

Abstract Submitted
for the DFD06 Meeting of
The American Physical Society

Experimental Results from a Flat Plate, Turbulent Boundary Layer Modified for the Purpose of Drag Reduction BRIAN R. ELBING, University of Michigan — Recent experiments on a flat plate, turbulent boundary layer at high Reynolds numbers ($> 10^7$) were performed to investigate various methods of reducing skin friction drag. The methods used involved injecting either air or a polymer solution into the boundary layer through a slot injector. Two slot injectors were mounted on the model with one located 1.4 meters downstream of the nose and the second located 3.75 meters downstream. This allowed for some synergetic experiments to be performed by varying the injections from each slot and comparing the skin friction along the plate. Skin friction measurements were made with 6 shear stress sensors flush mounted along the stream-wise direction of the model.

Brian R. Elbing
University of Michigan

Date submitted: 26 Sep 2006

Electronic form version 1.4