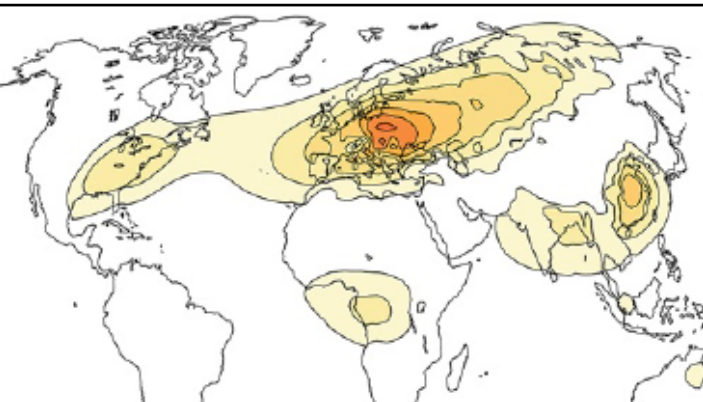


Response of atmosphere-ocean circulation to aerosol patterns of the 1970s and 2000s

Stephanie Fiedler¹ & Dian Putrasahan²

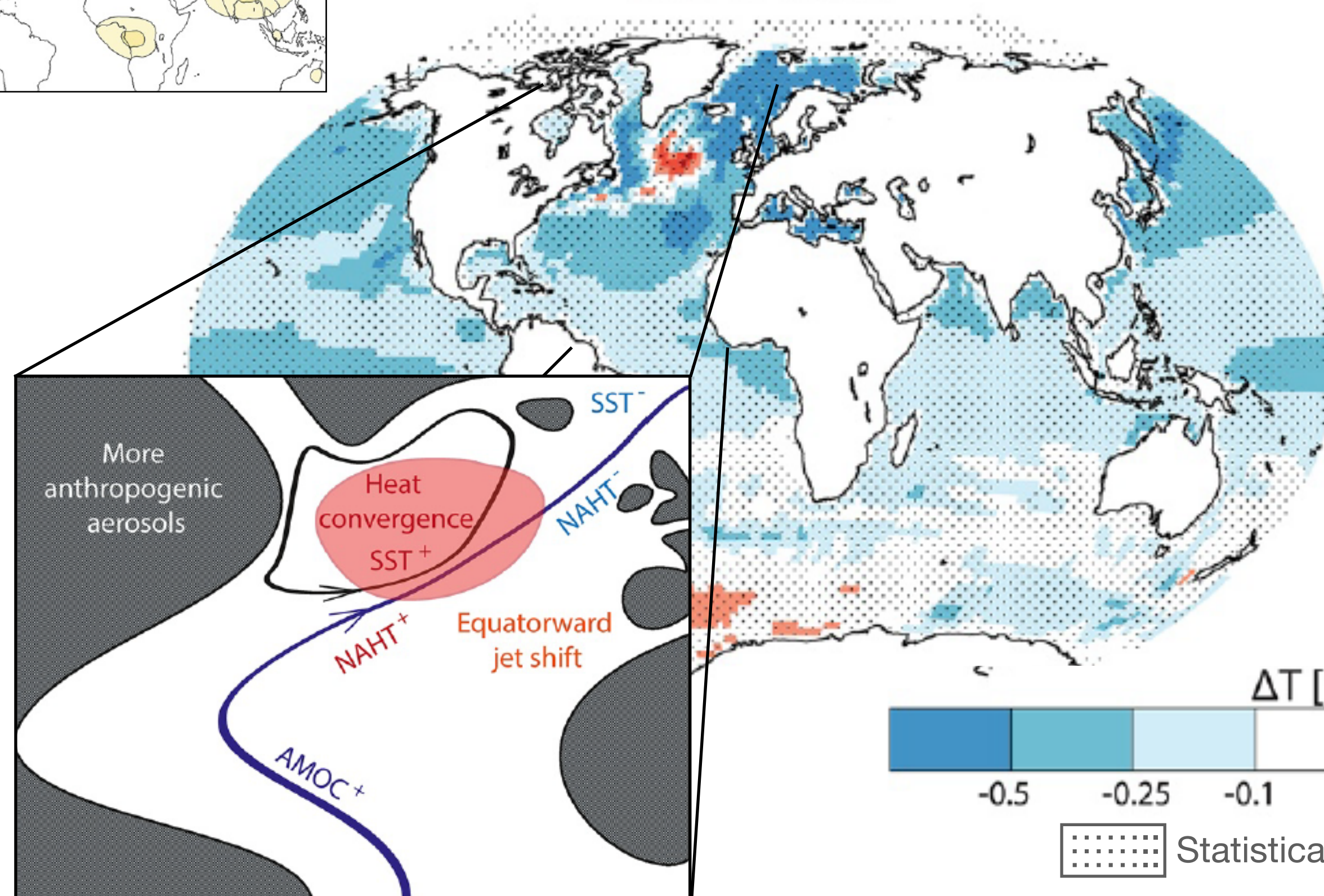
(1) University of Cologne, previously: Max-Planck-Institute for Meteorology, Germany, (2) Max-Planck-Institute for Meteorology, Germany

Aerosol pattern 1970s



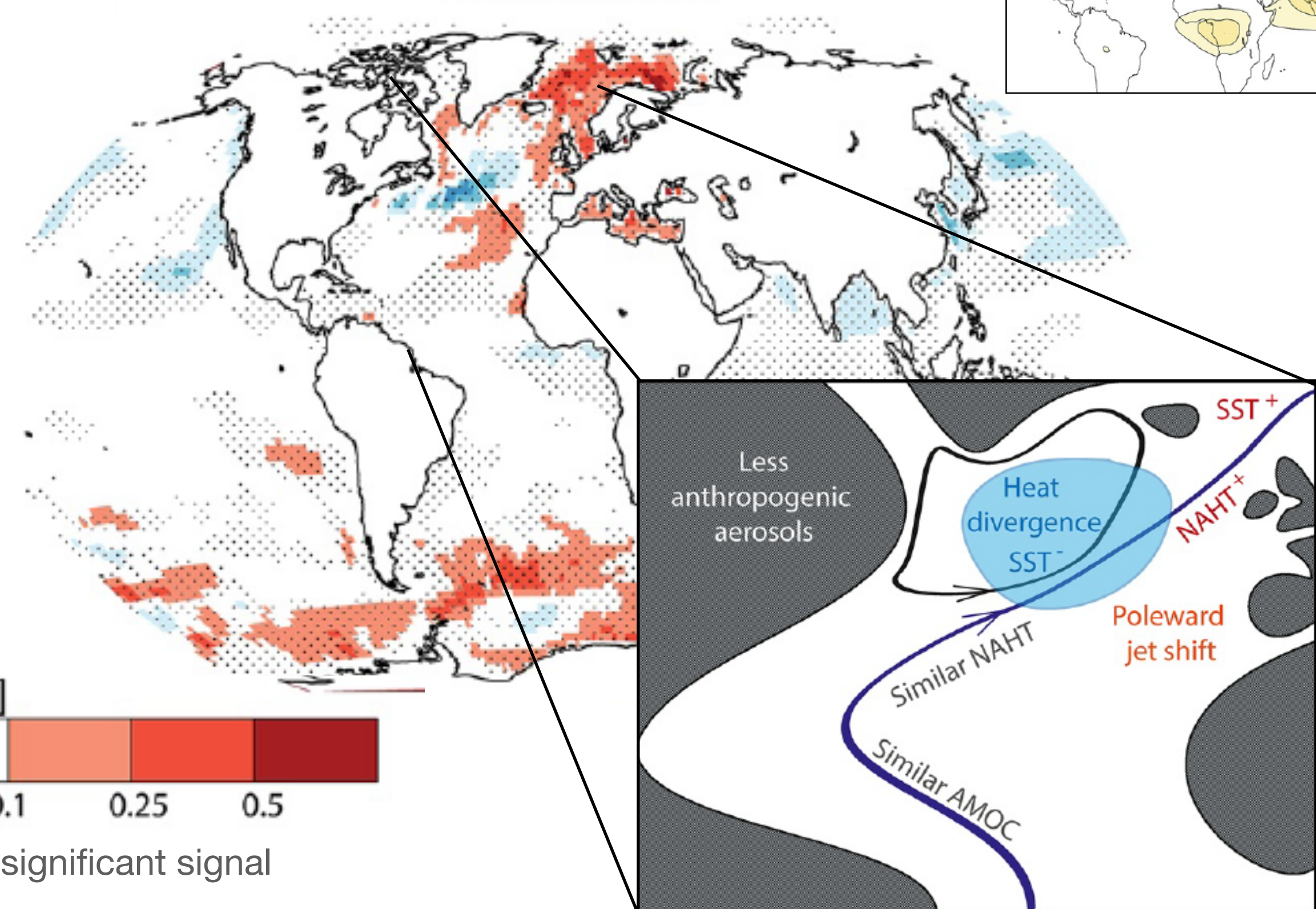
Effect of aerosol increase

1850 to 1970s

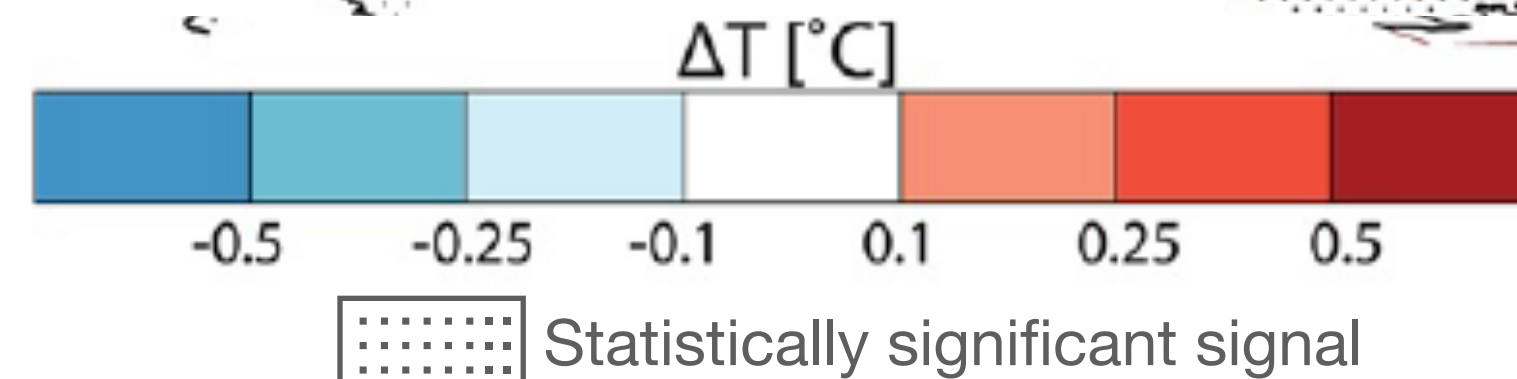
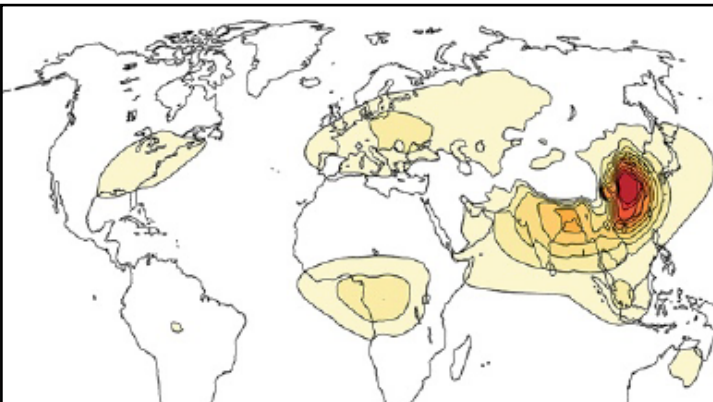


Effect of regional aerosol reduction

1970s to 2000s



Aerosol pattern 2000s



- Contribution of regional aerosol reduction since 1970s to Arctic amplification and warming hole.
- Sub-polar gyre plays important role in the response to aerosol changes through divergence in northward heat transport.

