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Impact of wall motion on flow through a model glottis MICHAEL

KRANE, Penn State University — The dynamic importance of unsteady displacement of vocal fold walls on glottal flow aerodynamics was studied using measurements of flow through a scaled-up model glottis (Krane, et al. JASA, 2007). Scaling laws developed by Krane and Wei (JASA, 2006) to describe glottal aerodynamics are used to collapse data and show the relevant flow physics. Particular focus is given to the relative importance of wall motion, relative to both glottal jet inertia and convective acceleration. How these relationships vary with vibration frequency is also addressed. (Supported by NIH grant 5R01 DC00564245.)

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