



## **Climatology of Banded Convection over the United Kingdom**

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Stationary precipitation bands by their very nature have the potential to cause large amounts of precipitation due to their persistence over a given location, especially when associated with high precipitation rates. However, due to the subjectivity of determining whether precipitation is banded or not as well as the subjectivity in determining stationary of the precipitating system, a climatology of these events across the United Kingdom does not exist. This makes it difficult to determine the contribution from banded convection to annual precipitation as well as preferential locations of banded precipitation development. This study is the first step in order to document quasis-stationary banded precipitation, using the United Kingdom as an initial testbed for algorithm development. Metrics of frequency of convection, stationarity of convection, and shape detection algorithms are applied to UK MetOffice NIMROD radar composites of precipitation rate from 2004 through 2012 in order to improve automated detection of stationary bands. Results from these automated analyses will be used in the future to diagnose banded leeward orographic convection events and the meteorological conditions that promote their developments. Initial results from analysis of the year 2011 indicate that on average 20% of precipitation can be considered banded, with the primary areas of occurrence over the United Kingdom being in areas of high topographic variation.