

## Data assimilation of Doppler Lidar data with high resolution weather model in Tokyo metropolitan area

\*Kuniaki Higashi<sup>1</sup>, Kenya Yano<sup>2</sup>, Jun-ichi Furumoto<sup>2</sup>, Nobumitsu Tsunematsu<sup>3</sup>

1.Research Institute for Sustainable Humanosphere, Kyoto University Metroweather Co., Ltd.,  
2.Research Institute for Sustainable Humanosphere, Kyoto University , 3.Tokyo Metropolitan Research  
Institute for Environmental Protection

This study aims to investigate the impact of data assimilation of Doppler Lidar data with high resolution non-hydrostatic weather model in Tokyo metropolitan area. The small-scale convergence of surface wind field in the boundary layer is considered as one of the most important factor to determine the generation of heavy rainfall in urban area.

Considering that the complex feature of surface wind field has not fully elucidated, this study compared observation data with control simulation and data assimilation simulation.

Keywords: Atmospheric boundary layer, Data assimilation , High resolution non-hydrostatic weather model