Abstract Submitted
for the DFD12 Meeting of
The American Physical Society

Off-wall boundary conditions for turbulent flows obtained from buffer-layer minimal flow units[1] RICARDO GARCIA-MAYORAL, BRIAN PIERCE, CTR, Stanford University, JAMES WALLACE, Burgers Program, University of Maryland — There is strong evidence that the transport processes in the buffer region of wall-bounded turbulence are common across various flow configurations, even in the embryonic turbulence in transition (Park et al., *Phys. Fl.* **24**). We use this premise to develop off-wall boundary conditions for turbulent simulations. Boundary conditions are constructed from DNS databases using periodic minimal flow units and reduced order modeling. The DNS data was taken from a channel at $Re_\tau = 400$ and a zero-pressure gradient transitional boundary layer (Sayadi et al., submitted to *J. Fluid Mech.). Both types of boundary conditions were first tested on a DNS of the core of the channel flow with the aim of extending their application to LES and to spatially evolving flows.*

[1]2012 CTR Summer Program

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Date submitted: 11 Oct 2012 Electronic form version 1.4