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*Supplement of*

## **Estimating radar precipitation in cold climates: the role of air temperature within a non-parametric framework**

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Supplementary Material

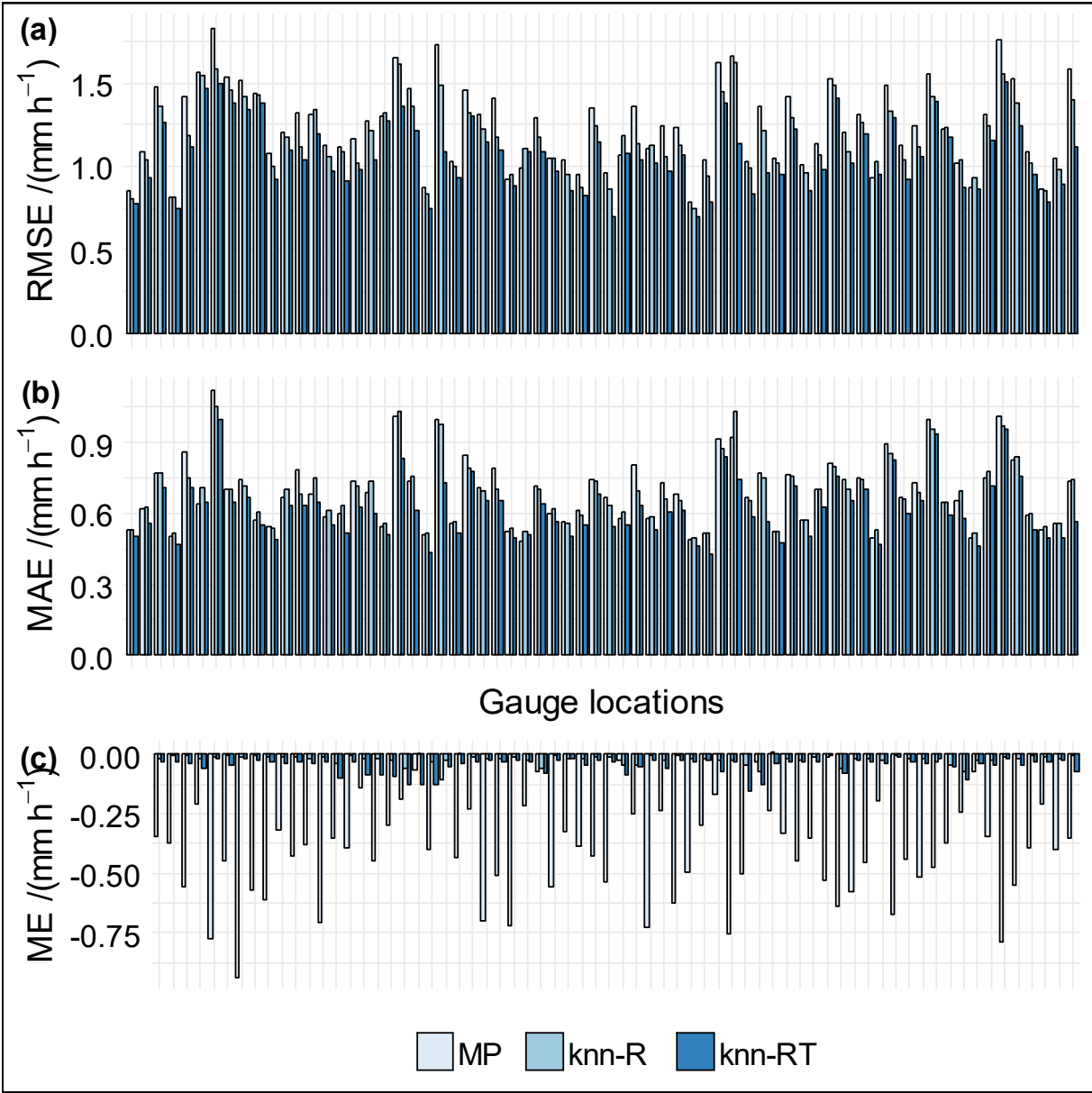


Figure S1. Bar plot representing three quality metrics (RMSE, MAE and ME) estimated at gauge locations for the original data (MP) and for the two nonparametric models (knn-R and knn-RT). Here, knn-R denotes the nonparametric model with radar precipitation rate as a single predictor, while knn-RT denotes the nonparametric model with radar precipitation rate and air temperature as two predictors with fixed partial weight of (0.68, 0.32).

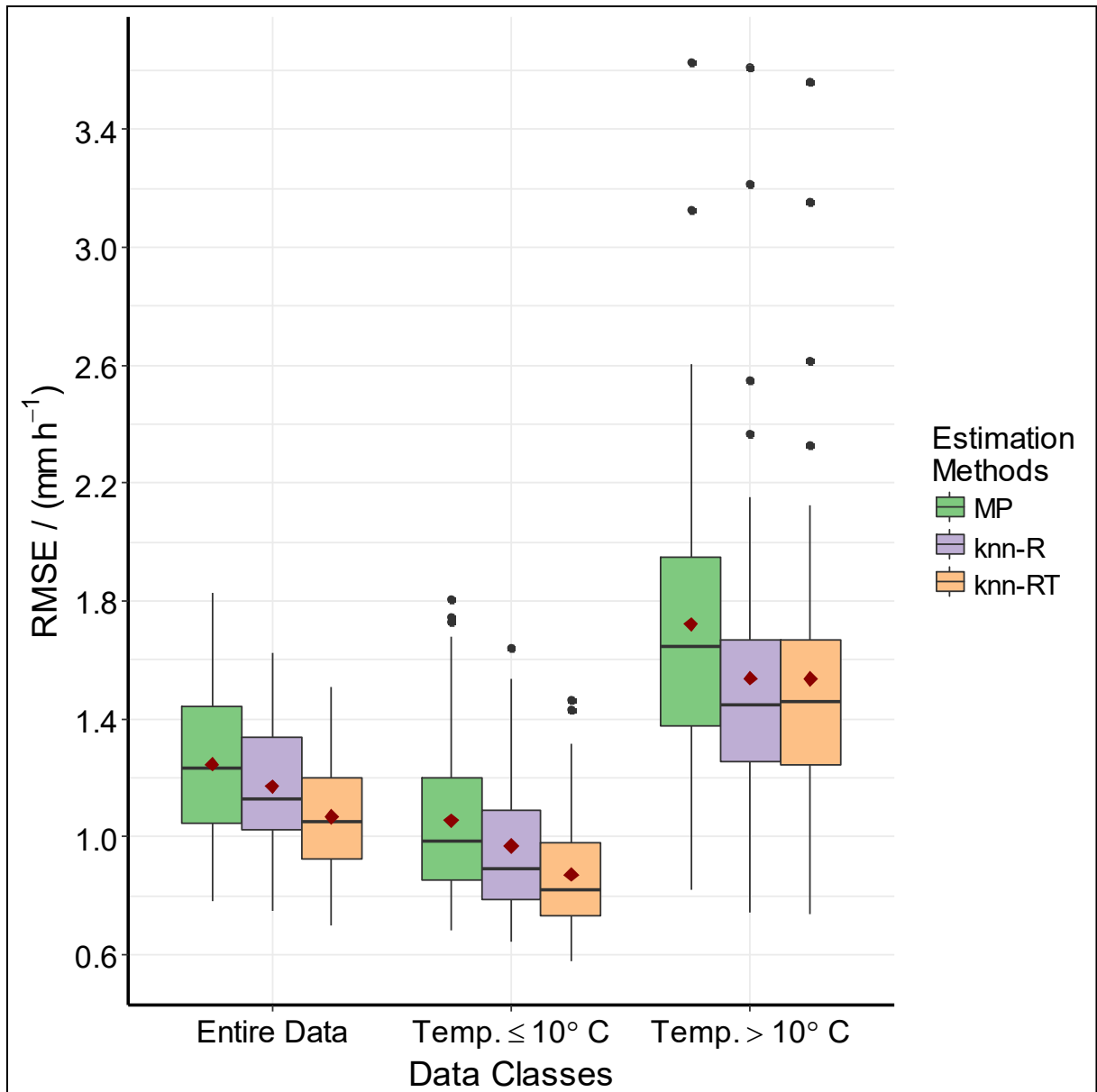


Figure S2. Box plot of RMSE ( $\text{mm h}^{-1}$ ) values estimated at gauge locations for the original data (MP) and the two nonparametric models (knn-R and knn-RT) using the entire data and the datasets with temperatures colder than or equal  $10^\circ \text{C}$  and warmer than  $10^\circ \text{C}$ . Mean value of RMSE for each model by red diamond point. Here, knn-R - nonparametric model with radar precipitation rate as single predictor and knn-RT - nonparametric model with radar precipitation rate and air temperature as two predictors with the partial weight of (0.68, 0.32). The values outside  $1.5 * \text{IQR}$  are represented by the whiskers.