Frequency domain analysis and modelling of velocity in the surface layer to develop a trajectory diaspore dispersal model.

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Measured time series of the three dimensional velocity vector and temperature for different landscapes are analyzed by Fouriertransformation to calculate the power spectra. These are compared with theory and statistically modelled in dependence of mean velocity, stability and turbulent energy to simulate turbulence. In addition the three dimensional microscale flow model ASAM is used to compute the airflow for structured landscapes. The airflow will be overlayed with the theoretic turbulent time series to provide the background flow for the trajectory diaspore dispersal model.