Computational study of flow through a model glottis L. JOEL
PELTIER, MICHAEL KRANE, Penn State University — A computational study to
determine the dominant dynamic mechanisms in glottal airflow is presented. Com-
putations of the flow through a scaled-up model of the human glottis were performed
for f* = 0.035, 0.040, and 0.080, and a Reynolds number of 8000. Choice of boundary
conditions is discussed. Comparison to available data (Krane, et al., JASA, 2007) is
presented. Computed results are used to calculate dynamic relevance of momentum
equation terms, and how this relevance varies with vibration frequency. The energy
budget of the flow is also computed to show the dominant terms. (Supported by
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