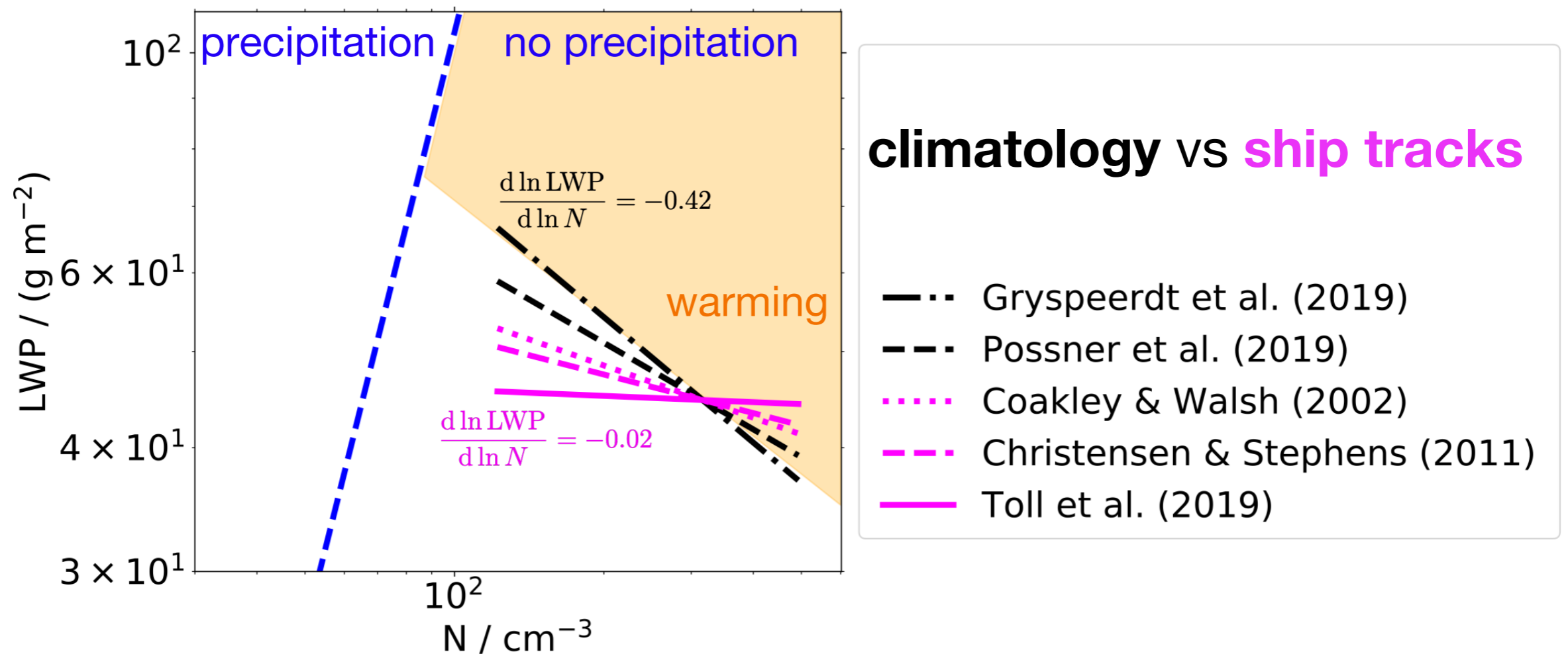
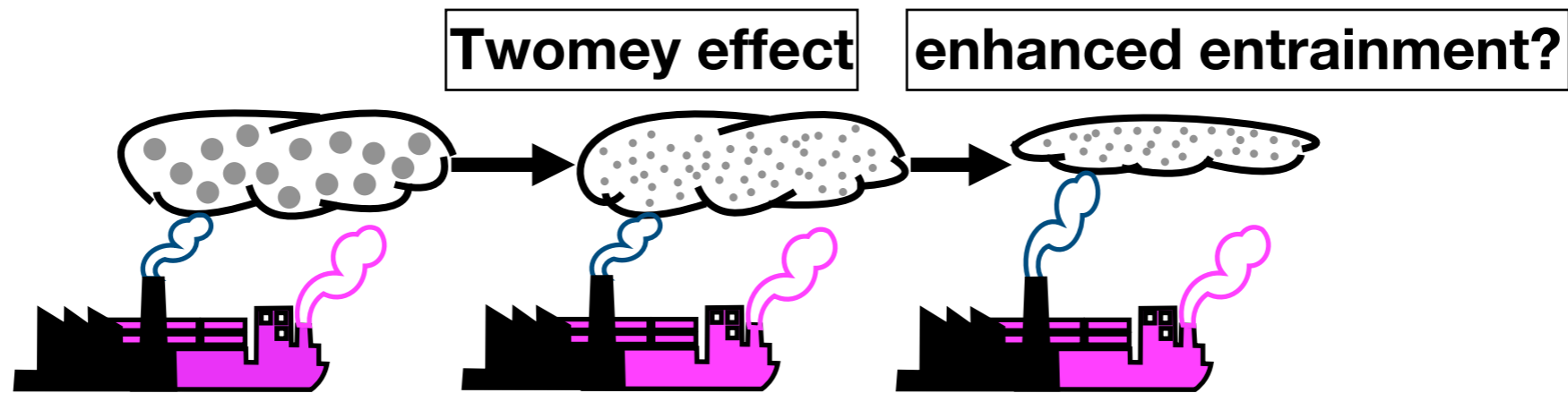
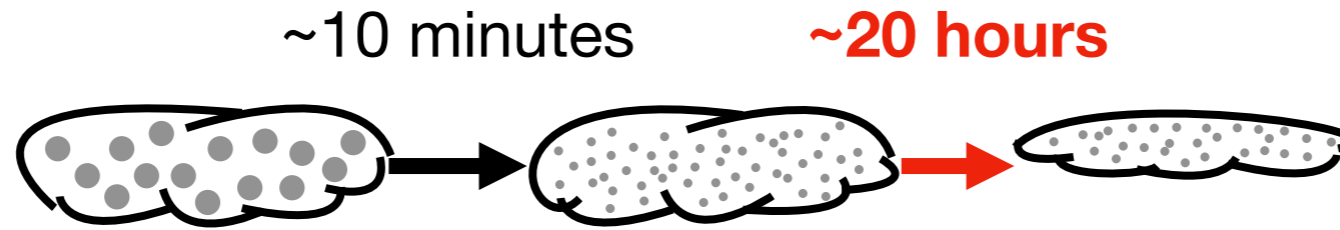


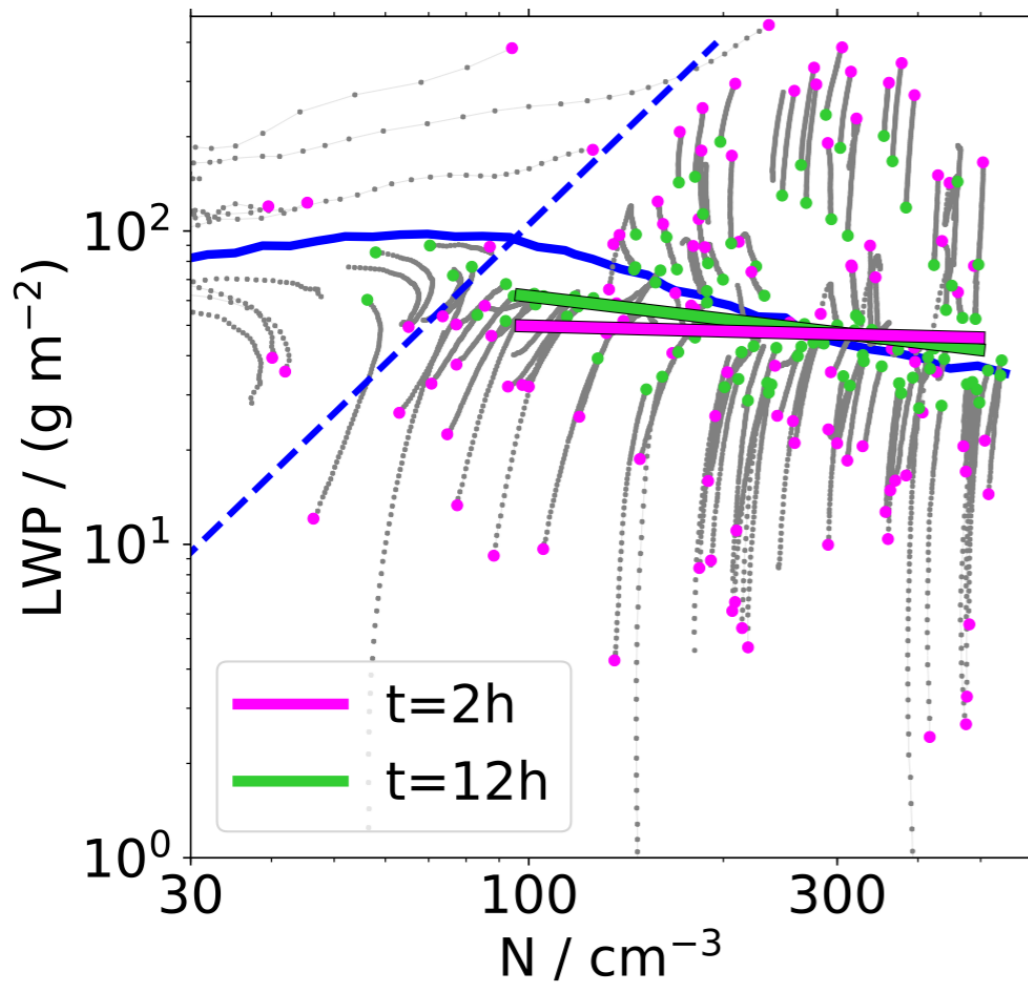
# LWP response ("adjustment") to aerosol in *non-prcp* Sc:



# LWP adjustments occur with timescale of ~20 hours:



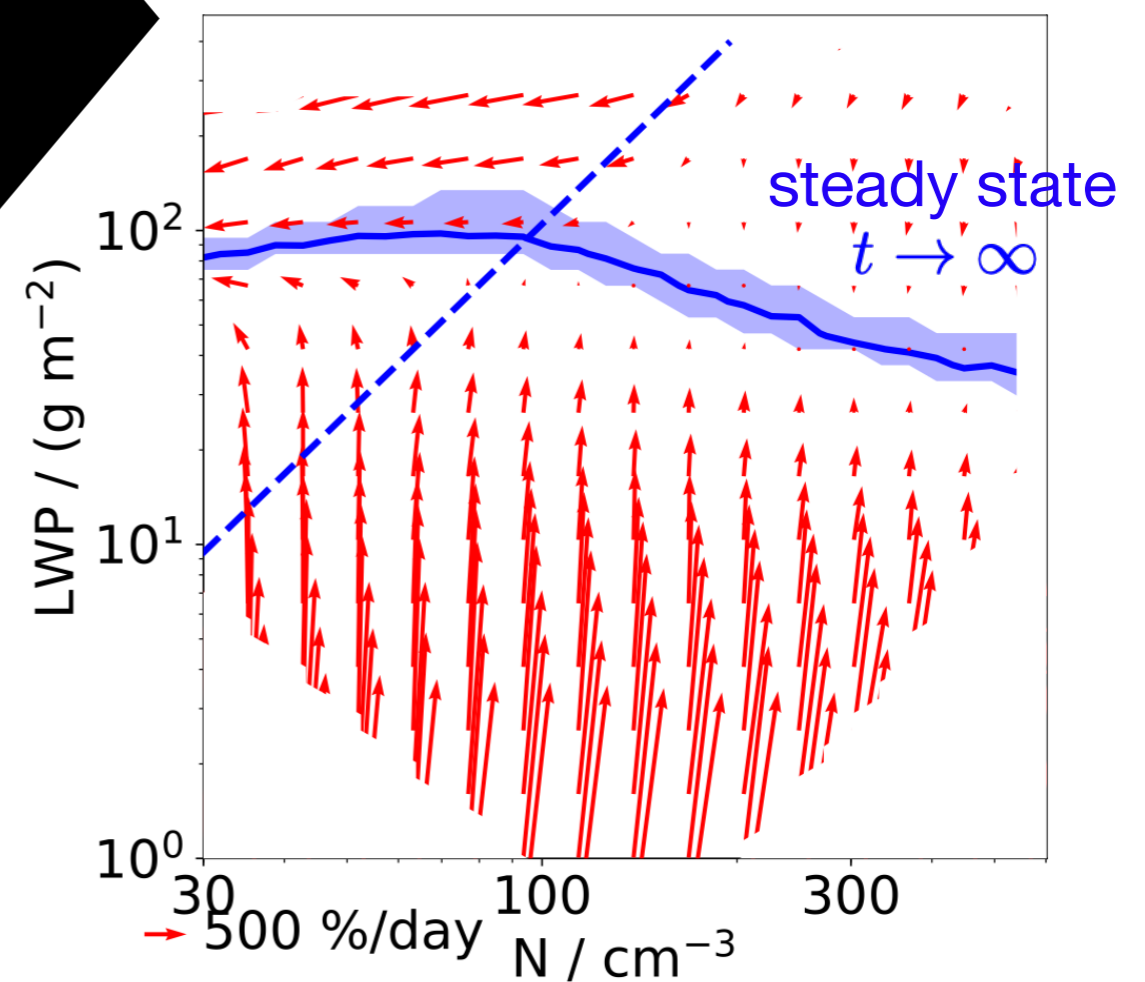
LES ensemble (~150 runs)



Gaussian-  
process  
emulation

dynamical system/  
state-space flow

$$\vec{v} = \begin{pmatrix} \frac{d \ln N}{dt} \\ \frac{d \ln \text{LWP}}{dt} \end{pmatrix}$$

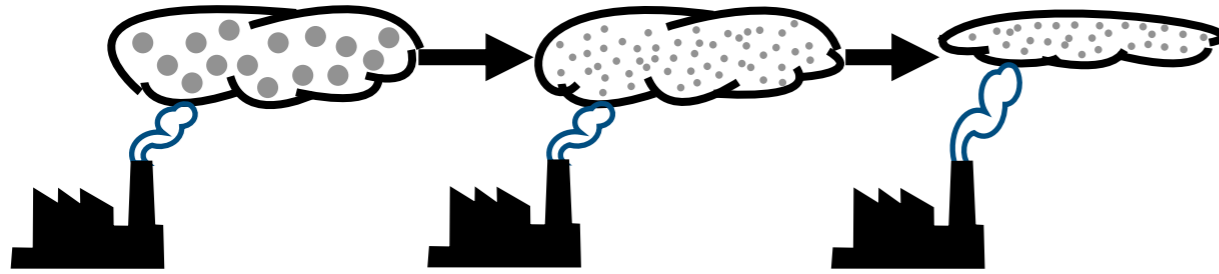


Glassmeier, Hoffmann, Johnson, Yamaguchi, Carslaw & Feingold (2020):

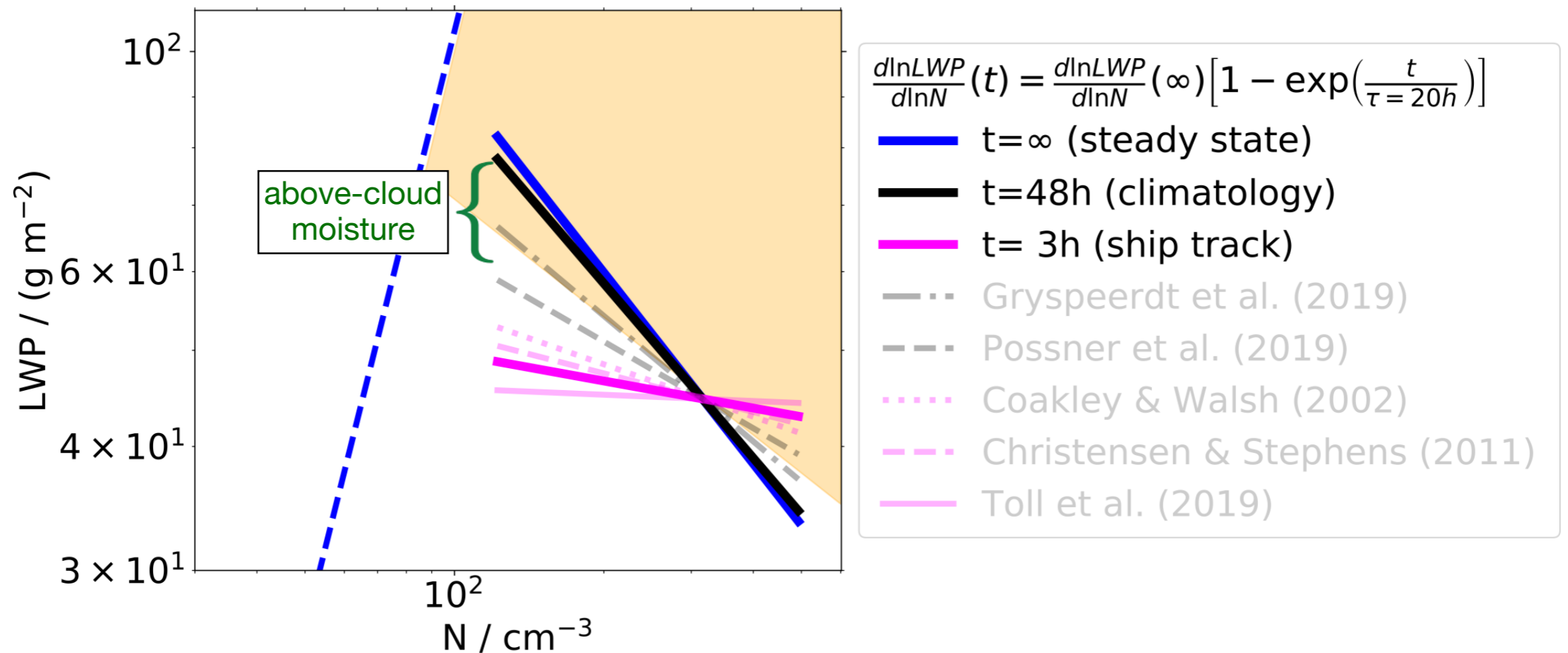
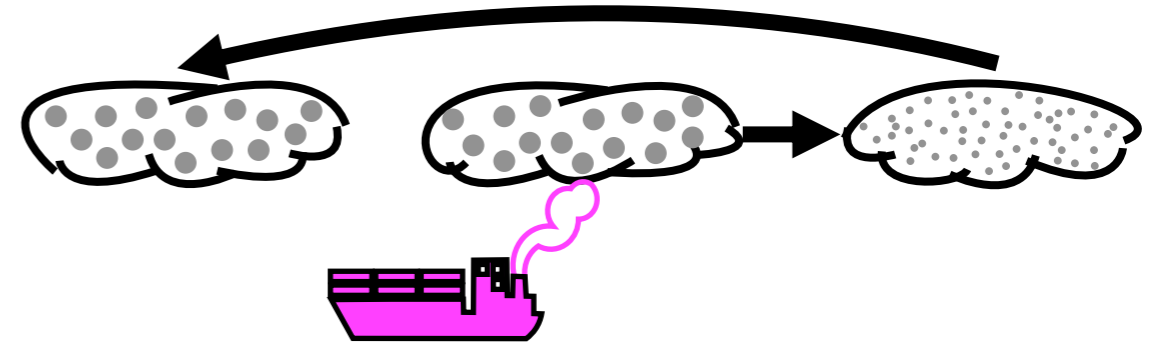
Ship-track-based assessments overestimate the cooling effect of anthropogenic aerosol, [arXiv:2005.14159](https://arxiv.org/abs/2005.14159)

# Weak LWP adjustment in ship tracks due to short lifetime:

climatological background: ~48 hours



ship track: ~3 hours



Glassmeier, Hoffmann, Johnson, Yamaguchi, Carslaw & Feingold (2020):

Ship-track-based assessments overestimate the cooling effect of anthropogenic aerosol, [arXiv:2005.14159](https://arxiv.org/abs/2005.14159)