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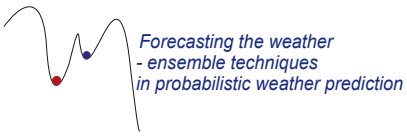

Temperature and precipitation extremes over Spain for the 21st century

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The knowledge about frequency and severity of climatic extreme events are of the uttermost importance for the adaptation to climate variability and change in many sectors sensitive to climate conditions. This contribution is focused on trends of temperature and precipitation extremes over Spain for the 21st century. Particular emphasis has been put on the estimation of uncertainties coming from a variety of sources (emissions scenarios, global model simulations and downscaling methods). The ENSEMBLES project have generated a dataset of downscaled climate projections with 25 km resolution based on a collection of regional climate model integrations forced with different global models. We have made use of this dataset to explore changes in some standard extreme indices for 21st century including indication of uncertainties. Results are regionally analyzed by annual and seasonal averaging. With respect to temperature, results show quantitatively an increase of the number of warm nights, warm days, longer heat waves and a decrease of the number of frost days. With respect to precipitation, results show longer dry spells, fewer precipitation days with higher intensity.