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Predicting Acoustic Wave Generation and Amplification inside a Rectangular Cavity RYAN SCHMIT, JAMES GROVE, Air Force Research Laboratory — Empirical and theoretical solutions to predict acoustic tones inside a rectangular cavity have been proposed throughout the years. A new theoretical understand is being developed that can now explain at the minimum the cavity tonal frequency response and possibly the self amplification of the acoustic tones. Current simulated results based on acoustic wave motion inside a cavity utilizing this theoretical understanding have produced results that compare well with experimental data all ready taken.

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