

Abstract Submitted
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Neutral equivalent surface stress CHERYL KLIPP, US Army Research Laboratory — In laboratory turbulent flows, it has been observed that the eigen axes of the Reynolds stress tensor are oriented 17 deg from the streamwise coordinate system. This has also been observed in atmospheric flows over relatively flat terrain under thermally neutral conditions. The reliability of this relationship is examined, especially for locations very near the surface. The relationship is then used as the basis for a neutral equivalent momentum transport which can be calculated in complex environments, such as urban canyons, where the influence of multiple wall normals makes more conventional measurement of momentum transport problematic.

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