Atmospheric
Chemistry
and Physics

Supplement of

Ship-based estimates of momentum transfer coefficient over sea ice and recommendations for its parameterization

Piyush Srivastava et al.

Correspondence to: Piyush Srivastava (p.srivastava@leeds.ac.uk)

Supplementary material

Figure S1 shows the best fits of the L2015 parameterization to the individual data sets for ACSE and AO2016 (black lines) along with the best fit to the joint data set, as derived in the main paper (P2021-L2015, red line). L2015 provides an excellent fit to both individual data sets, passing close the median observed values at all ice fractions, and differs little in either case from the fit to the joint data sets.
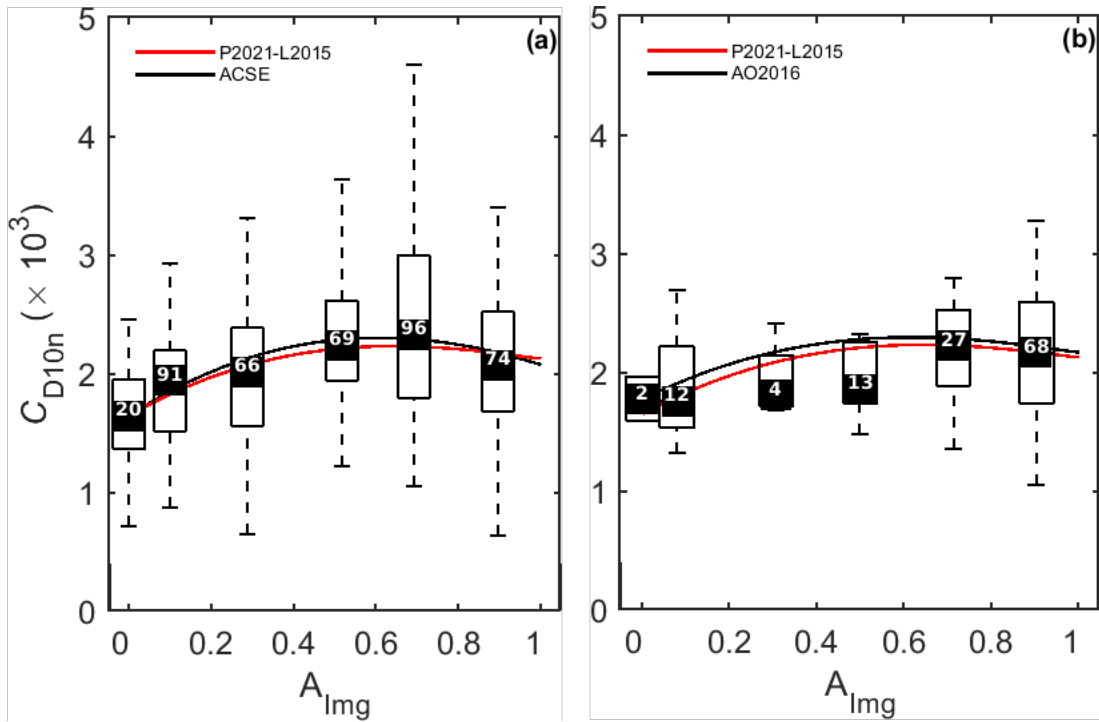
Figure S1. C_{D10n} as a function of A_{Img} for the (a) ACSE (n = 416) and (b) AO2016 (n = 126) datasets. In each panel, the proposed parameterizations (black lines) are presented with the L2015 form anchored at the values of C_{D10nw} ($A_{Img} = 0$) and C_{D10ni} ($A_{Img} > 0.8$) from the data shown in the respective panels with coefficients β and c_e shown in Table 1, while the red line shows the fit to the joint dataset as in Figure 8 (P2021-L2015).