



Very high resolution climate modelling of extremes

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This study aims to gain a better understanding of extreme rainfall processes, and model deficiencies in the representation of these, across space and time scales. It links up Met Office expertise in forecasting extreme events on weather and climate change timescales.

Work with high resolution NWP models at the Met Office has shown significant improvements in the representation of extreme rainfall at convection permitting scales, with the representation of internal cloud dynamics essential for capturing the development and persistence of convective events such as Boscastle in 2004. However these processes are not well understood or resolved in current climate models, and it is uncertain how important their representation may be for predictions of future change.

Here we present results from a new very high resolution (1.5km) regional climate model, run for a limited area over the UK. The simulation of rainfall in the 1.5km model will be compared with lower resolution model versions, and implications for the reliability of model predictions of extreme rainfall change will be discussed.