UKCP: Understanding uncertainty in future changes in precipitation extremes at convection-permitting scale

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Main findings

• Convection-permitting model ensemble projects an intensification above the Clausius-Clapeyron relation for extreme precipitation

• Climate change signal for extreme precipitation appears to converge in the CPM ensemble, with uncertainty dominated by natural variability

• The correct representation of convection may lead to reduced model uncertainties in future changes in extreme precipitation

Paper under review on GRL journal with the title: “Convection-permitting Models Offer Promise Of More Certain Extreme Rainfall Projections”