

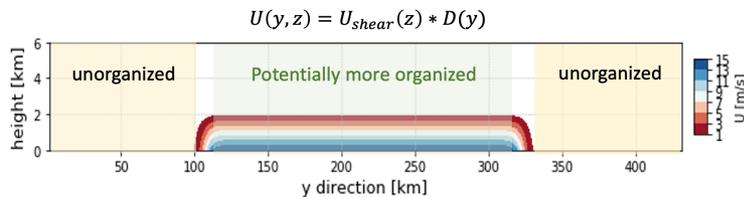


**Motivation:** Can convective organization be steered by competition between organized and unorganized clouds?

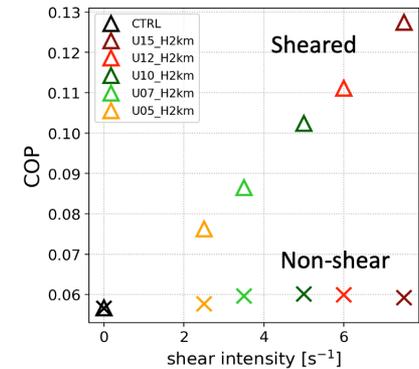
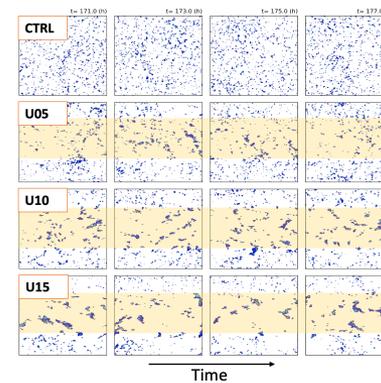
**Idealized CRM simulations by NCAR Cloud Model 1 (CM1):**

**Domain size:** 450 x 450 km<sup>2</sup> (dx=2km), 65 levels to 28 km  
**Controlled forcing:** Homogenous radiative cooling (~4K/day) with corresponding SFX compensated to maintain energy conservation.  
**Simulation time:** 10 days (last 5 days for analysis)

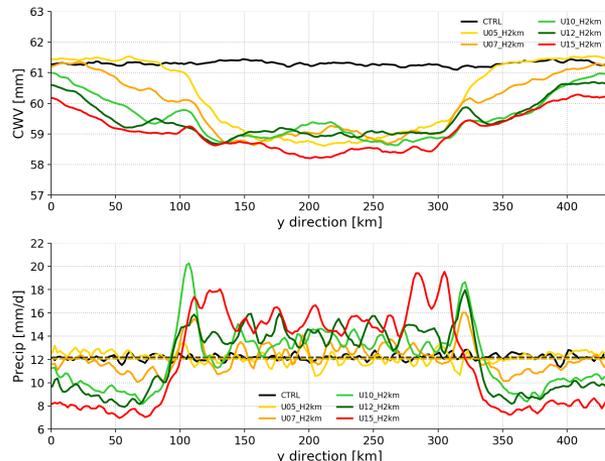
Imposing *shear* to generate organization gradient over the domain



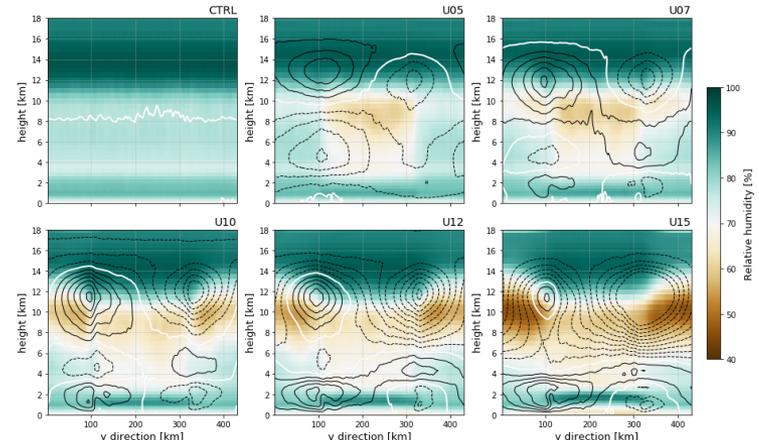
❖ **Controlling organization patterns/gradient in the domain**



❖ **Responses of vapor and precipitation in two regions**



❖ **Resulting coupled circulations and organization gradient**



- A drying effect is associated with organized convection and proportional to organization gradient over the domain.
- organized convection *outcompetes* unorganized one and is supported by the resulting, self-generated circulations.