

Abstract Submitted  
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**One-g Data of an Acoustic Fire Extinguishing Experiment<sup>1</sup>** ELIZABETH NELSON, DMITRIY PLAKS, NESHA HYATT, ZADE COLEY, JAMES ESPINOSA, University of West Georgia — We are studying the effects of acoustics on a flame in microgravity. Our research is meant to provide a new approach to reducing and extinguishing a combustion reaction in space (where a conventional fire extinguisher is hazardous). Our setup includes an interior cage, inside of which is a candle; three speakers surround the cage, which are used to manipulate the flame. A video camera, infrared camera, temperature sensors, and microphone are placed in various locations throughout the setup to collect data. The master computer records all data and is later used for data analysis. We will describe the experimental apparatus in more detail, which will be flown aboard a NASA C-9B Aircraft. We will show 1g data collected with the apparatus and briefly describe NASA's Reduced Gravity Student Flight Opportunities Program (RGSFOP).

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