



Supplement of

Improving precipitation interpolation using anisotropic variograms derived from convection-permitting regional climate model simulations

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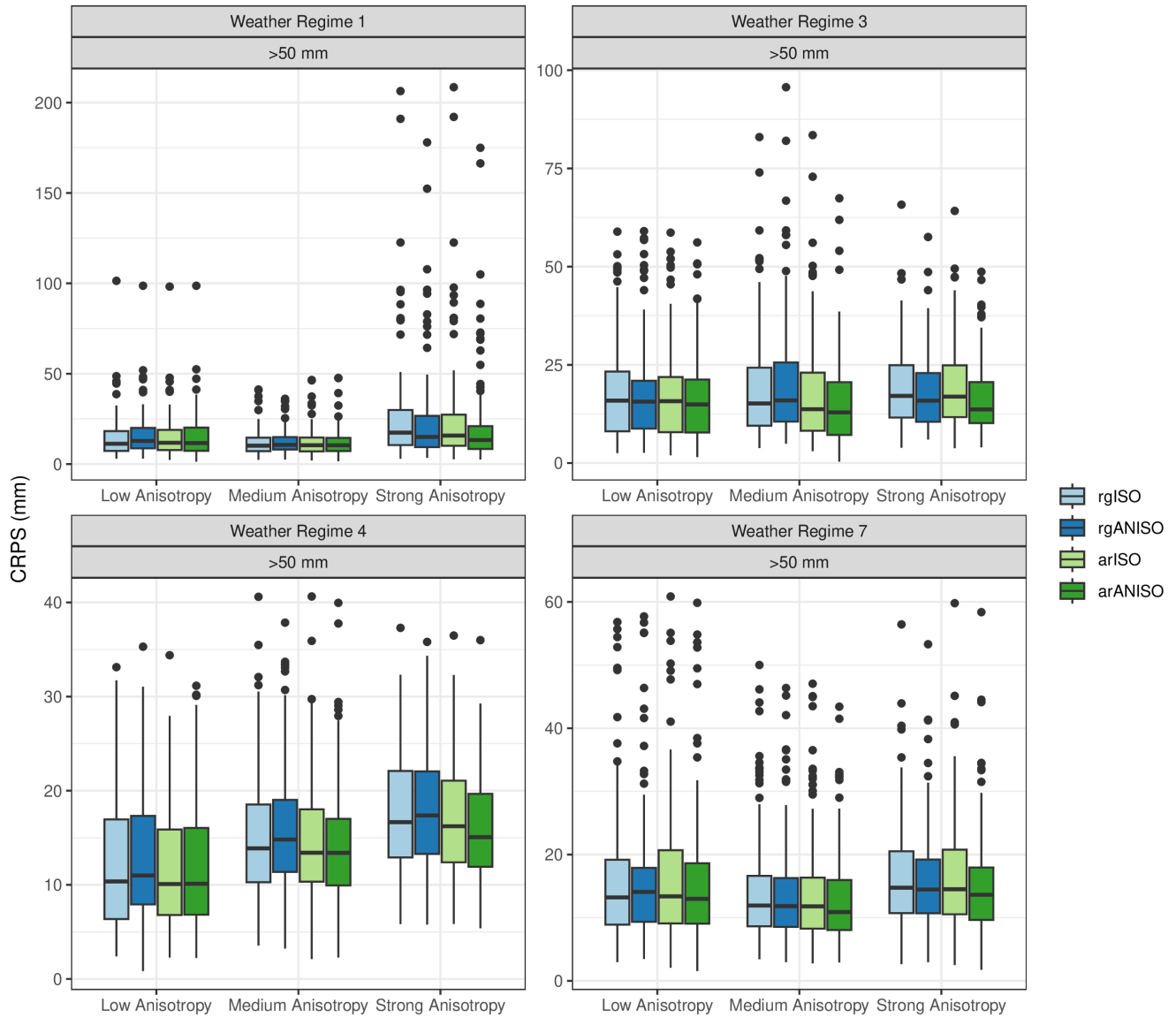


Figure S1. Distribution of cross-validation CRPS scores for stochastic models (rgISO, rgANISO, arISO, arANISO). 1 mean value of CRPS is obtained for each station within the Cevennes region for the days with more than 50 mm. Lower CRPS values indicate better spatial interpolation. The distributions of CRPS scores are plotted for low estimated anisotropy ratio ($0.75 \leq \eta \leq 1$, left), medium estimated anisotropy ratio ($0.5 \leq \eta \leq 0.75$, center), strong estimated anisotropy ratio ($0 \leq \eta \leq 0.5$, right), and for different weather regimes (1,3,4,7). The weather regimes number refers to (Garavaglia et al., 2010).

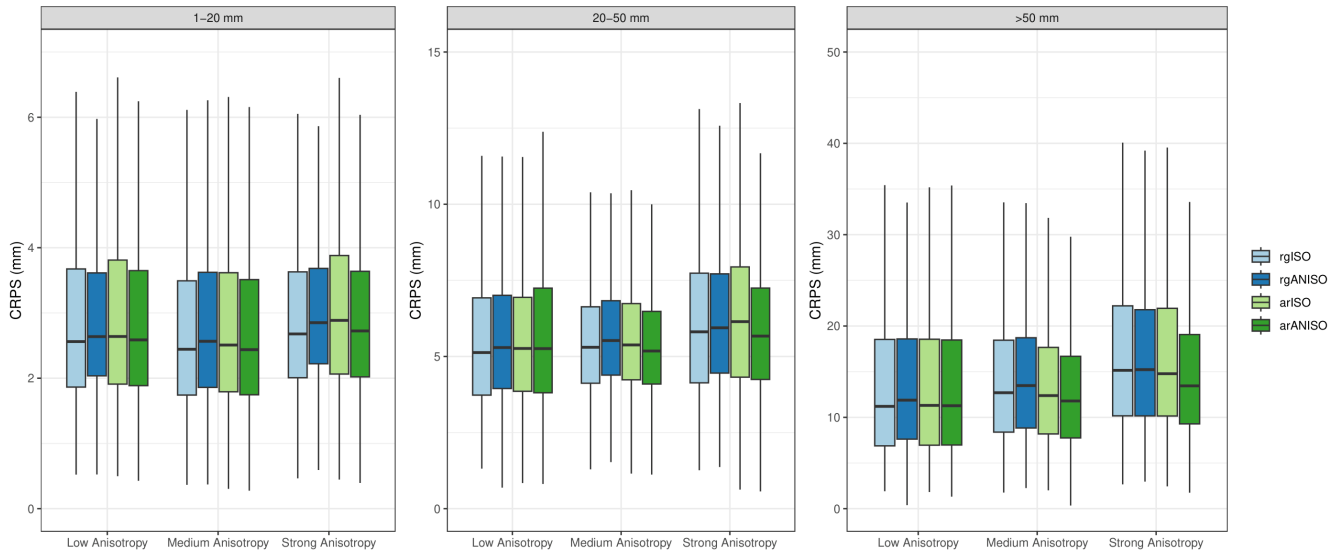


Figure S2. Distribution of cross-validation CRPS scores for stochastic models (rgISO, rgANISO, arISO, arANISO). 1 mean value of CRPS is obtained for each station within the Cevennes region for the days with more than 50 mm. Lower CRPS values indicate better spatial interpolation. The distributions of CRPS scores are plotted for low estimated anisotropy ratio ($0.75 \leq \eta \leq 1$, left), medium estimated anisotropy ratio ($0.5 \leq \eta \leq 0.75$, center), and strong estimated anisotropy ratio ($0 \leq \eta \leq 0.5$, right). CRPS are plotted per precipitation intensity class (1-20 mm, 20-50 mm, > 50 mm).

References

Garavaglia, F., Gailhard, J., Paquet, E., Lang, M., Garçon, R., and Bernardara, P.: Introducing a rainfall compound distribution model based on weather patterns sub-sampling, *Hydrology and Earth System Sciences*, 14, 951–964, <https://doi.org/10.5194/hess-14-951-2010>, 2010.