

Abstract Submitted  
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**Characterization of a vortical gust generator using PIV<sup>1</sup>** ESTEBAN HUFSTEDLER, BEVERLEY MCKEON, California Institute of Technology — A heaving plate has been used to generate aperiodic vortical gusts in a free-surface water tunnel as part of an effort to experimentally investigate the interaction between a wing and an incoming parallel vortex. Particle image velocimetry measurements provided information about the growth and evolution of the vortices over a range of heaving and freestream speeds. Vortex tracking methods were used to examine the circulation and movement paths of the vortices. Preliminary results of vortex-airfoil interactions will also be presented, with a view to identifying the gust response and tolerance.

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