

Simulated Space-Based Doppler Lidar Performance In Regions Of Backscatter Inhomogeneities

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Abstract

The prospect of obtaining directly measured winds on a global scale has raised questions about the expected quality of the lidar wind measurements and the potential for biases due to sampling patterns and line-of-sight impediments. Extensive computer simulations are on-going to address these and other issues. One source of measurement bias is found in regions of the atmosphere where gradients in both lidar backscatter and the winds occur together. The potential biases that result are identified and their magnitudes estimated.