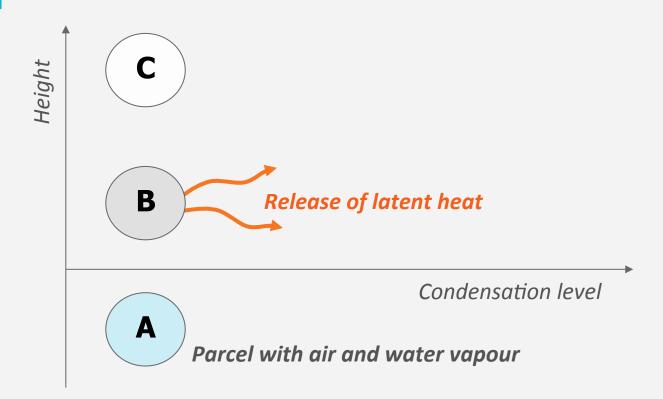
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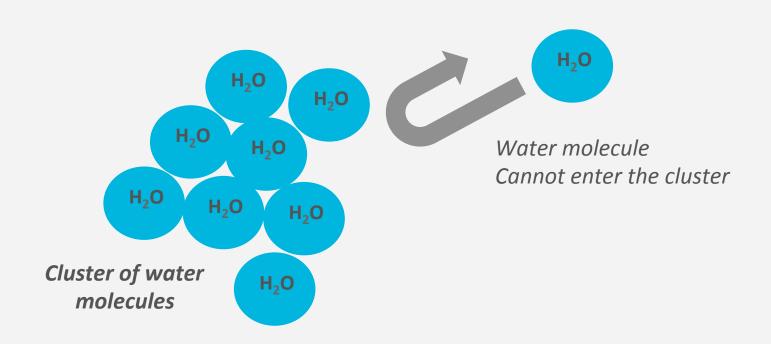
Prof.dr.ir. Herman Russchenberg



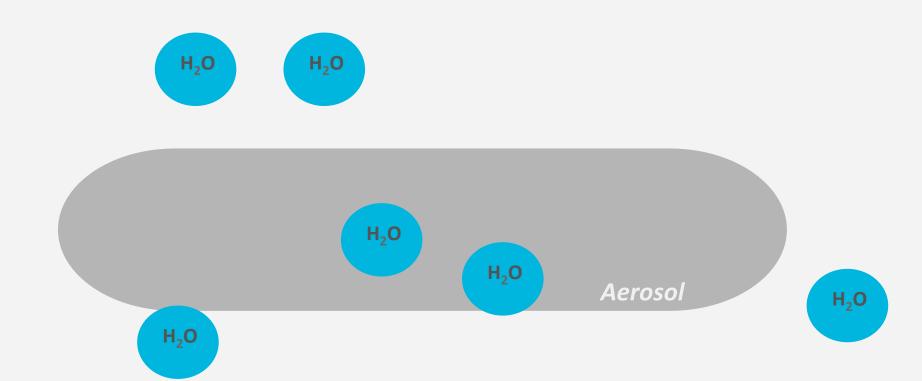
Cloud forming



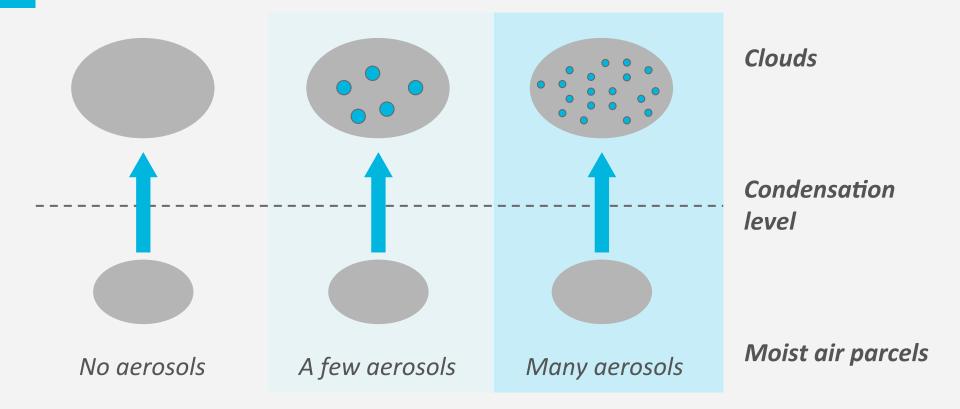
Clustering



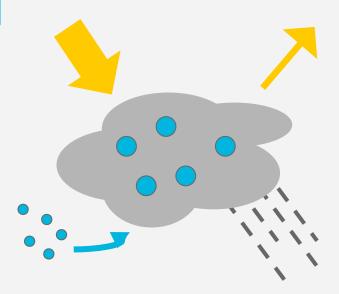
Aerosols

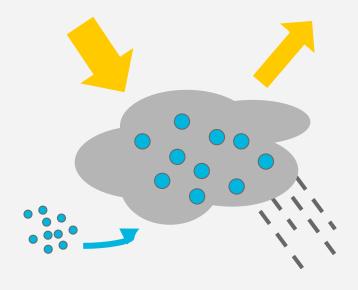


A bit more on cloud formation



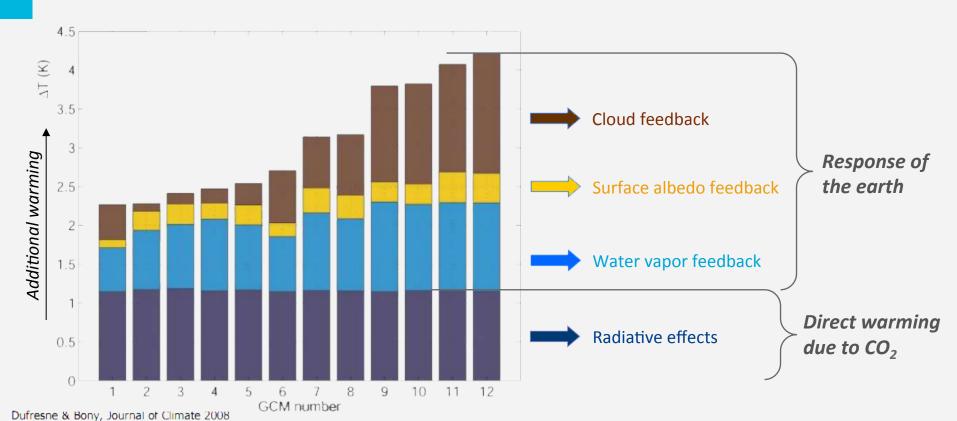
Aerosol-cloud interactions





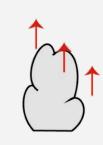
More aerosols → Delayed rainfall → Longer cloud → Sustained impact lifetime on radiation

Global warming: state of the art



Global warming, cloud response

Greenhouse Warming



Tropics



Mid-latitudes



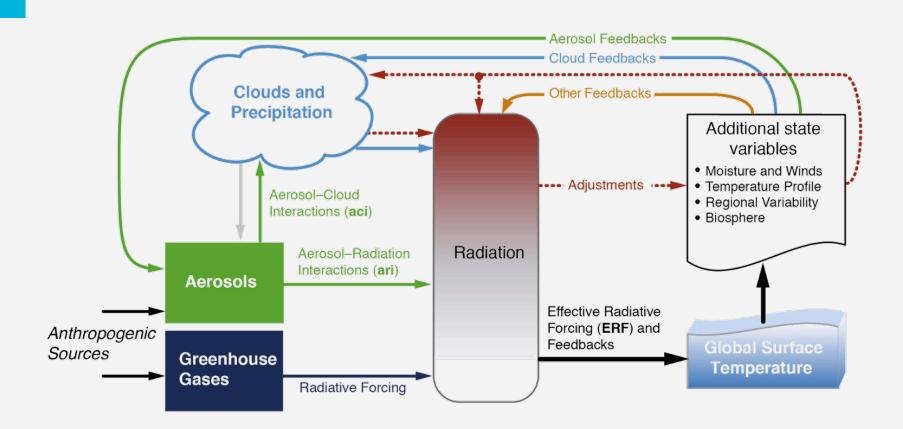


Cloud Response High clouds rise as troposphere deepens, increasing difference between cloud top and surface temperature.

Reduction in mid- and low-level cloudiness (left). Shift of cloudy storm tracks poleward into regions with less sunlight (right).

Feedback Mechanism High clouds more effectively trap infrared radiation, increasing surface warming.

Less sunlight reflected by clouds back to space, increasing surface warming.



How to solve this problem?



Models

Observations

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