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The Effects of Geometry on Trailing Edge Flows SCOTT MORRIS, DAVID STEPHENS, University of Notre Dame — The flow field in the near wake of an airfoil is strongly influenced by the shape of the trailing edge. The shape will have and effect on the mean lift and drag, as well as the unsteady surface pressure that can lead to undesired aeroelastic and aeroacoustic phenomena. This talk will describe recent results that include unsteady wall pressure, PIV measurements of the velocity field, and radiated sound measurements from 9 different edge geometries with varied bluntness. The results will focus on the effects of the approach boundary layers on the separation point and the overall unsteadiness of the wake. The boundary conditions that lead to large scale vortex shedding will also be examined.

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