Supplement of

Atmospheric impacts of chlorinated very short-lived substances over the recent past – Part 1: Stratospheric chlorine budget and the role of transport

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**Figure S1.** Surface volume mixing ratios [ppt] of (a) CH$_2$Cl$_2$, (b) CHCl$_3$, (c) C$_2$Cl$_4$, and (d) C$_2$H$_4$Cl$_2$ as a function of time and latitude simulated in the ensemble mean VSLS.
Figure S2. Comparison of the time evolution of the monthly mean 30°S-30°N SSTs datasets imposed in the simulations. Black shows the CMIP6-recommended dataset (Durack and Taylor, 2016), red shows the dataset from Reynolds and Smith (1994).
Figure S3. Shading: 2010-2018 difference [ppt] in the (a) HCl, (b) ClONO₂, (c) COCl₂, and (d) ClO response between ΔSD-5 and ΔFR. Contours show the corresponding ΔSD-5 responses.
Fig. S4. Shading: 2010-2018 difference [ppt] in the (a) HCl, (b) ClONO₂, (c) COCl₂, and (d) ClO response between ΔSD-I and ΔFR. Contours show the corresponding ΔSD-I responses.
Figure S5. As in Fig. 10 of the main paper but for linear trends in deseasonalised AoA [day/10yrs].
Figure S6. As in Fig. 11 of the main manuscript but for linear trends in COCl$_2$ mixing ratios [ppt/10yrs].
Figure S7. As in Fig. 9 of the main paper but for COCl$_2$ trends.