

Abstract Submitted  
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**High accuracy skin friction measurements demonstrated in a wall jet** JONATHAN NAUGHTON, University of Wyoming, FARAZ MEHDI, GUNNAR JOHANSSON, Chalmers University of Technology — The demand for high accuracy mean skin friction  $C_f$  measurements has increased recently due, in part, to the need to have accurate friction velocities for scaling wall bounded flows. Other areas that will benefit from accurate  $C_f$  values are validation cases for computational fluid dynamics and wall-bounded flow control studies. Here we consider a  $C_f$  measurement technique capable of high accuracy, oil film interferometry (OFI). Specifically, the steps required for quality measurements in general flows are discussed including image registration and image analysis with a focus on one, two, and multiple image analysis approaches. The methods are applied to interferograms taken in a wall jet flow using OFI, and the results are applied to scaling wall jet velocity profiles obtained using laser Doppler anemometry.

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