

Abstract Submitted  
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**Efficient and effective mixed turbulence models for LES of the atmospheric boundary layer**<sup>1</sup> FOTINI CHOW, University of California, Berkeley — Dynamic mixed turbulence models have recently been applied to large-eddy simulation of idealized atmospheric flows, with great improvement in comparisons to similarity theory. Mixed models combine a scale-similarity (or velocity reconstruction) component with an eddy-viscosity component. A dynamic eddy-viscosity model can be used for the latter. Difficulty in implementation of dynamic models over rough surfaces has limited their use to simplified geometries. Here it is shown that combining a scale-similarity model with standard non-dynamic eddy viscosity formulations leads to a simple mixed model which still provides significant needed improvements to atmospheric boundary layer simulations and can easily be implemented for general flows over complex terrain.

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