

ETH zürich



This research receives funding from the European Union's Horizon 2020 research and innovation programme under Marie Skłodowska-Curie grant agreement No 860100 (iMIRACLI).

Exploiting temporal development of stratocumulus (Sc) clouds to estimate causal aerosol-cloud interactions (aci)

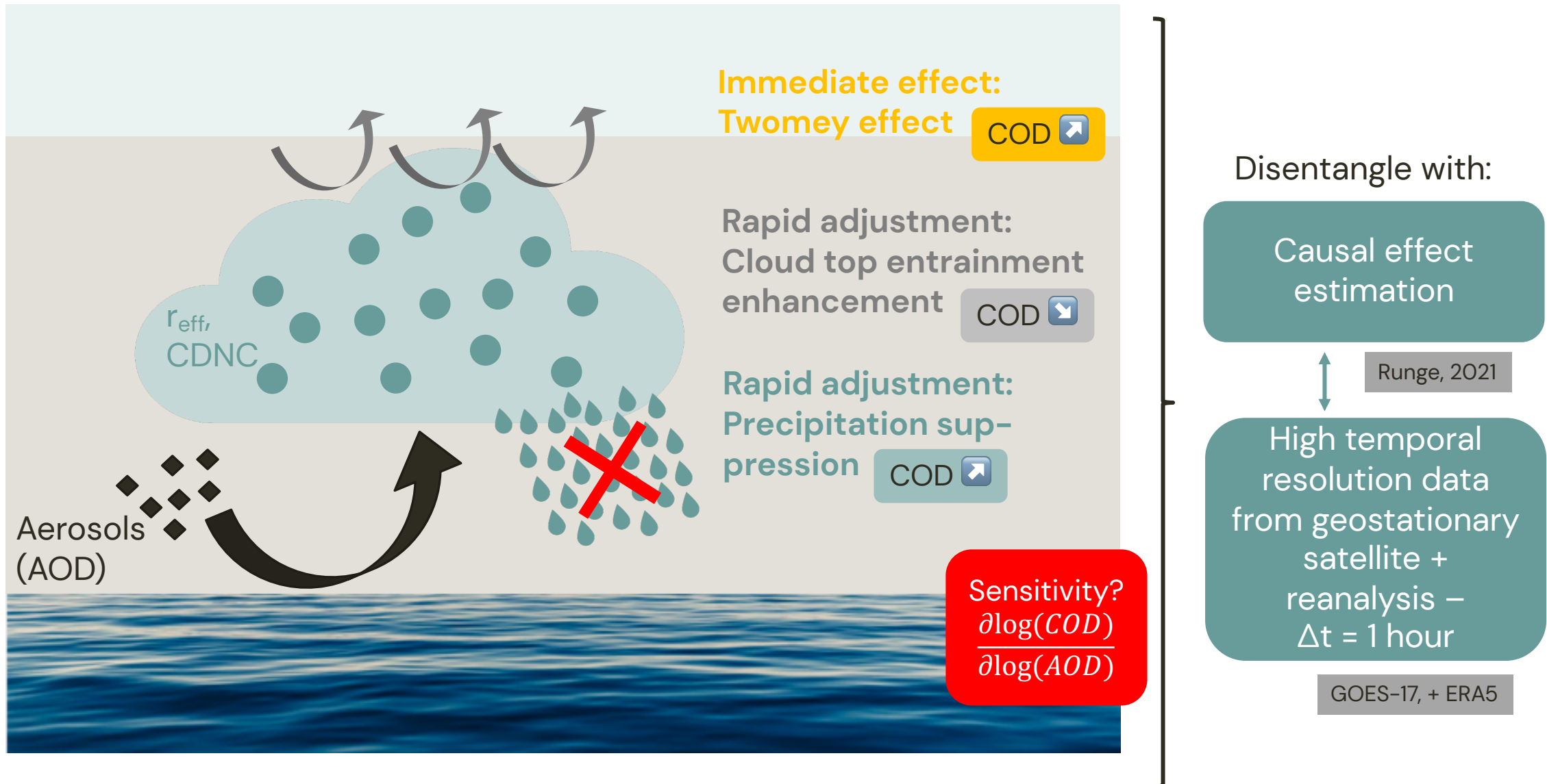
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Aerosol-cloud interactions in Sc clouds

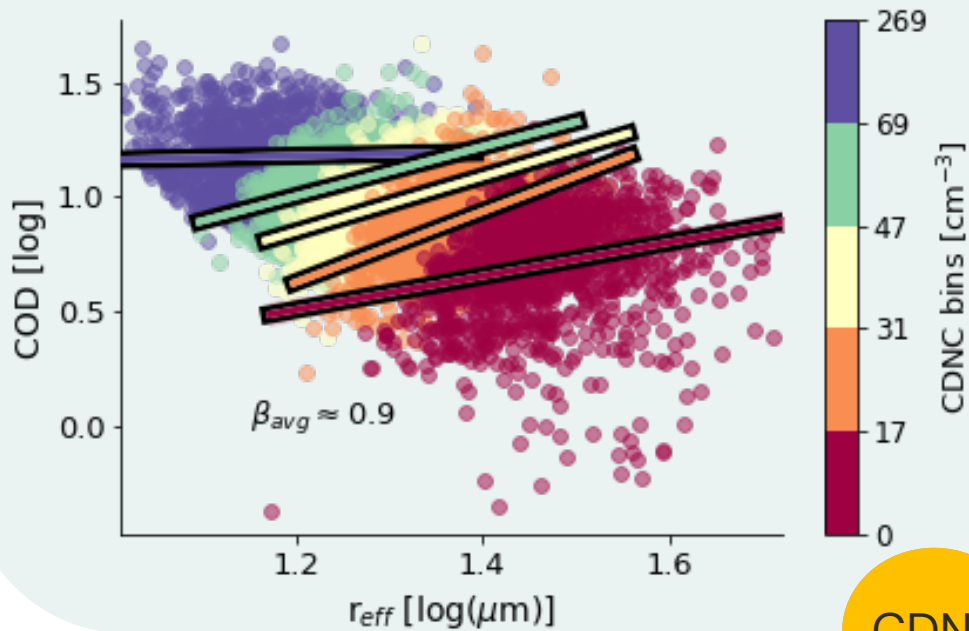


Causation > correlation

CAUSATION

$r_{\text{eff}} \rightarrow \text{COD}$

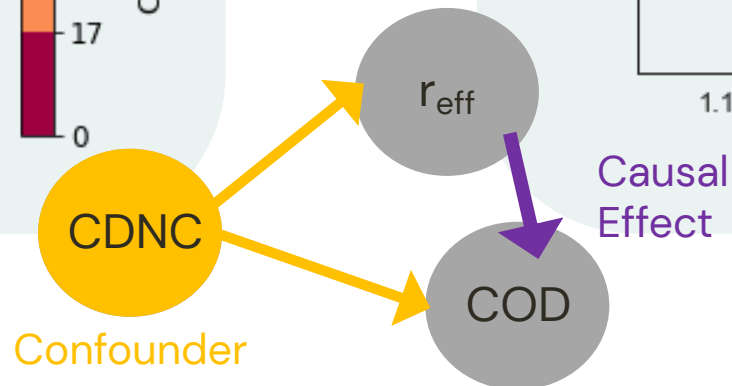
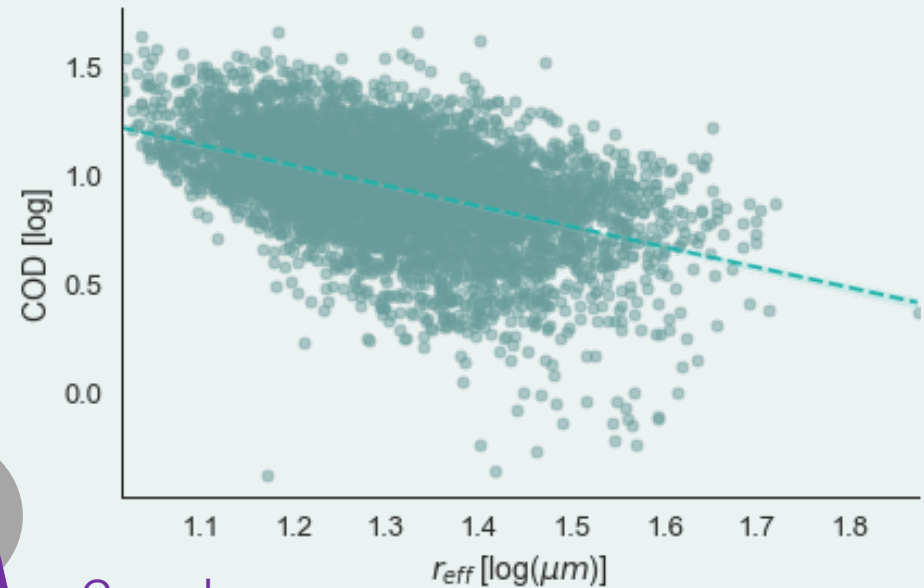
When CDNC is held constant:



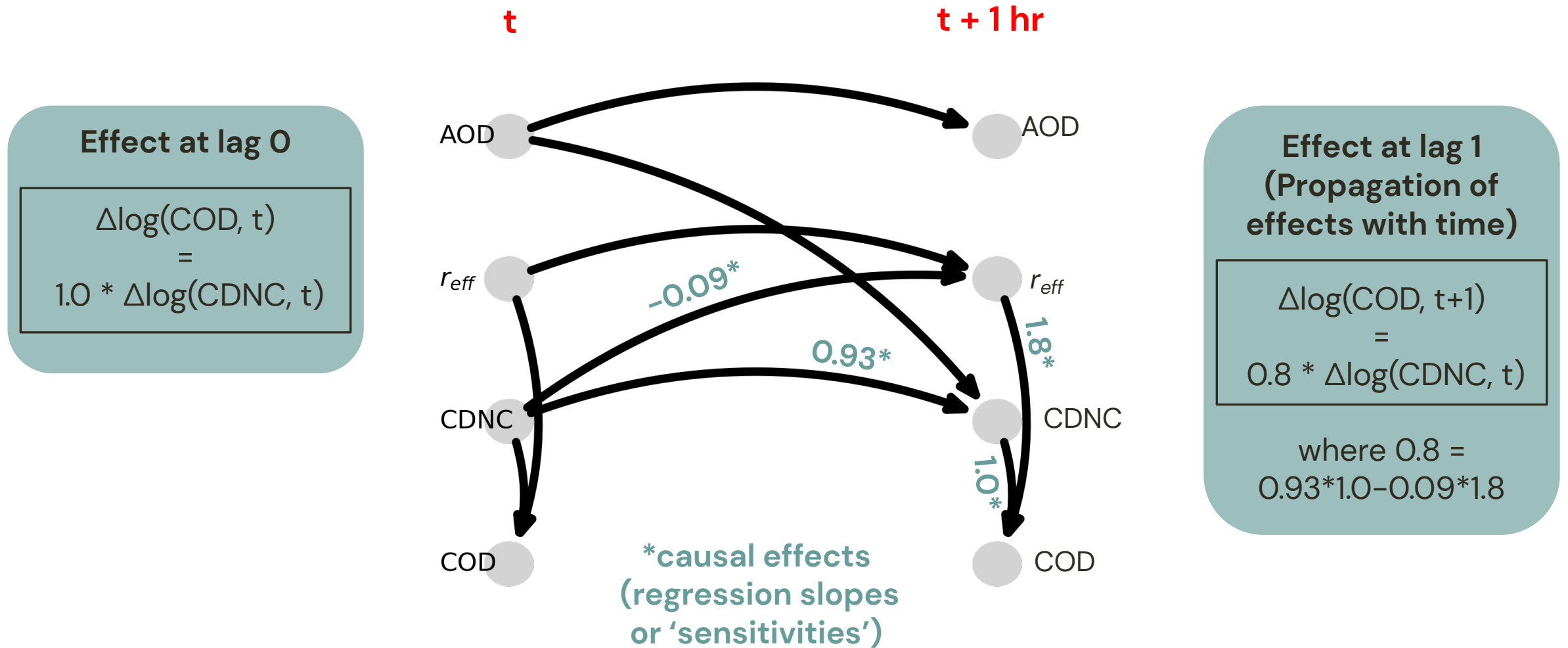
\neq

CORRELATION

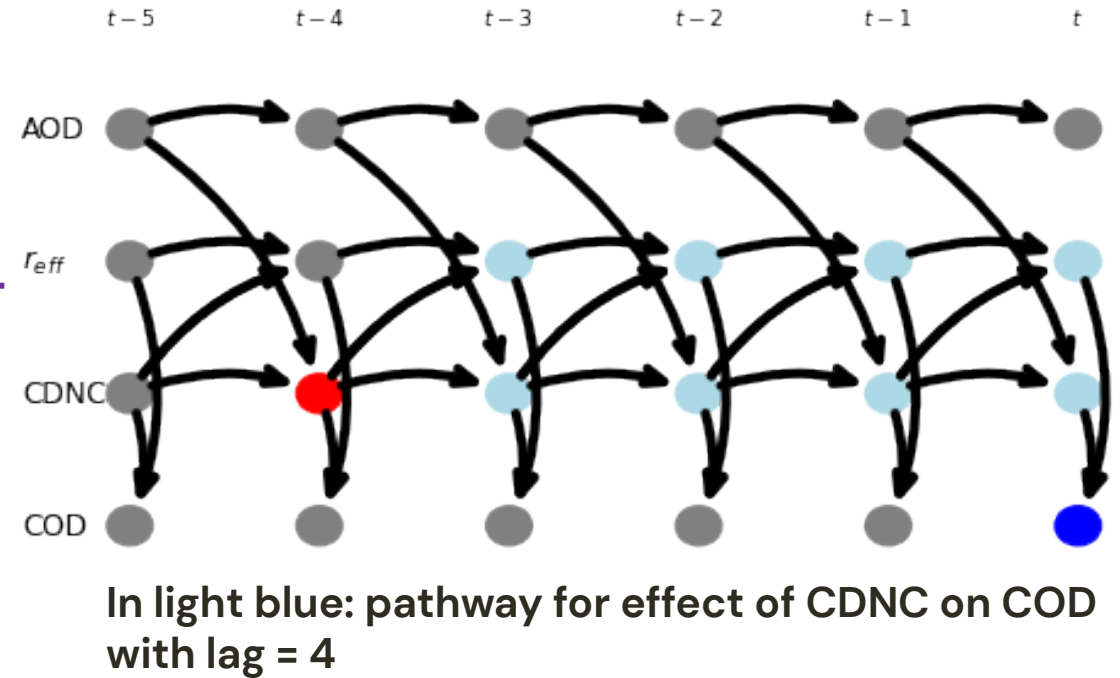
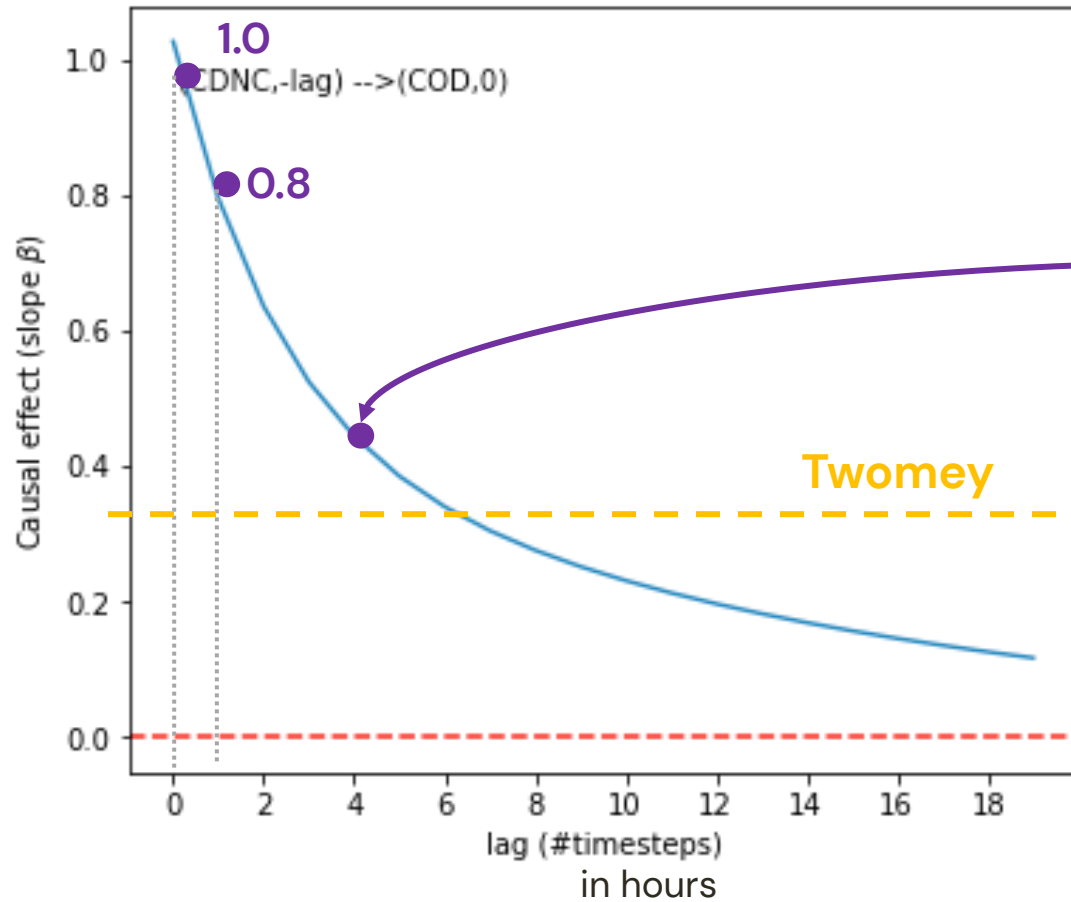
$r_{\text{eff}} \leftrightarrow \text{COD}$



Results: Causal effect estimates



Results: temporal development



Summary

For questions: emfons@ethz.ch

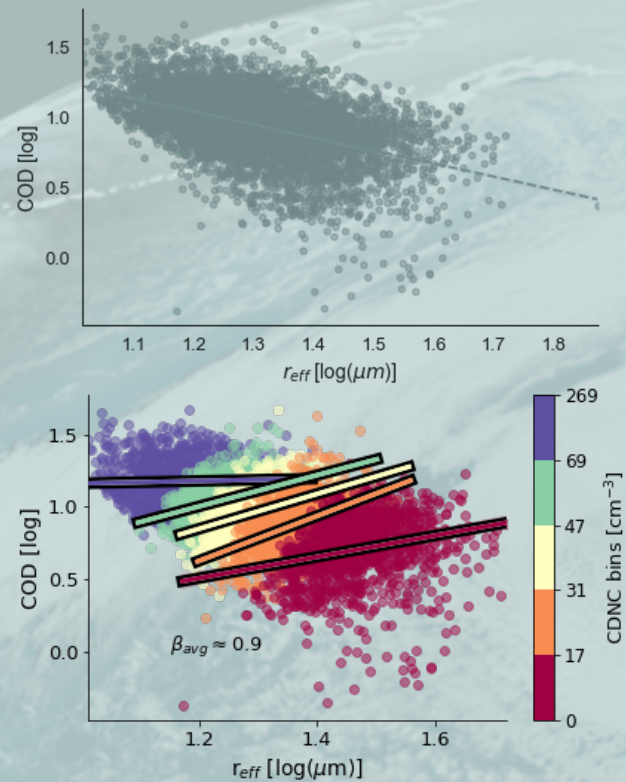
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Correlation \neq Causation



Causal approach \rightarrow derive temporal development of effects

