

Hourly meteorological input

$LWin, SWin, T, RH, p, prec, wind$

Two glaciers, three summers

Calculating cloud cover from measured short wave and tune radiation modules

Model forcing data

$Clouds (n), T, RH, p, prec, wind$

Two glaciers, three summers

22 model free
parameters

7 stakes

18 stakes

Global sensitivity analysis

Parameter sensitivity
fixes insensitive parameters for optimization

Multi objective optimization

Three objectives: MADtop, MADlow and bias

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Parameters

Pareto optimal
set

Compromise
solution

Pareto optimal
set

Model sensitivity through
space and time

Transferability in
space & time
*Modeling uncertainty,
parameter variation*

Energy balance
components and
parameter uncertainty