
Reducing uncertainty on past, near-future and long-term warming

Aurélien Ribes*¹ and Said Qasmi²

¹Centre national de recherches météorologiques – Météo France, Centre National de la Recherche Scientifique : UMR3589 – 42 avenue Gaspard Coriolis, 31057 Toulouse, France

²CNRM – CNRS : UMR3589, Météo France – 42, Av. G. Coriolis, 31057 Toulouse, France

Abstract

I'll introduce a new statistical method to attribute historical long-term changes to specific forcings and constrain 21st century projections based on historical observations. This method provides a consistent picture of on-going changes, through merging model simulations and observations in a Bayesian fashion. One attractive feature of this approach is that it can provide assessment of recent warming rate and near-term changes, and therefore is relevant to assess the forced response at a decadal time-scale. I'll provide illustrations of how this method effectively constrains projected warming at the global and regional scales and will discuss strengths and weaknesses in a near-term warming perspective.

Keywords: attribution, projections, climate change, Kriging, observational constraint

*Speaker