

Abstract Submitted
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Alternative Visualization Methods of Wine Glass Resonance

SHELBY BURNS, WILLIAM SLATON, none — Breaking a wine glass with sound is a visually striking achievement and a great way to get potential students interested in Physics. The goal of this project is to not only break the wine glass but to build an apparatus that is portable and easily setup for lecture room demonstrations as well as outreach. The apparatus should also provide enough visibility for a room full of observers to easily see the resonance. Thus we constructed an enclosure using clear plexiglass, attached to two compression driver, hooked up to an amplifier and then hooked up to a signal generator. Until now our experiment has only been approached from one angle which is the utilization of a strobe light apparatus as the way to view the different modes of the wine glass. Moving forward with the experiment we began to explore different ways of viewing the modes of the wine glass. After receiving a generous loan from University of Mississippi in the form of a high speed camera, it is now possible to capture the modes without the use of a high speed strobe light. The apparatus should also provide even better visibility than previously achieved for a room full of observers to easily see the resonance. In a larger setting a camera could be used to relay the relatively small image of the wine glass to a projector for better visibility, only now there is a possibility to enhance the quality of those pictures and videos. From a more technical stand point, the project will provide an opportunity to experiment with resonance on a variety of different capture methods. In order to prepare for the final demonstration, many different wineglasses will be tested in the test chamber as well as different capture methods

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