

n = number of glaciers

Site-independent model

for g in {1;...;n}:

Training, validation and hyperparameters tuning with all glaciers except glacier g:

Hyperparameters tuning with grid search:

10-fold cross-validation:

for i in {1;...;10}:

Training with all glaciers except group (fold) i



Validation on group i:

$$MSE_{\text{fold},i} = \text{mse}(F_{\text{fold},i,\text{ref}}, F_{\text{fold},i,\text{pred}})$$

$$MSE_{\text{validation}} = \text{mean}(MSE_{\text{fold},1}; \dots; MSE_{\text{fold},10})$$



Selection of the hyperparameters with minimum $MSE_{\text{validation}}$



Training with the selected hyperparameters and all glaciers except glacier g



Test on glacier g:

$$MSE_g = \text{mse}(F_{g,\text{ref}}, F_{g,\text{pred}})$$