

# AeroCom aircraft comparison experiment

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# Outline



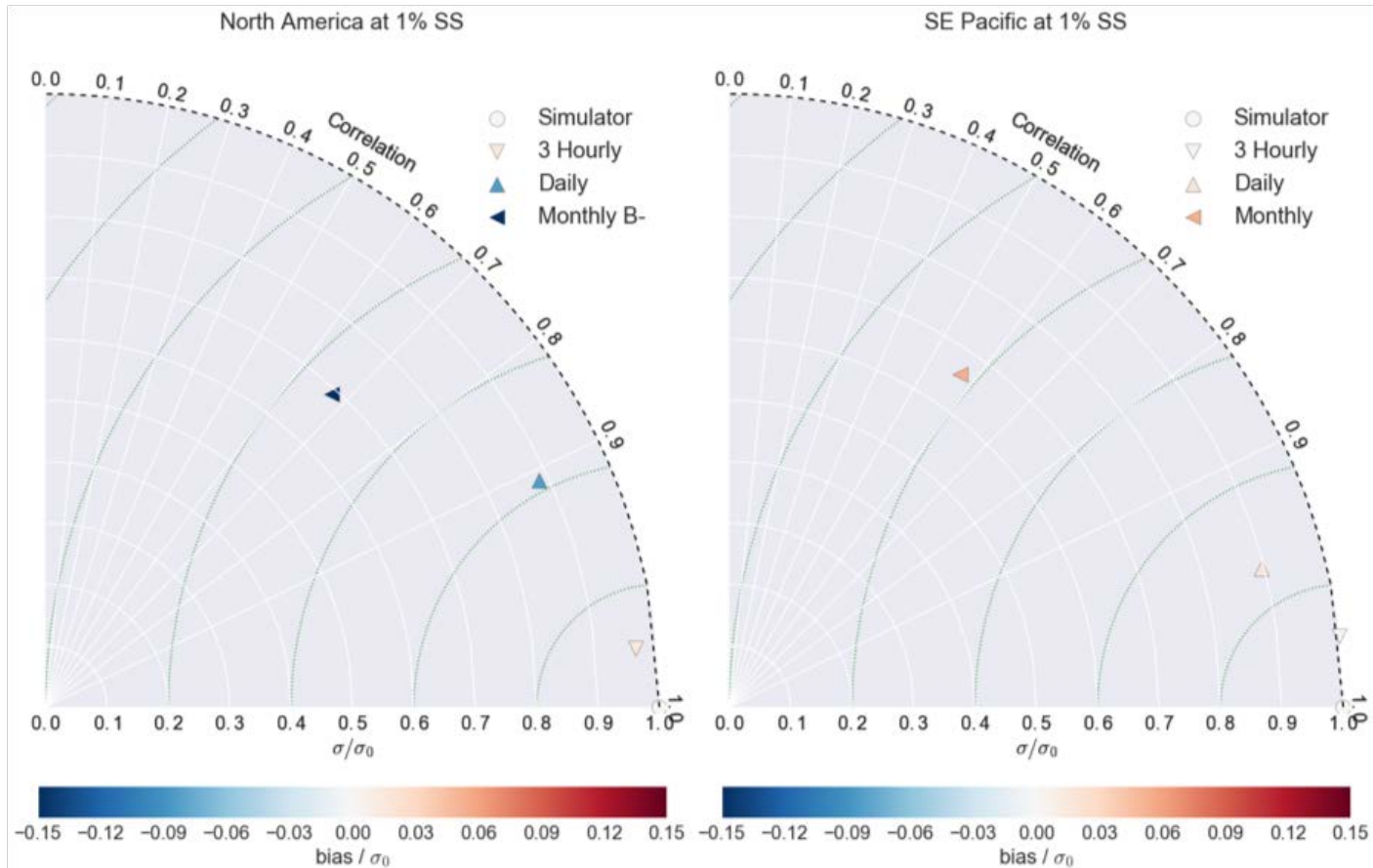
*E.g. C. L. Reddington et al., BAMS 2017*

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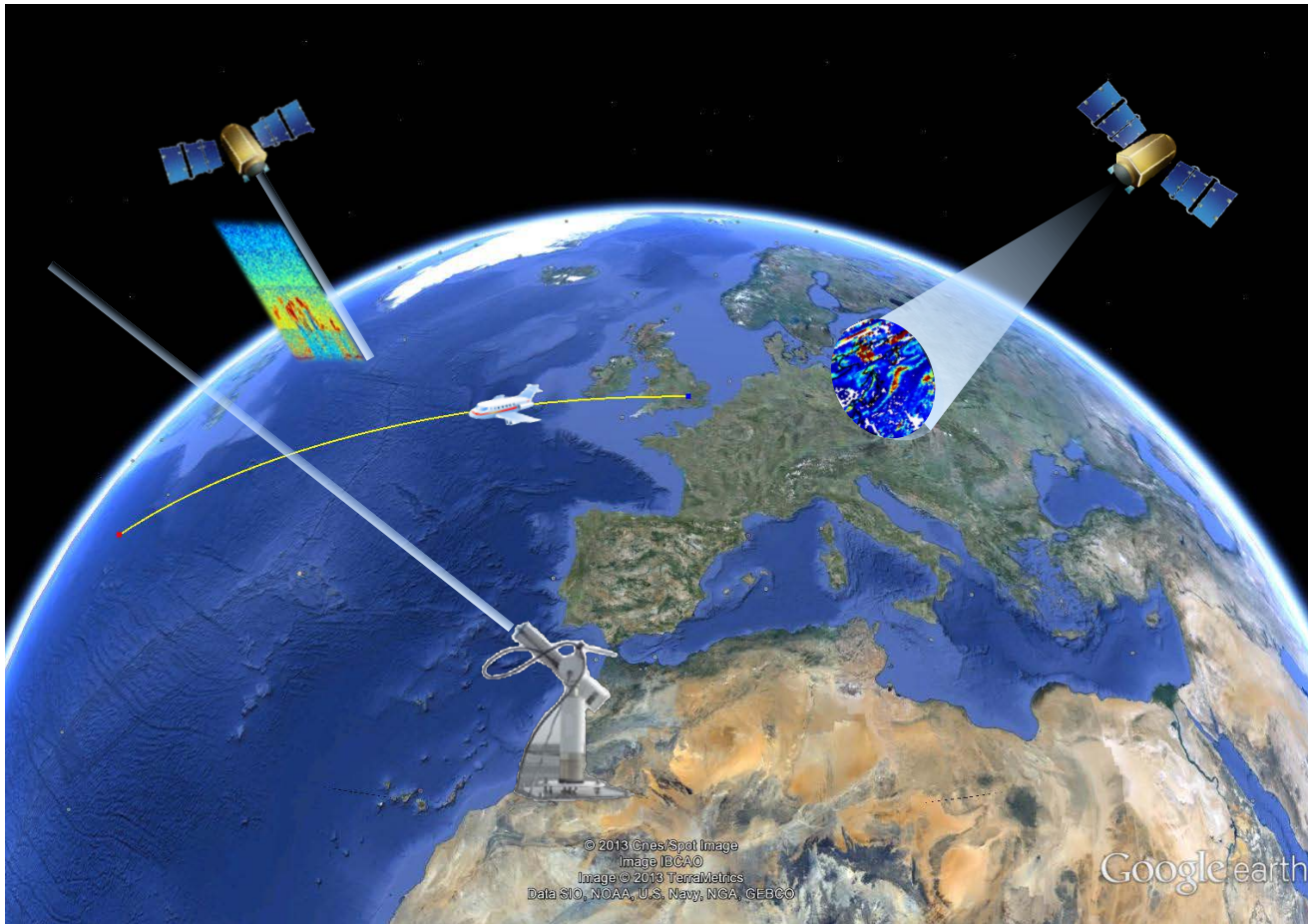


# Setup - sampling



See e.g. M. Lund et al., *npj Climate and Atmospheric Science* (2018)

# The Community Inter-comparison Suite (CIS)



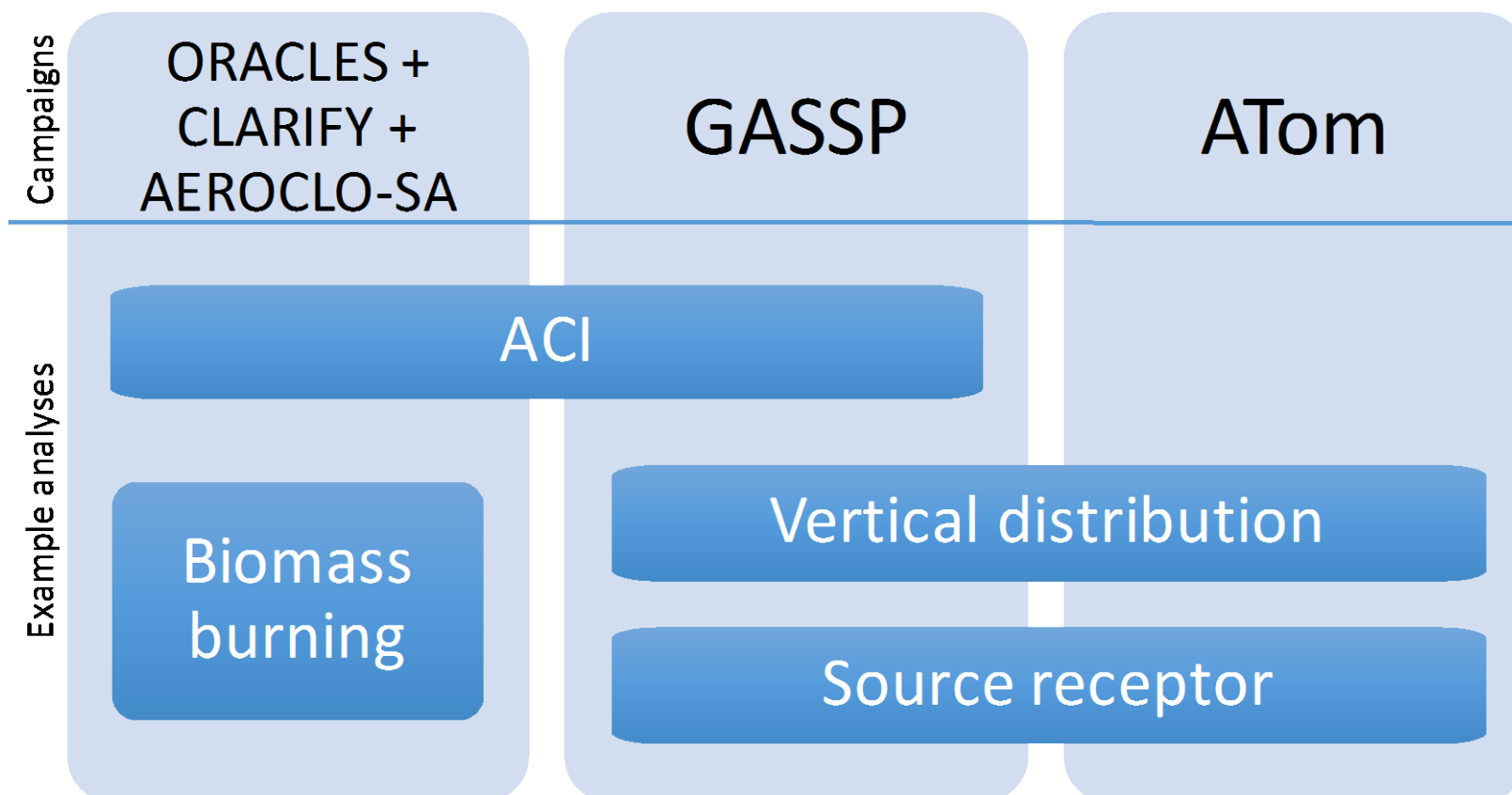
*D. Watson-Parris et al., Geosci. Model Dev. 2016*

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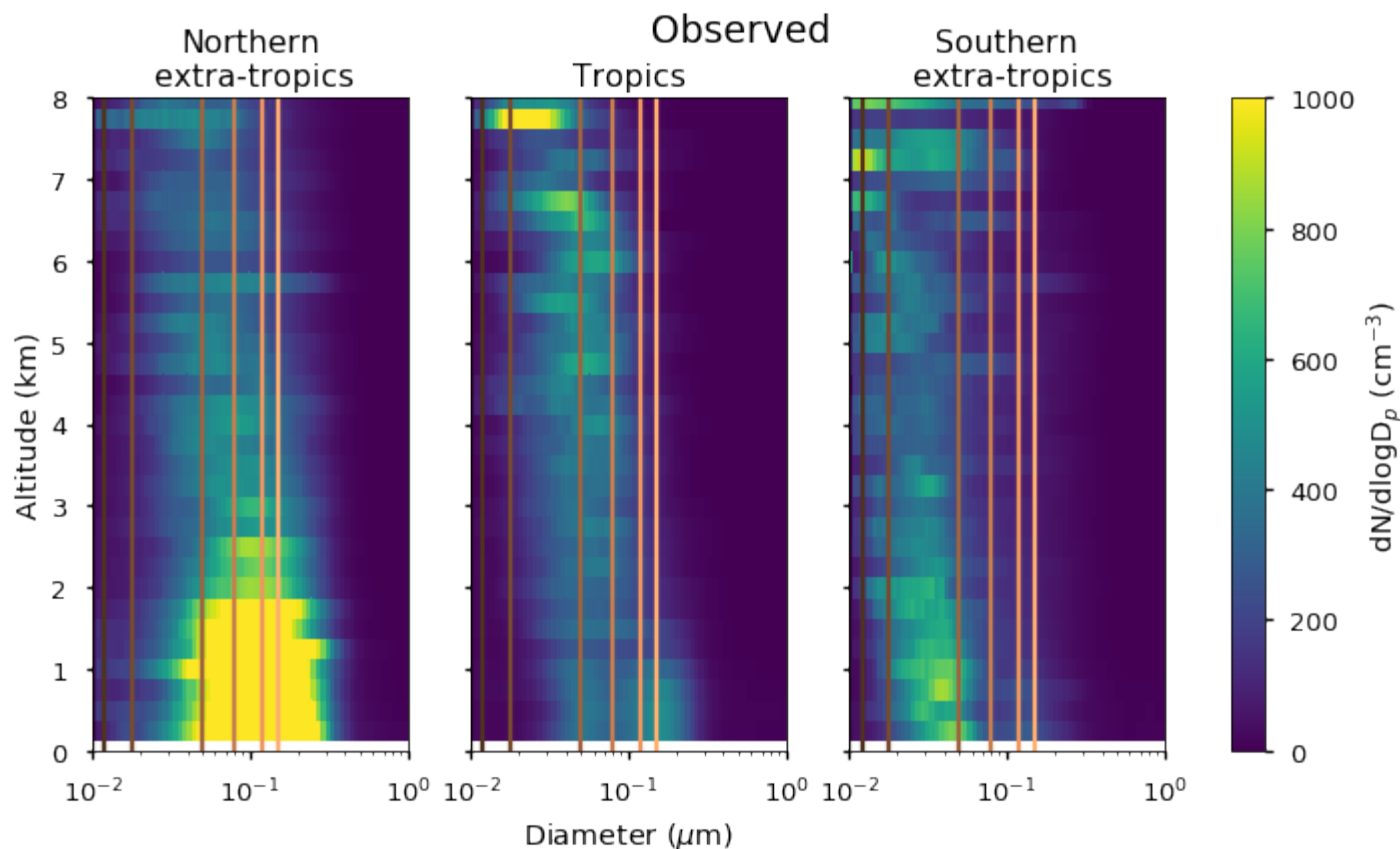
# Diagnostics

Aerosol	Cloud	Thermodynamics	Radiation
CCN at: 0.05%, 0.08%, 0.12%, 0.16%, 0.20%, 0.25%, 0.3%, 0.35%, 0.45%, 0.55%, 0.60%, 0.75%, 1.0%	Cloud droplet effective radius	Air temperature	Ambient aerosol scattering coefficient at 550nm
	Cloud droplet number concentration	Air density	Ambient aerosol absorption coefficient at 550nm
	Liquid water path	Specific humidity	Single scattering albedo at 550nm
N4, N10, N18, N50, N80, N120, N150		Relative humidity	Dry aerosol Scattering coefficient at 550nm
		Omega (dp/dt)	Dry aerosol absorption coefficient at 550nm
Concentrations of BC, OC, Sea Salt, DMS, MSA, NO3, ...			

# Analyses

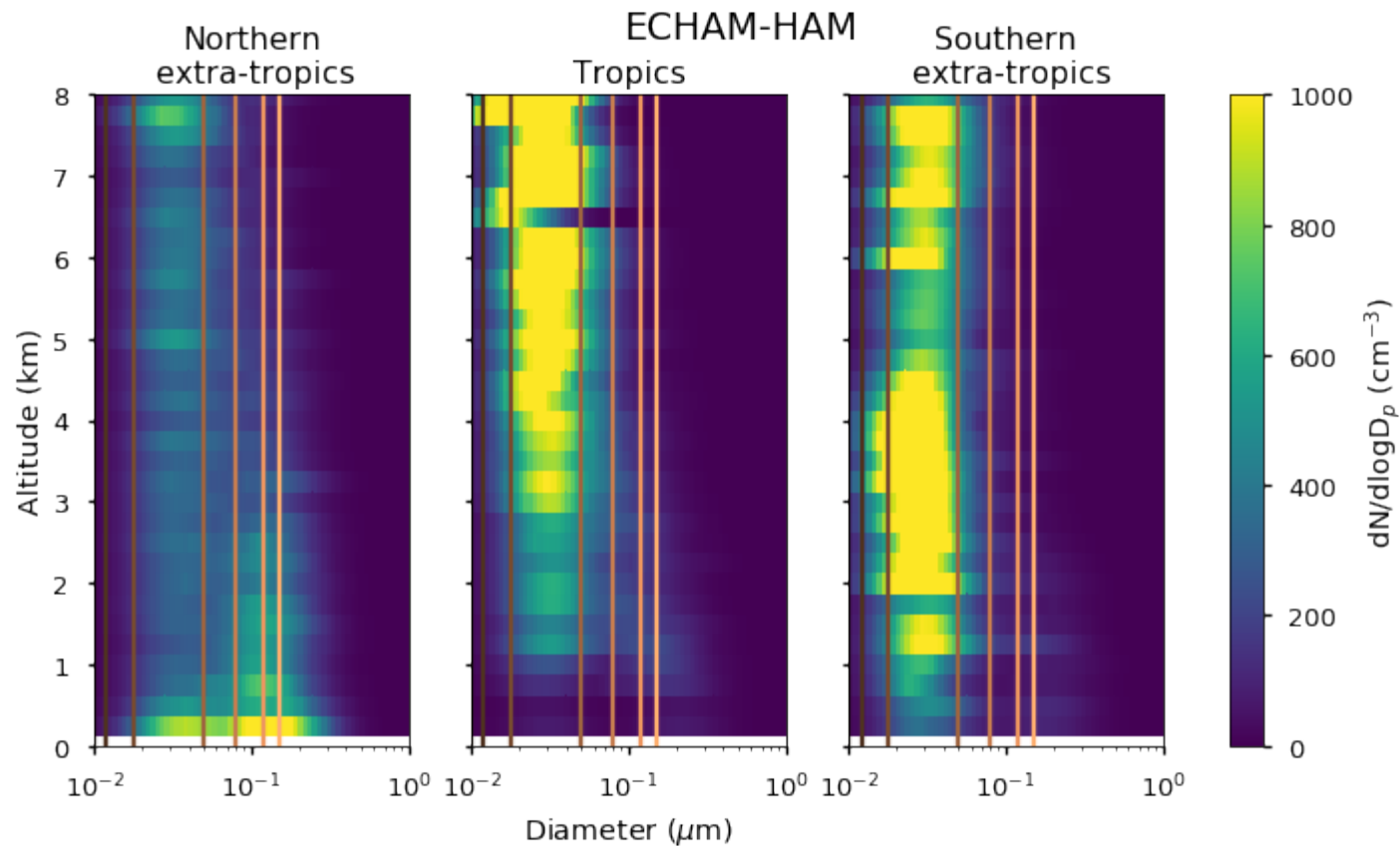


# Example analysis: Vertical distribution



*D. Watson-Parris et al., Atmos. Chem. Phys. 2019*

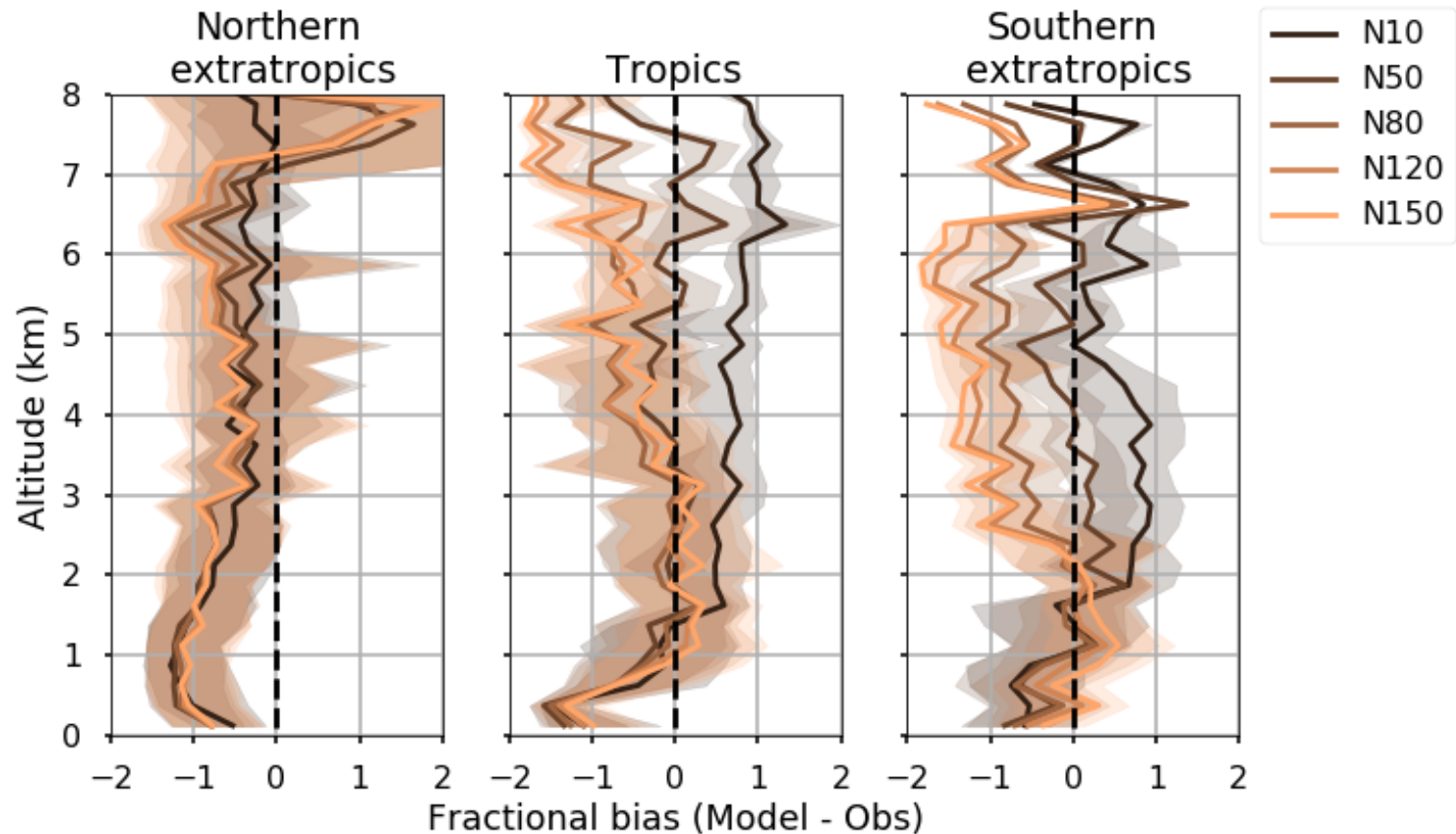
# Example analysis: Vertical distribution



*D. Watson-Parris et al., Atmos. Chem. Phys. 2019*

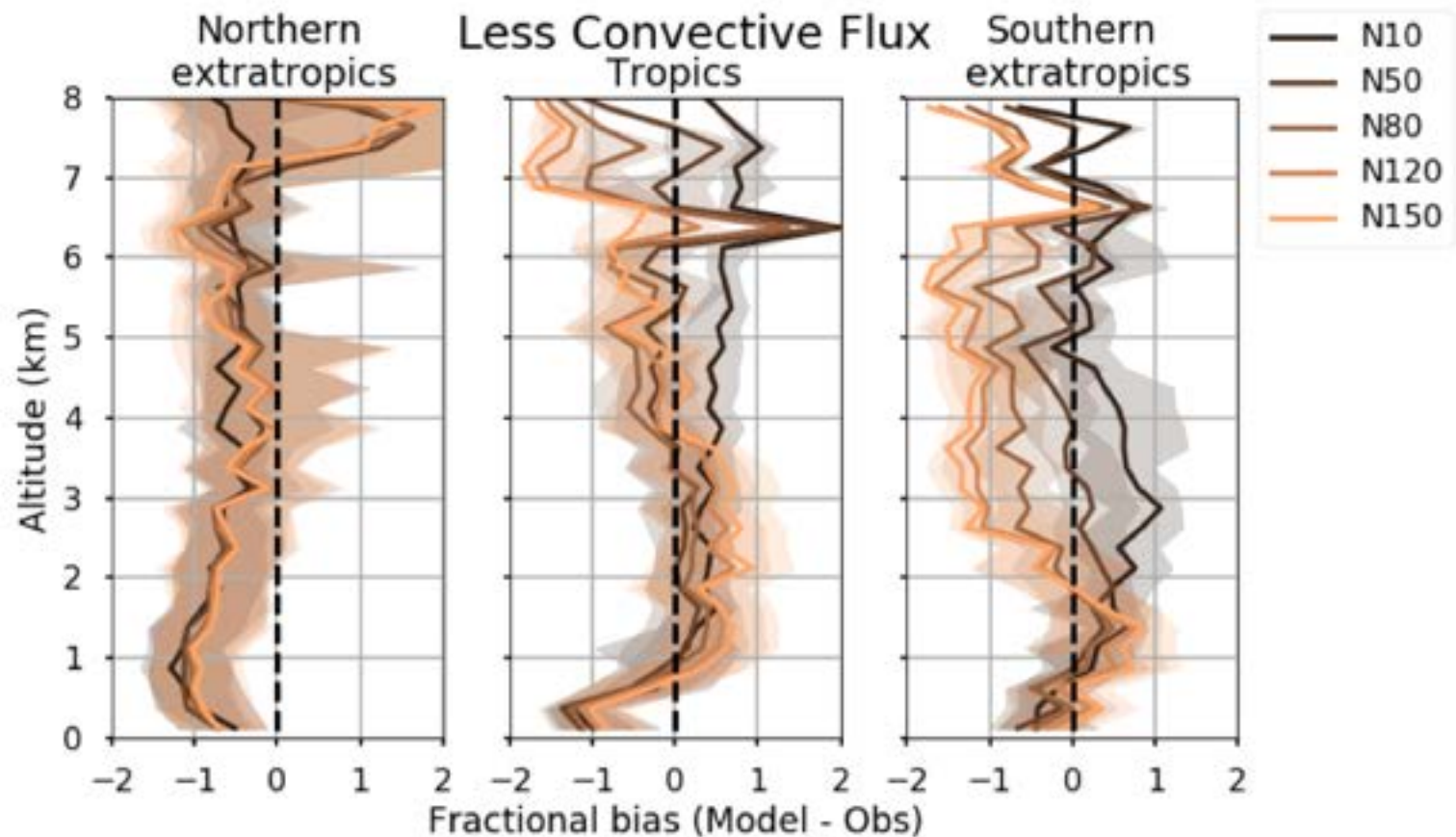


# Example analysis: Vertical distribution



*D. Watson-Parris et al., Atmos. Chem. Phys. 2019*

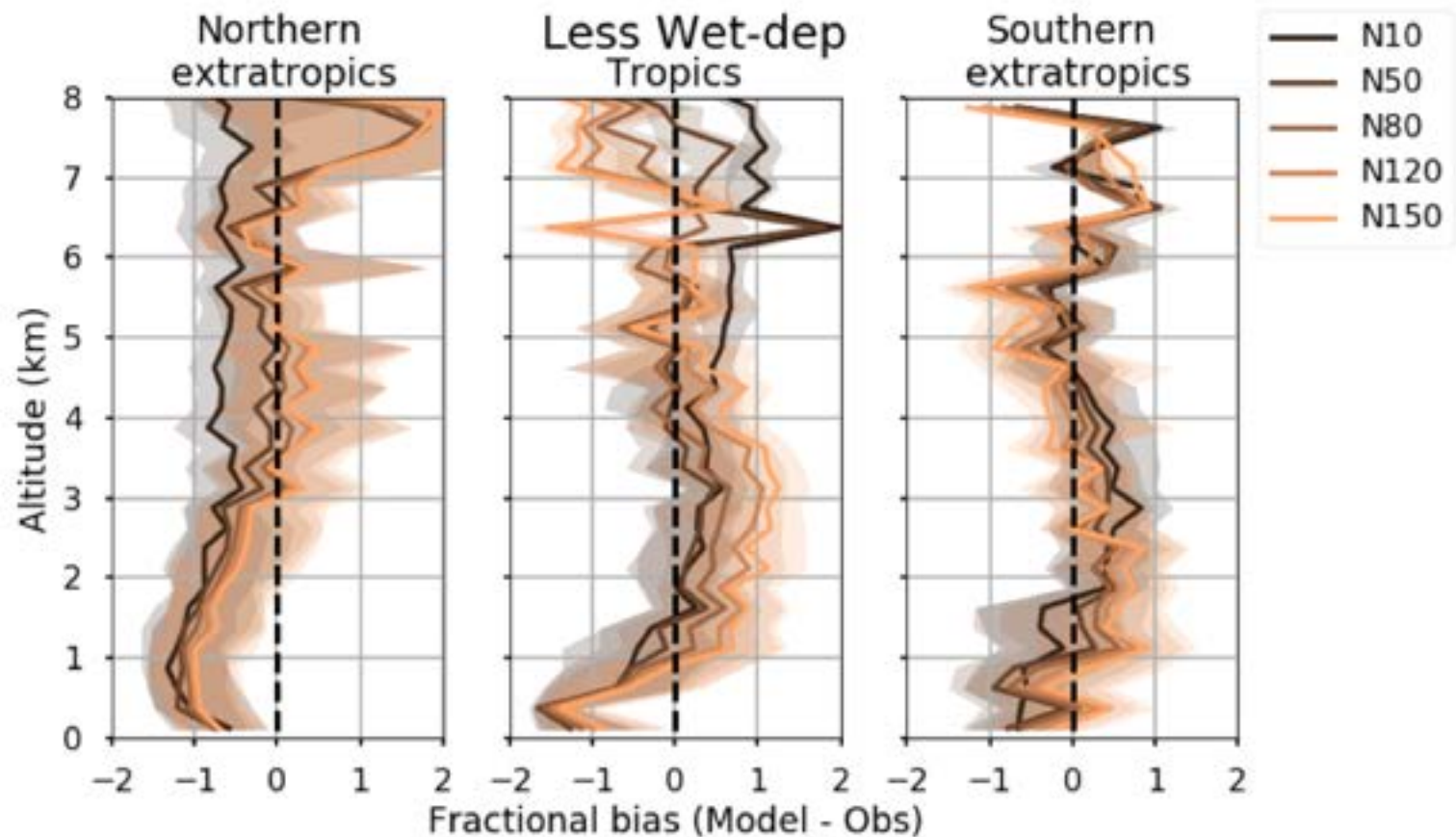
# Example analysis: Vertical distribution



*D. Watson-Parris et al., Atmos. Chem. Phys. 2019*

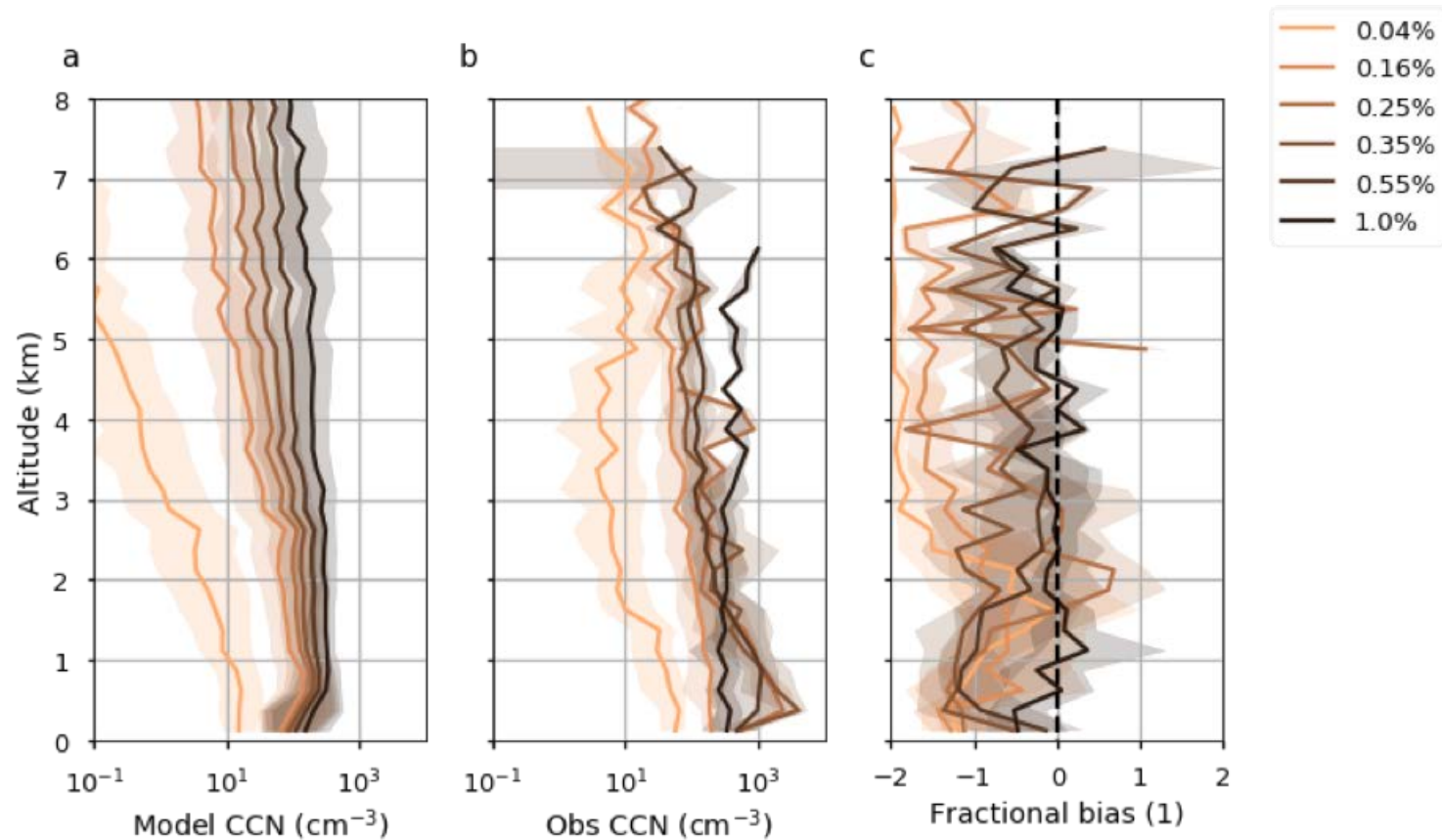


# Example analysis: Vertical distribution



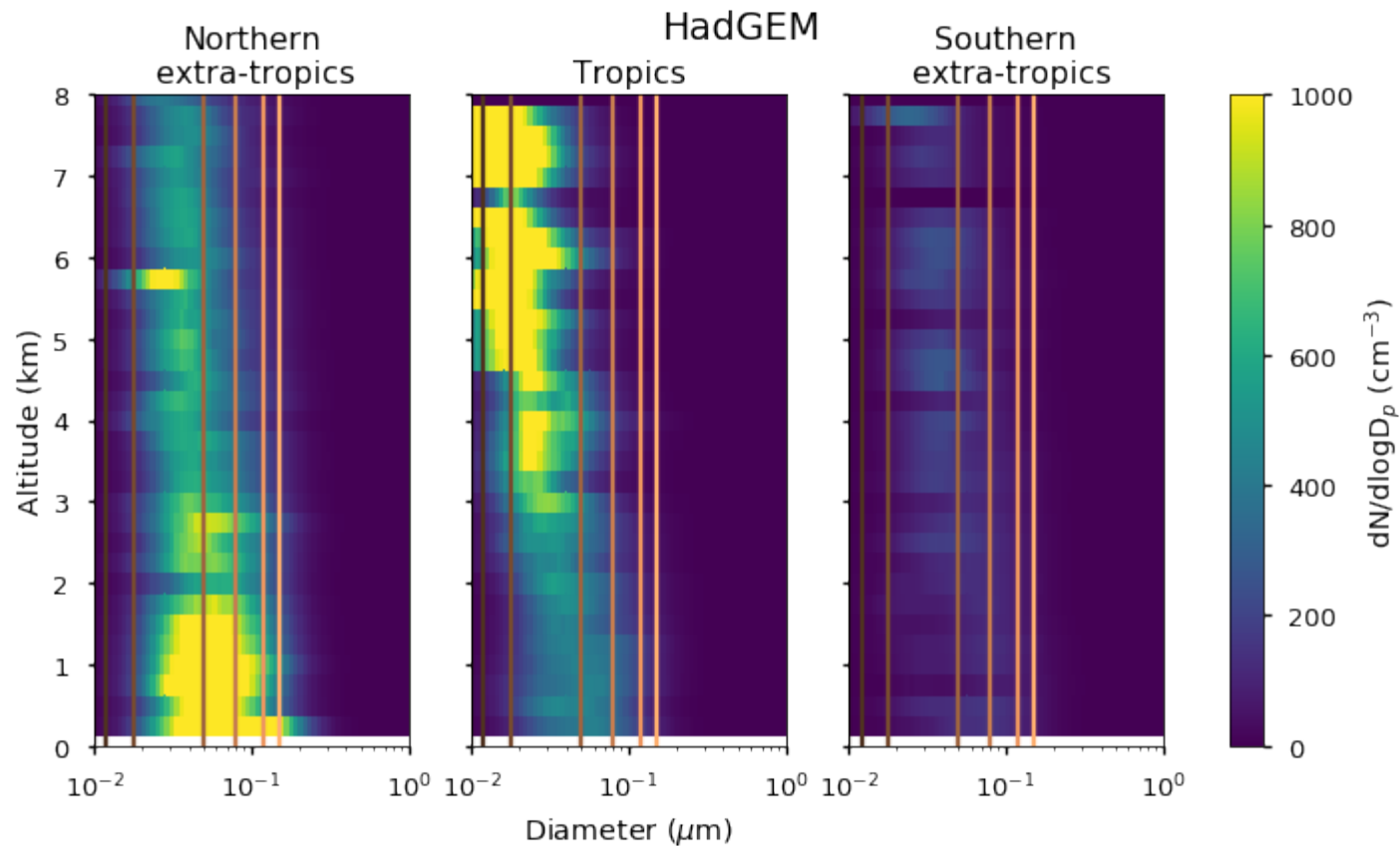
*D. Watson-Parris et al., Atmos. Chem. Phys. 2019*

# Example analysis: Vertical distribution

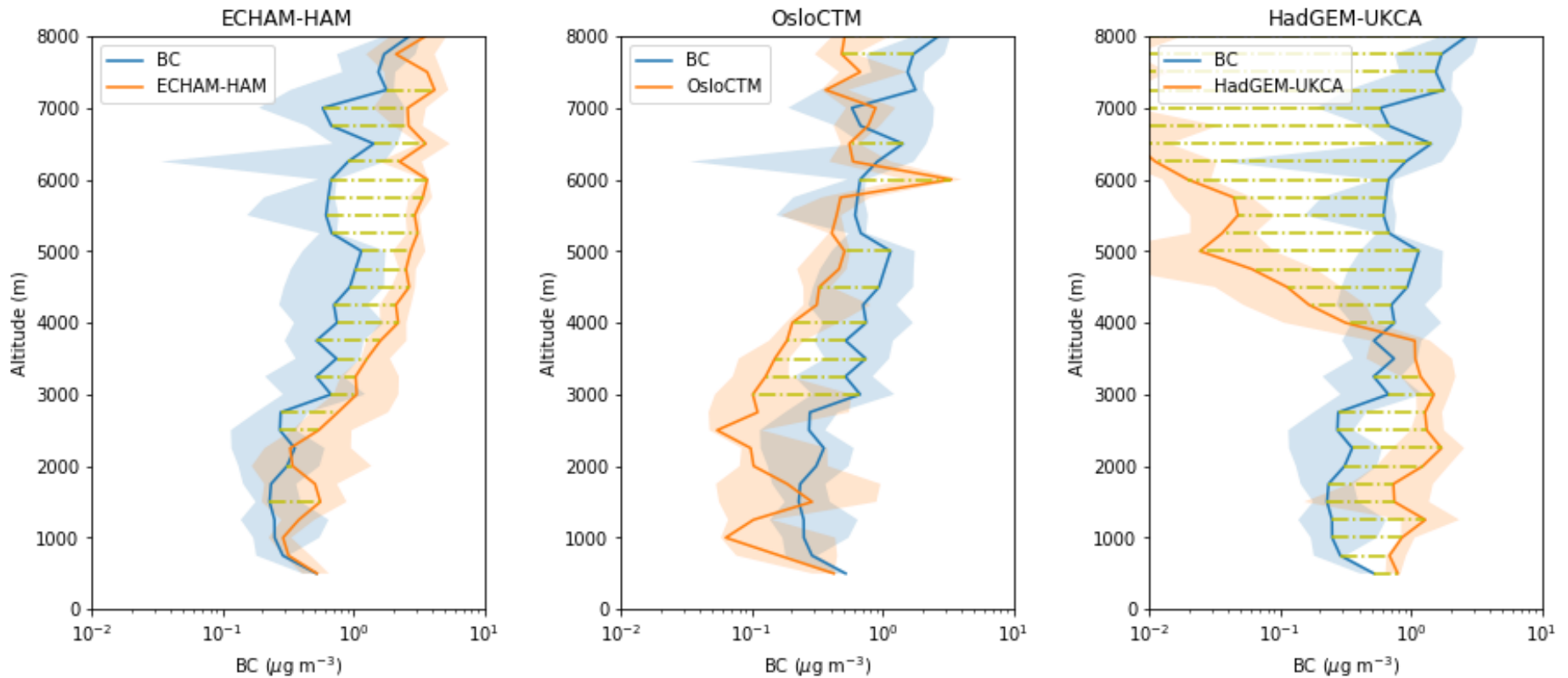


*D. Watson-Parris et al., Atmos. Chem. Phys. 2019*

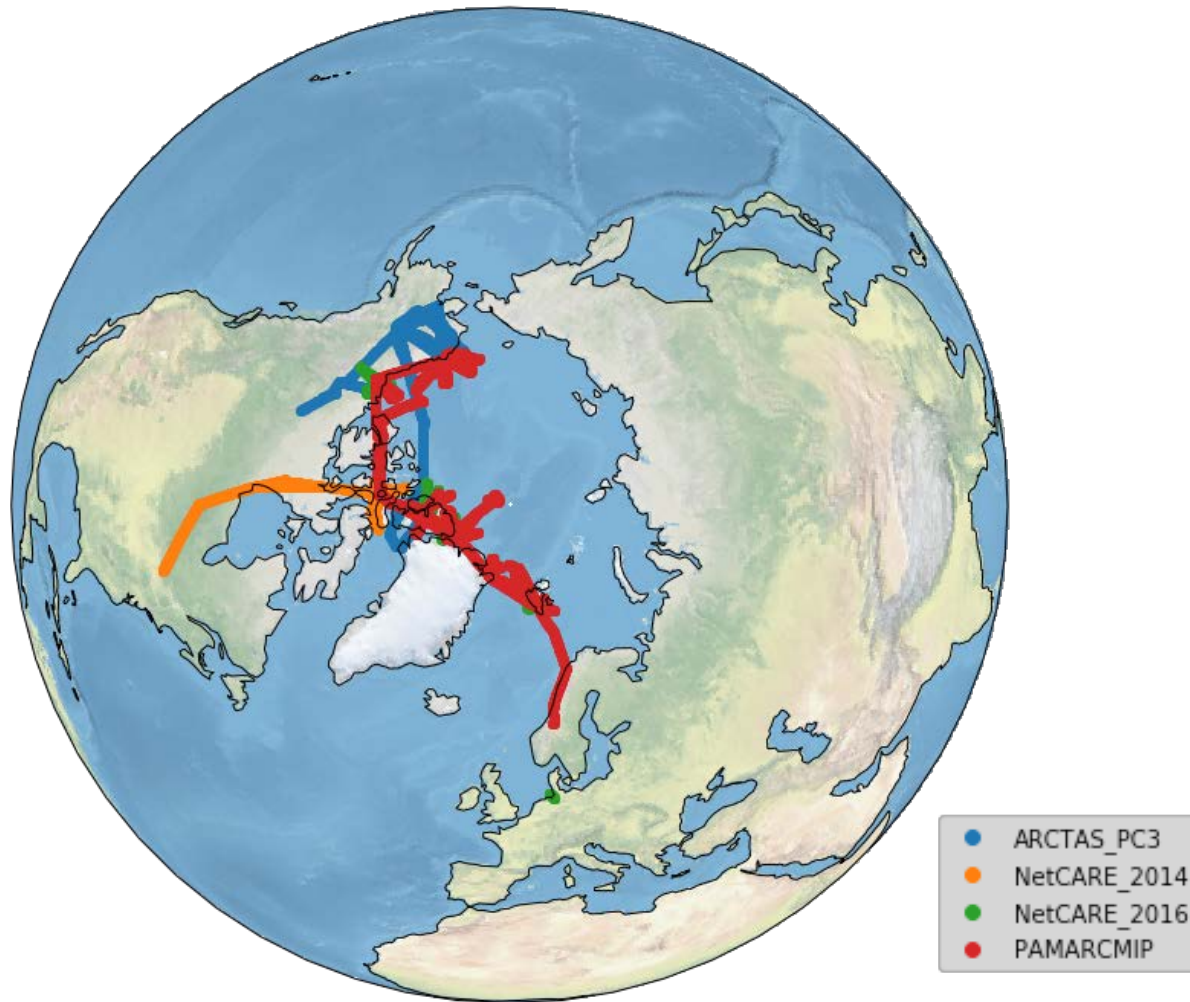
# Example analysis: Vertical distribution



# Example analysis: Biomass burning



# Example analysis: Arctic aerosol





# Summary

Watch

this

space!

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