

# A statistical approach to understanding uncertainty in aerosol effects on the climate

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- Want to produce a systematic framework to understand diversity in different models using statistical methods
- The contribution of microphysical uncertainties to model output uncertainty can be measured via a sensitivity analysis
- Perturb multiple parameters at the same time using statistical emulation so interactions can be seen
- Different outputs and different regions can be investigated using the same set of model runs
- Compare sensitive parameters between models – are the sensitivities the same, how are they treated between models?
- Are models more complex than necessary?

