Estimation of turbulent diffusion transport in the boundary layer by the SIV method

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Abstract

© 2018 Institute of Physics Publishing. All rights reserved. The study aims at an experimental estimation of turbulent diffusion transport of Reynolds stresses in a developed turbulent zero-gradient boundary layer. Estimates were derived from dynamics of two-component instantaneous velocity vector fields measured by an Smoke Image Velocimetry (SIV) optical method. The obtained profiles were compared with DNS results at a similar value of $Re\tau$.

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