

Abstract Submitted  
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**The Effect of Aspect Ratio and Angle of Attack on the Transition Regions of the Inverted Flag Instability**<sup>1</sup> JULIA COSSE, Caltech, JOHN SADER, University of Melbourne, BOYU FAN, DAEGYOUM KIM, MORY GHARIB, Caltech — The inverted flag instability occurs when a pliable plate is held parallel to a free-stream, with the leading edge free to move and the trailing edge clamped. Large-amplitude flapping is observed across a slim band of non-dimensional wind speeds. The specific boundaries of this flapping band vary greatly, depending on both the aspect ratio and the angle of attack of the plate with respect to the incoming flow. In addition, both periodic and aperiodic flapping modes exist. The frequency of the plate motion was analyzed and was found to be consistent with vortex-induced vibration.

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