



## **Ensemble prediction of intense summer rainfall in the UK**

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In the UK, the main flooding season is in summer and early autumn due to intense rainfall from deep convection. In recent years the cost of surface water flooding from such storms has become more widely recognised and a system of alerts has been introduced based on forecasts of extreme short-period rainfall accumulations. In 2012, the Met Office implemented a 2.2km grid length, convection-permitting ensemble to generate short-range probability forecasts for the UK, initially in support of the London Olympic and Paralympic Games. One aim of the new ensemble was to improve the forecast guidance on intense rainfall. In support of this, map products were generated of the probability of rain rates exceeding 16mm/hr during the day and during each hour. An unusually large number of storms produced surface water floods in summer 2012, providing the opportunity to undertake a first subjective evaluation of the skill of the ensemble products and their potential value as predictors of surface water flooding. I will present an overview of the results, illustrated with some cases of particular interest.