Abstract

*"*Regional climate predictability from regional climate feedbacks*"*
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Uncertainty in the spatial pattern of future climate change is dominated by the divergent predictions among different climate models. Progress in constraining this uncertainty is predicated on understanding how the spatial patterns of different climate feedbacks aggregate to create the regional and global climate response. Firstly I'll review the basic principles of feedback analysis, and how feedbacks are calculated in models and observations. Secondly, I'll demonstrate that a simple physical model accounting for the transport of both latent and sensible heat is able to replicate the behavior of more comprehensive climate models, and offers a practical framework for understanding how uncertainty in regional climate feedbacks combine to yield the uncertainty in both the local and nonlocal climate response.