



## **Characterisation of Convective Regimes over the British Isles**

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Convection-permitting modelling has led to a step change in forecasting convective events. However, convection occurs within different regimes which exhibit different forecast behaviour. A convective adjustment timescale can be used to distinguish between these regimes and examine their associated predictability. The convective adjustment timescale is examined for three summers in the British Isles to determine characteristics of the convective regimes for this maritime region. Convection in the British Isles is predominantly in convective quasi-equilibrium with 85% of convection occurring in this regime. This percentage varies spatially with more non-equilibrium events occurring in the south and southwest. The non-equilibrium regime occurs more frequently when windspeeds are between 5 and 15 ms<sup>-1</sup> and from the southerly to westerly sectors. The convective adjustment timescale is longest when the location being examined is downstream of large orographic gradients; and decreases with distance from the convective initiation region. Most non-equilibrium convective events in the British Isles are initiated near large coastal orographic gradients or on the European continent. The dominance of convective quasi-equilibrium conditions over the British Isles argues for the use of large-member ensembles in probabilistic forecasts for this region.