

## Scripts and Figures

### MODIS data download

To optimize the download process, we used the script “order\_MWS.pl”, available from:

<https://ladsweb.modaps.eosdis.nasa.gov/tools-and-services/>.

Script N°1: Comparative spectral fusion methods.

Script N°2: Quality Index for comparative spectral fusion.

Script N°3: Batch process with spectral fusion for an operative implementation.

Script N°4: Batch process for snow detection, cloud correction, and albedo.

Script N°5: Spatio-temporal snow cover reconstruction.

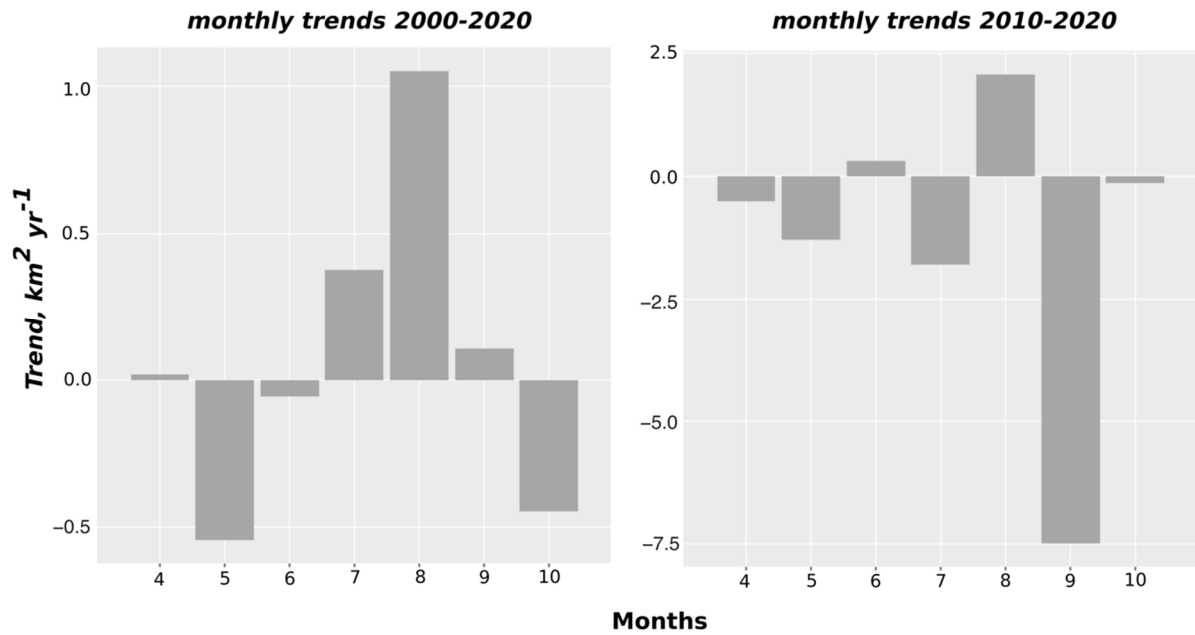


Figure S1. Monthly trend of snow cover area in the Brunswick Peninsula.

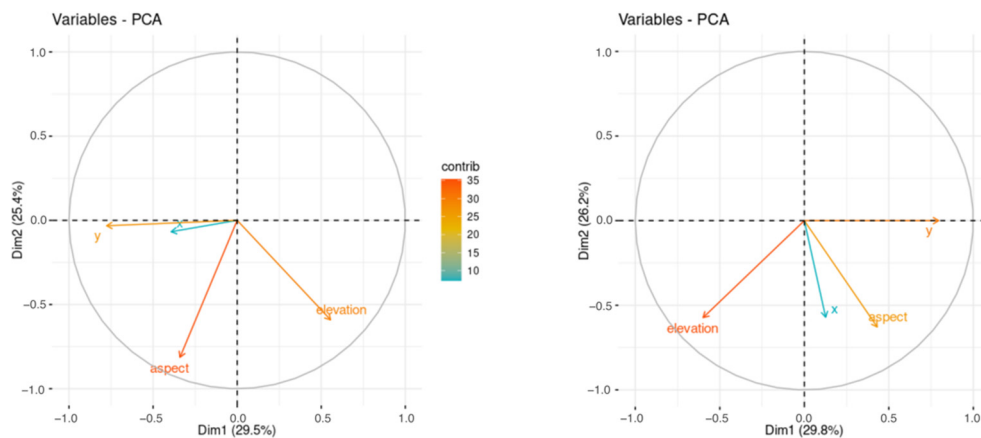
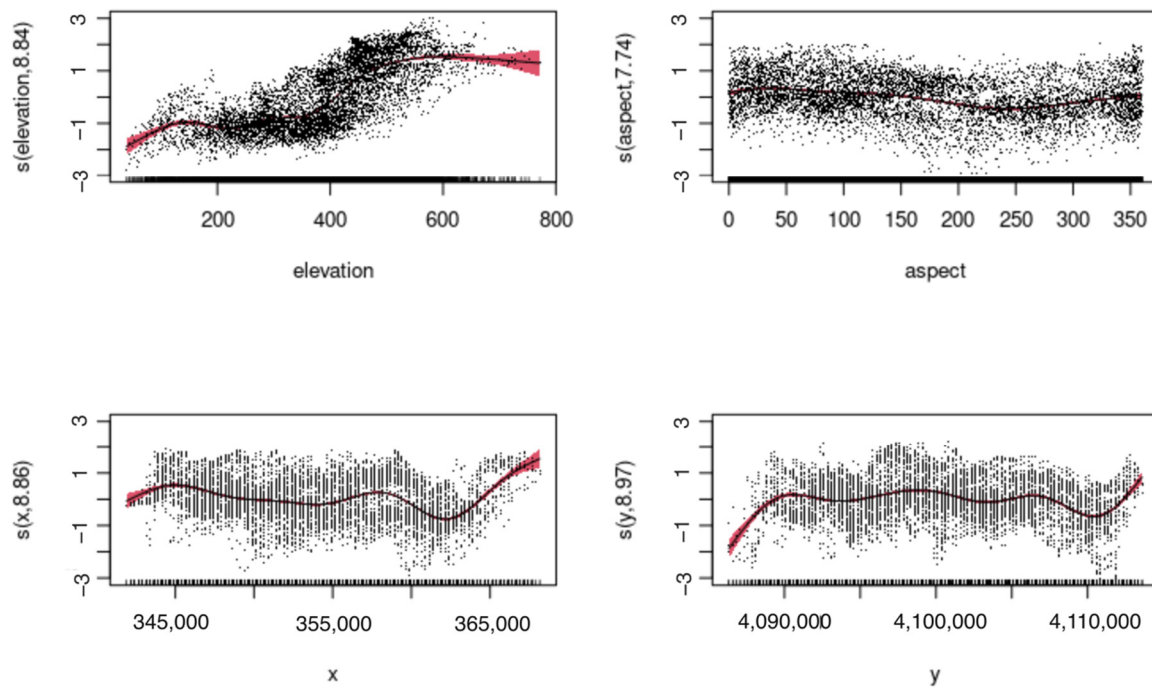
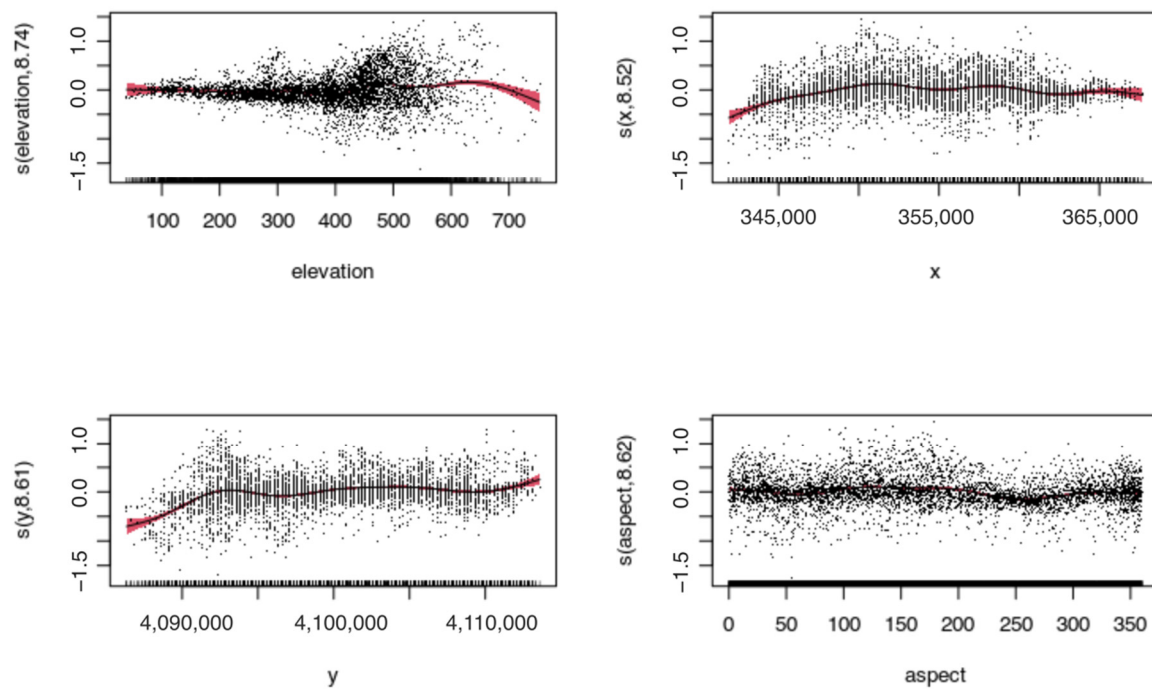


Figure S2. PCA of snow-days average and trend.



**Figure S3.** Generalized additive models to  $\text{Mod\_av}$ .



**Figure S4.** Generalized additive models to  $\text{Mod\_trend}$ .