



## **Structure and Dynamics of the High Latitude Stable Boundary Layer**

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We report experimental investigations of the Stable Boundary Layer (SBL) during the Winter-Boundary Layer Experiment (Wi-BLEx) over two winter periods (08/09-09/10). The structure and dynamics of the SBL, occurrence and breakup of inversions, formation of multilayered inversions and its connection with synoptic and small scales dynamics processes (i.e., intermittent drainage flows) are discussed. The paper summarizes the role of structure of the SBL in the mixing, re-circulating and processing gas and particulate matter as one of the key contributors to Air Pollution in Arctic urban settings.