

Abstract Submitted  
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**Aeroacoustic behavior of vocal fold models from acoustic measurements**<sup>1</sup> MICHAEL KRANE, ELIZABETH CAMPO, MICHAEL MCPHAIL, Penn State University — Measurements of the sound field of the Penn State Human Airway Model (HAM) are used to deduce the aeroacoustic behavior of vibrating vocal fold models. In particular, the distinctions between reflection, transmission and source behavior are sought as a means to quantify source-filter interaction. The acoustic measurements are conducted using 5 microphones located along the airway model axis. Phase-corrected signals from these microphones are used to compute the right-and left-running wave components on either side of the model vocal folds. In combination with theory, these cross-spectra are used to estimate the frequency dependence of the vocal fold reflection and transmission coefficients, as well as the aeroacoustic “voice” monopole and dipole source spectra.

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