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Visualizing the sound field of an acoustic fire extinguisher[1]
DMITRIY PLAKS, ELIZABETH NELSON, NESHA HYATT, ZADE COLEY, GARY HUNTER, PATRICIA SAPONARI, JAMES ESPINOSA, University of West Georgia — Our objective is to study the effects of acoustics on flames for the purpose of encouraging new research that will provide a different approach to reducing and extinguishing a combustion reaction. Through experiment, we have already demonstrated that it is possible to extinguish fire with sound. Our apparatus uses 12" subwoofer speakers in order to generate the necessary acoustic field. By placing dry ice at the bottom of the apparatus, this field becomes visible. We give visual data of how various sound patterns affect the flame and combustion reaction and provide qualitative explanations of the physical phenomena responsible for the effects.

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