Figure 1. Temporal evolution (hours 2-12) of 159 LES with varying initial conditions (see text) in an LWP-N state space, colored by fraction of rain water path (RWP) to the total liquid water path (LWP). Individual simulations are indicated by gray lines and start at the location of gray circles. The dashed blue line corresponds to an adiabatic volume-mean droplet radius at cloud top of $12 \mu$m (adiabatic condensation rate $\gamma = 2.5 \cdot 10^{-6} \text{kg m}^{-4}$). Together with the solid blue line, it defines three regions, which are labeled Q1 (first quadrant), Q2 (second quadrant) and Q34 (combination of third and fourth quadrants). Red letters indicate trajectories discussed in the main text.

be described as 2-dimensional functions. For such a reduction in dimensionality to be successful, it is required that multiple initial conditions in the 6-dimensional space map onto individual points on the 2-dimensional state space. In hydrology, this