

Abstract Submitted
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Examining diseased states in a scaled-up vocal fold model using simultaneous temporally resolved DPIV and pressure measurements¹

DYLAN ROGERS, NATHANIEL WEI, HUNTER RINGENBER, UNL, MICHAEL KRANE, Penn State - ARL, TIMOTHY WEI, UNL — This study builds on the parallel presentation of Ringenber, *et al.* (APS-DFD 2017) involving simultaneous, temporally and spatially resolved flow and pressure measurements in a scaled-up vocal fold model. In this talk, data from experiments replicating characteristics of diseased vocal folds are presented. This begins with vocal folds that do not fully close and continues with asymmetric oscillations. Data are compared to symmetric, *i.e.* ‘healthy’, oscillatory motions presented in the companion talk. Having pressure and flow data for individual as well as phase averaged oscillations for these diseased cases highlights the potential for aeroacoustic analysis in this complex system.

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