

Abstract Submitted  
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**Wall-pressure fluctuations beneath a spatially evolving turbulent boundary layer**<sup>1</sup> KRISHNAN MAHESH, PRAVEEN KUMAR, University of Minnesota — Wall-pressure fluctuations beneath a turbulent boundary layer are important in applications dealing with structural deformation and acoustics. Simulations are performed for flat plate and axisymmetric, spatially evolving zero-pressure-gradient turbulent boundary layers at inflow Reynolds number of 1400 and 2200 based on momentum thickness. The simulations generate their own inflow using the recycle-rescale method (*Lund et al., J. of Comput. Phys., 1998, 140 (2): 233-258*). The results for mean velocity and second-order statistics show excellent agreement with the data available in literature. The spectral characteristics of wall-pressure fluctuations and their relation to flow structure will be discussed.

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