Size decompositions of observed and simulated ShCu

P. Griewank, T. Heus, N. Lareau, R. Neggers

Question
Will statistics of regularized lidar cloud chords agree with LES at the SGP site?
Size decompositions of observed and simulated ShCu

Main results

▶ Modelled and observed vertical velocity and moisture anomalies agree well, are size dependent.
▶ Temporally sampled chords (1D, lidar) have weaker updrafts and are more asymmetric.
▶ Full results available in ACP discussions, undergoing minor revisions.
Ongoing: Evaluating multi-plume parametrizations

- 3D plumes are clustered from LES snapshots using surface emitted tracer
- Clusters qualitatively confirm relationship of size, height, vertical velocity profiles used by ED(MF)\textsuperscript{n}