P37 A case study evaluation of fog simulation using various land-surface models and micro-physics schemes.

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Despite its importance to transportation safety and ecosystem health related to pollutant and nutrient deposition, the simulation of fog lags the simulation of other meteorological phenomena due in large part to its complexity and limitations of model resolution. Accordingly, this evaluation provides a case study of fog simulation in the Nooksack Valley Region centered in Washington state during an extensive fog episode in January of 2014. Simulations of WRFV3.9 (4km) were conducted using various land-surface models (e.g. Noah, PX) and micro-physics schemes (e.g. Morrison, Thompson). Values of liquid water content, along with other surface layer parameters simulated by the various runs were then compared to a suite of meteorological measurements obtained at fourteen NWS sites along with satellite images. Both discrete and categorical statistics will be provided for each simulation to determine model efficacy.