

Supplementary info for:

"The periglacial Engine of Mountain Erosion. I. Rates of Frost cracking and Frost creep."

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Supplementary info folder contains the following files:

int_frost_10.c
makeT.m
Temp.input
showresults.m
periglacial_input.mat
periglacial_input_snow_mat

Description:

int_frost_10.c

Computes frost cracking and frost creep as a function of mean annual temperature (MAT) and sediment thickness (S).

The function requires two input parameters and an input-file:

Input 1: Model number (modnr) – will be written in name of output-file

Input 2: Annual temperature oscillation amplitude (dT_a)

The value used in manuscript = 8 degrees celcius

Input-file: Temp.input

The function creates an output file in the following format: frost_res_modnr.dat

makeT.m

This matlab function generates daily temperature variations throughout a year and saves to Temp.input file that can be used with int_frost_10.c

Temp.input

File including daily temperature variations throughout a year.

showresults.m

This matlab-file reads output generated by int_frost_10.c, displays the results and saves to mat-format for later use.

periglacial_input.mat

This is the data used to generate the standard frost cracking and frost creep contour plots.

periglacial_input_snow_mat

This is the data used to generate the frost cracking and frost creep contour plots with dampened daily oscillations in the winter-period.