





# **Collective Impact of temporal and spatial Soil Moisture Anomalies** on Deep Convection over Central Europe LUDWIG-MAXIMILIANS UNIVERSITÄ<sup>.</sup>

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- $\Rightarrow$  112km: Updraft region is blured
- background wind (moderate forcing)

# Conclusions

- (1) Positive overall soil moisture precipitation coupling Negative local soil moisture precipitation coupling
- 2 No dependence of daily precipitation on heterogeneity length scale. Minimum in day-to-day precipitation variability between 50 - 80km.
- ③ Thermally induced mesoscale circulations link precipitation.
- ④ Increased convergence and strong linkage on downwind flank of dry tiles enhance convective precipitation.

circulations do not efficiently enhance updraft region  $\Rightarrow$  56km & 84km: Updraft coincides with higher low-level convergence & Q<sub>c</sub>

 $\Rightarrow$  Signature of chessboard patterns weakens with increasing patch size and