Abstract Submitted
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2. Simultaneous measurements of vocal fold wall motion, aerodynamic and acoustic pressure, and volume flow[1] FAITH BECK, PAUL TRZCINSKI, ADAM NICKELS, ZACHARY YOAS, JEFF HARRIS, MICHAEL KRANE, Applied Research Laboratory, Penn State University — Simultaneous measurements of acoustic pressure, transglottal pressure, volume flow, and vocal fold surface motion are reported. Measurements were conducted in a hemilarynx configuration consist of the Penn State Upper Airway Model (PSUAM), using a multilayer swept-ellipse vocal fold model. Pressure and volume flow measurements were conducted as described in other studies in the PSUAM, but vocal fold surface motion was also acquired by imaging the surface with three Vision Research v1212 high-speed cameras. The surface motion was estimated from the video using DaVis Strainmaster. Vocal fold motion is decomposed using POD and correlated to pressure and flow measurements.

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