



## **Investigating the early springtime stable atmospheric boundary layer in Adventdalen (Spitsbergen) - a case study**

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During the night of 31.03-01.04.2009, very cold temperatures ( $\leq 30^{\circ}\text{C}$ ) were observed at the old Auroral station in Adventdalen (Spitsbergen). A group of german and norwegian scientists operated the Small Unmanned Meteorological Observer SUMO as a 'recoverable radiosonde' in high temporal resolution. SUMO aircraft measurements will be shown in comparison to high resolution runs using the numerical weather prediction model WRF. With support of surface measurements from a 10 m mast and boundary layer profiles measured by SUMO it can be tested, if the model is able to forecast such extreme temperature.