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Mesoscale challenges in forecasting the weather and climate of Bergen

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Mesoscale challenges in forecasting the weather and climate of Bergen. The weather in the Greater Bergen Area has been observed with high temporal resolution by a dense network of 40 weather stations for several years. Data from the Bergen School of Meteorology mesonet has been explored to assess elements that can be identified as principal challenges in forecasting of individual events as well as local climatological features. This includes thermally driven flows, cold pools and orographically triggered convection. The events are discussed in view of the capabilities of the state-of-the art tools for numerical weather prediction.