Supplement of **"Doomed descent? How fast sulphate signals diffuse in the EPICA Dome C ice column" by Felix S. L. Ng et al.**

Contents: Figures S1, S2, and S3

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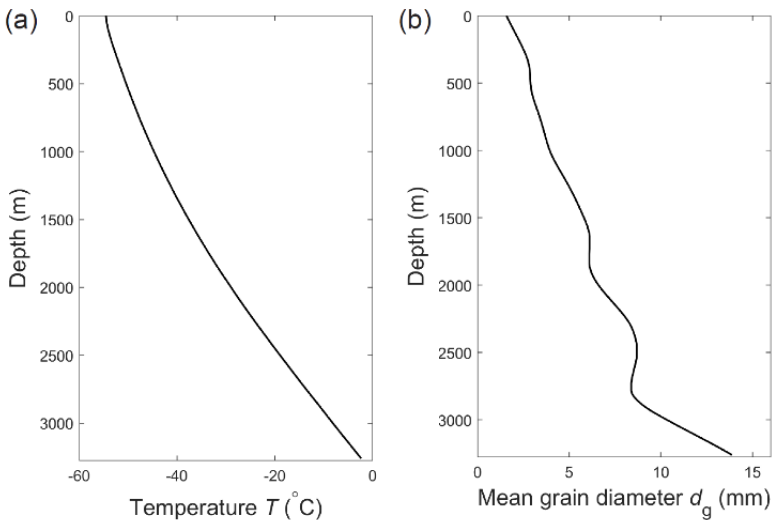
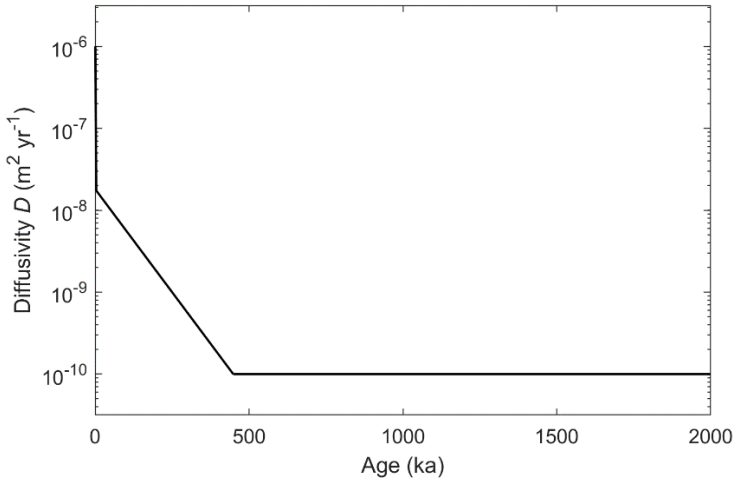


Figure S1. Measured profiles of (a) temperature and (b) mean grain diameter (smoothed version of the data from Durand et al. (2006)) at the EPICA Dome C core site.

10   Figure S2. Assumed diffusivity profile $D(t)$ used to estimate the sulphate diffusion lengths at the BE-OI and MYIC core sites.

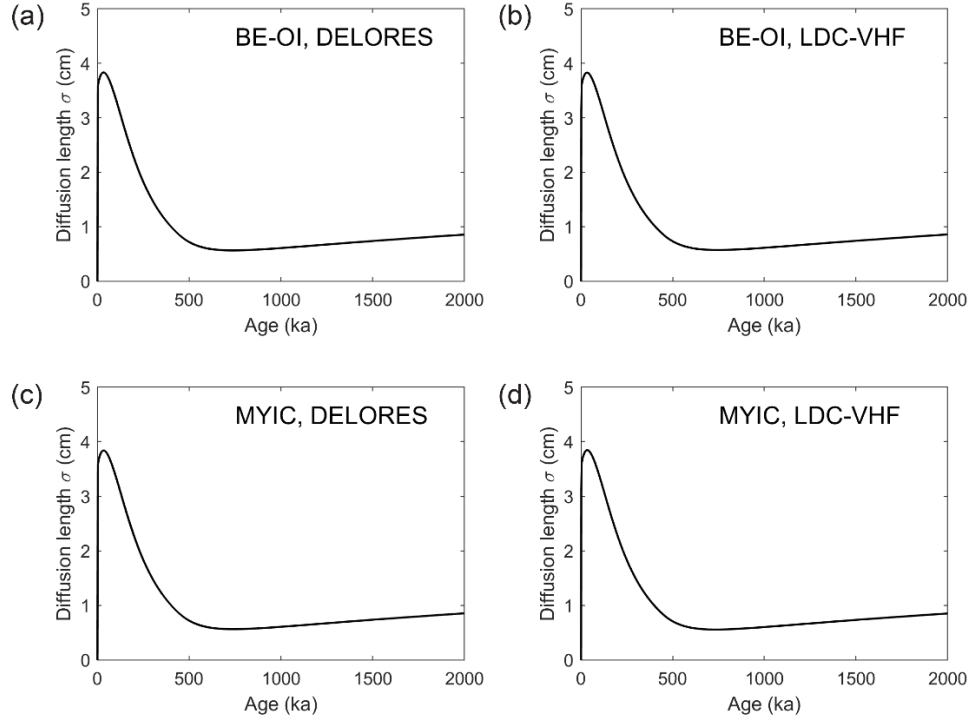



Figure S3. Sulphate diffusion length at the (a, b) BE-OI and (c, d) MYIC core sites at Little Dome C in Antarctica, estimated from Eq. (24) with the diffusivity profile in Fig. S2 and the thinning factor S derived from the modelled age–depth profiles of Chung et al. (2023); see their Table 5 for more information. DELORES and LDC-VHF refer to the two different radar datasets used in their study to constrain the age–depth profiles.