Critical review of challenges and potentials for snow drift

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A review of current snow drift models is given. Further a turbulent snow drift model based on an Algebraic Slip Model approach is validated. The driving wind field is computed by extracting time dependent boundary conditions from Numerical Weather Prediction by a mass conserving optimization approach. The results are compared to observations at the Planneralm, Austria. The influence of different snow parameters is investigated and it’s concluded, that the snow particle transport is more sensitive to the wind speed, than to various snow property parameters of classical models.