Code: ER-52**

**Title of Poster: Solid Rocket Motor Thrust Oscillation Due to Inhibitor Vortex Shedding**

**Abstract:**

The problem of identifying and attributing vortex shedding to certain causes (inhibitors, propellant cavities, etc) has been a long debated topic in the scientific community. Pressure oscillations within the motor are of increasing concern as it has been found especially with recent solid rocket motors (SRMs) that the frequency of oscillation is nearing the harmonic frequency of the human body, which endangers the future of human spaceflight. The decision was made to use cold flow and schlieren photography to view vortex shedding over various scaled down inhibitors, through a simulated section of a motor, to view what type of oscillation occurs due to each piece. Additionally, pressure readings are recorded to develop a frequency trace for the simulated motor. These traces were analyzed to determine the relationship of inhibitor placement and pressure oscillations along with serving as a basis for determining the correlation between the existing empirical model and existing SRB data.