



Communicating uncertainty in circulation aspects of climate change

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The usual way of representing uncertainty in climate change is to define a likelihood range of possible futures, conditioned on a particular pathway of greenhouse gas concentrations (RCPs). Typically these likelihood ranges are derived from multi-model ensembles. However, there is no obvious basis for treating such ensembles as probability distributions. Moreover, for aspects of climate related to atmospheric circulation, such an approach generally leads to large uncertainty and low confidence in projections. Yet this does not mean that the associated climate risks are small. We therefore need to develop suitable ways of communicating climate risk whilst acknowledging the uncertainties. This talk will outline an approach based on conditioning the purely thermodynamic aspects of climate change, concerning which there is comparatively high confidence, on circulation-related aspects, and treating the latter through non-probabilistic storylines.