

Abstract Submitted  
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**Effects of Canard on the Flowfield over a Wing** ARASH NAYEBZADEH, University of Central Florida — Surface and flowfield pressure measurements have been done over delta wing/canard configuration in a variety of canard vertical and horizontal locations and angles of attack. The experimental model consisted of wing, canard and a body to accommodate pressure tubing and canard rotation mechanism. All the tests have been performed at subsonic velocities and the effect of canard were analyzed through comparison between surface and flowfield pressure distributions. It was found that vortex flow pattern over the wing is dominated mainly by canard vertical position and in some cases, by merging of canard and wing vortices. In addition, the pressure loss induced by canard vortex on the wing surface moves the wing vortex toward the leading edge. In the mid canard configuration, canard and wing vortices merge at  $x/c$  greater than 0.5 and as a result of this phenomenon, abrupt pressure loss induces more stable vortex flow over the wing. It is also shown that canard plays a vital role in vortex break down over the wing.

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