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Title: Extended range predictions of heat waves

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Abstract:

This study assess the ECMWF extended range forecasts' s performance in predicting heat waves. It is well known that the extended-range predictability of temperature extremes is associated with the predictability of large scale flow regimes and soil moisture feedbacks.

The analysis make use of an heat wave index that describes spatially coherent patterns of temperature anomalies persisting for a number of days. Objective verification of probability forecasts requires a far larger sample that is available (typically the case for any investigation of extreme events). Therefore the cases were investigated individually. It is difficult to draw any firm conclusions from the limited sample available. However, the skill in predicting heat waves at the extended range seems to be limited by the ability of the forecast model to represent transitions to anticyclonic circulation regimes.

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