



## Supplement of

## Firn data compilation reveals widespread decrease of firn air content in western Greenland

Baptiste Vandecrux et al.

Correspondence to: Baptiste Vandecrux (bava@byg.dtu.dk)

The copyright of individual parts of the supplement might differ from the CC BY 4.0 License.



Figure S1. Extrapolation of FAC to 10 m using the lower section of the existing 10 m long FAC profile that has the lowest Root Mean Squared Difference with the shallow FAC profile.



Figure S1. Extrapolation of FAC to 10 m using the lower section of the existing 10 m long FAC profile that has the lowest Root Mean Squared Difference with the shallow FAC profile.



Figure S1. Extrapolation of FAC to 10 m using the lower section of the existing 10 m long FAC profile that has the lowest Root Mean Squared Difference with the shallow FAC profile.



Figure S2. Standard deviation of  $FAC_{10}$  measurements located within 1 km. Dashed line indicate 0.3 m<sup>3</sup> m<sup>-2</sup>, value used to describe the uncertainty applying on any  $FAC_{10}$  measurement.



Figure S3. Selection of remotely sensed firm line locations in the HAPA to be used as FAC<sub>10</sub> observations. a) Remotely sensed firm line locations in the temperature-accumulation space  $(\overline{T_a}, \overline{c})$ . b) Locations selected from the remotely sensed firm line.



Figure S4. Difference between the FAC<sub>10</sub> maps obtained using  $\overline{\dot{c}}$  and  $\overline{T_a}$  from Box (2013) and Box et al. (2013) and the maps obtained using  $\overline{\dot{c}}$  and  $\overline{T_a}$  from MAR (Fettweis et al. 2017).