Abstract Submitted
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Studying Flame Structures in Free Fall.[1] DMITRIY PLAKS, JAMES ESPINOSA, ELIZABETH NELSON, ZADE COLEY, CATHY TRAN, NESHA HYATT, BEN DE MAYO, 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; four speakers surround the cage, which are used to manipulate the flame. A video camera, infrared camera, light sensor, 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 DC-9 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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