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The interhemispheric gradient of SF_6 in the upper troposphere

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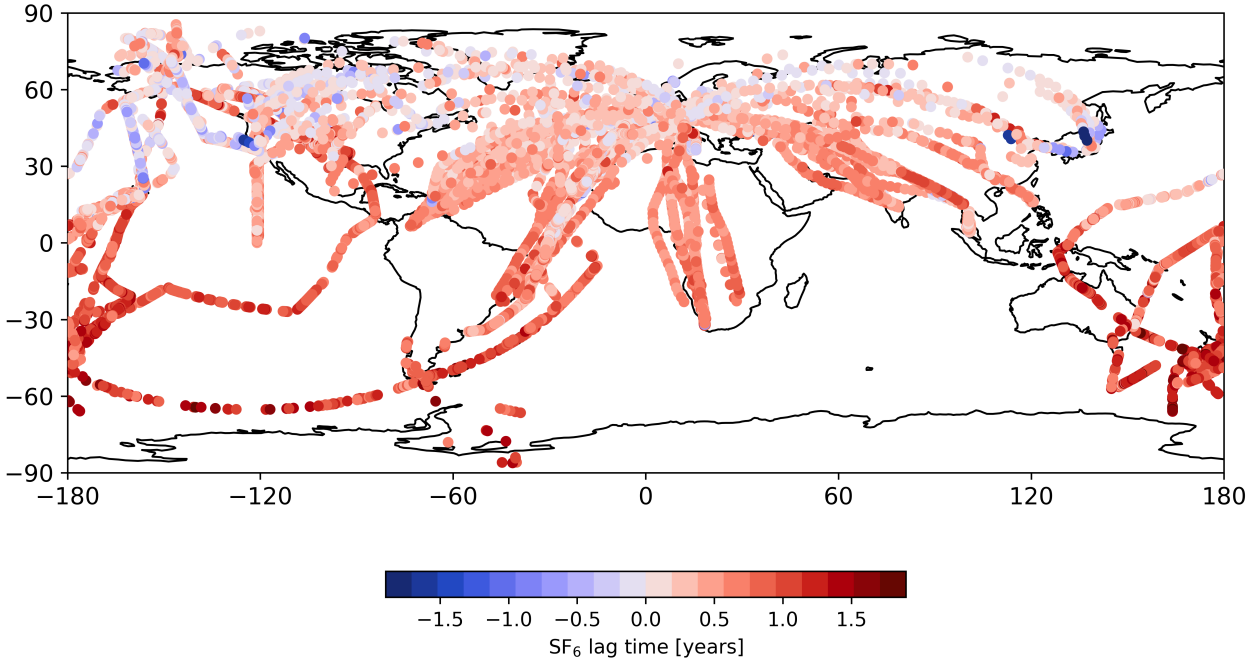

Figure S1. Map of all tropospheric measurement locations at altitudes above 400 hPa, excluding stratospheric data, colour-coded by time lag derived from SF_6 mixing ratios with respect to the northern extra-tropical marine boundary layer north of 30° N.

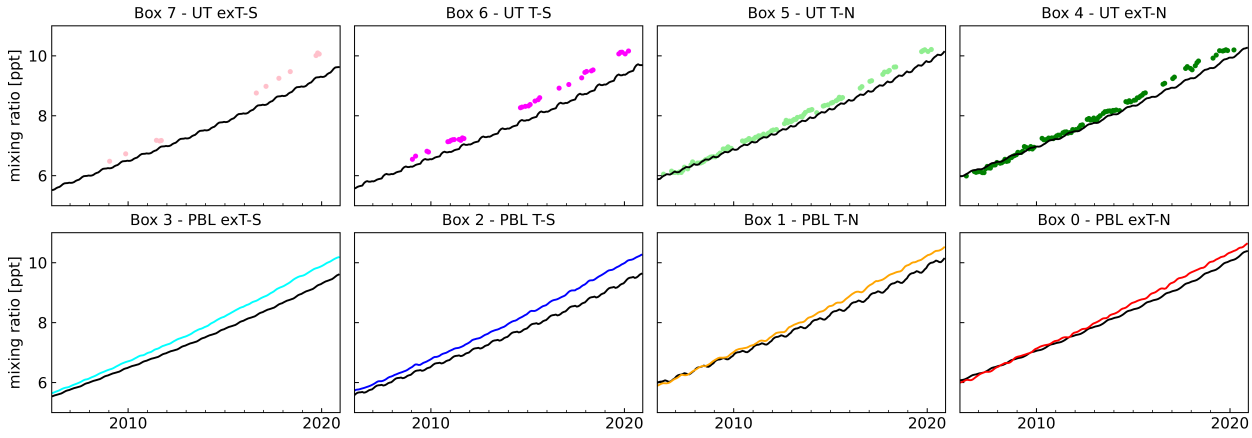

Figure S2. Comparison of mixing ratios from the AGAGE 12-box model (black lines) with aircraft observations (Boxes 4, 5, 6, 7) and measurements at observational sites (Boxes 0, 1, 2, 3).

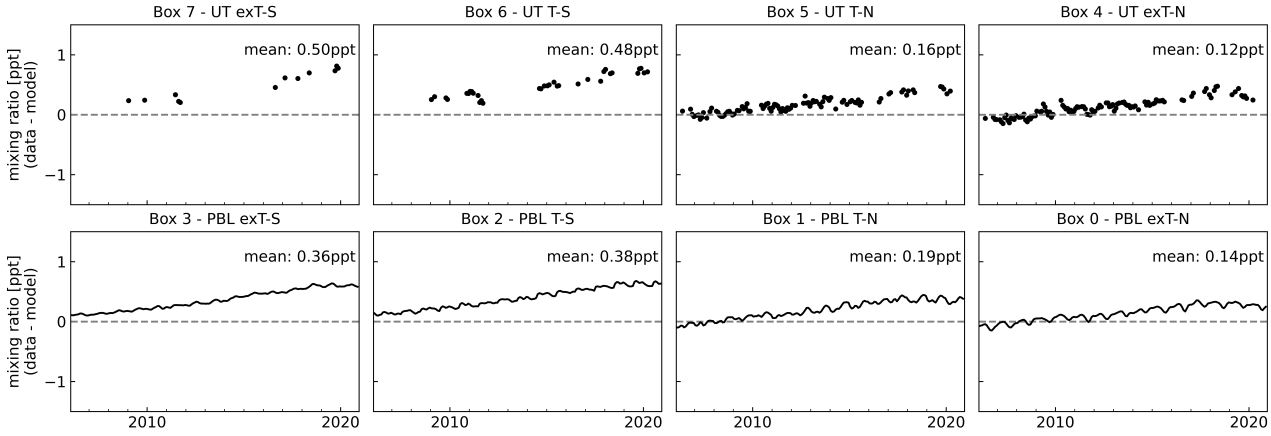

Figure S3. Mixing ratio difference per model box as a function of time.

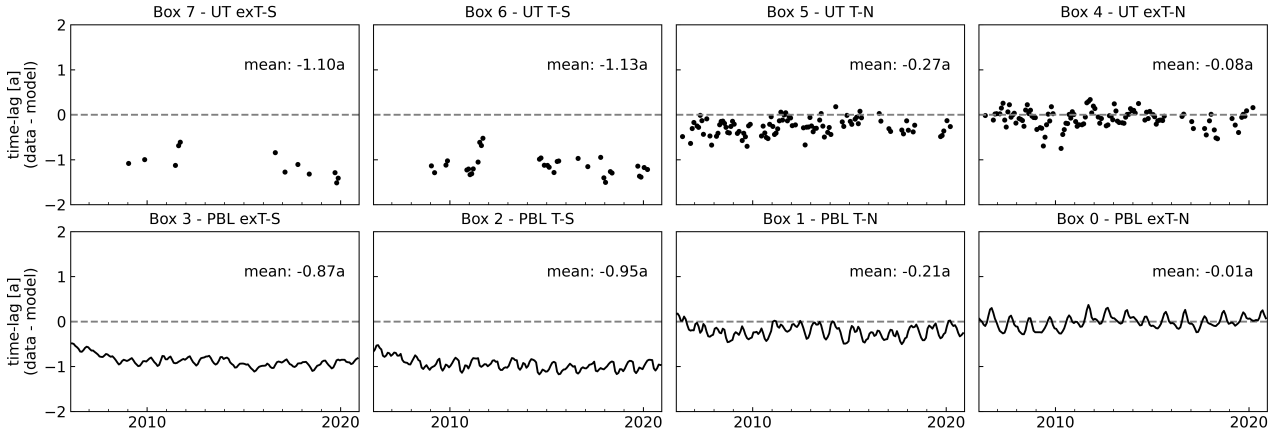

Figure S4. Time lag difference per model box as a function of time.

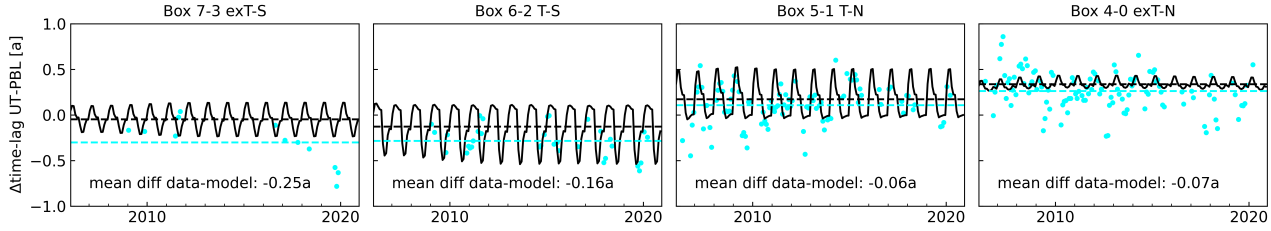

Figure S5. Time lag difference between vertically neighbouring boxes for the AGAGE 12-box model (black lines) and observations (coloured lines and symbols).

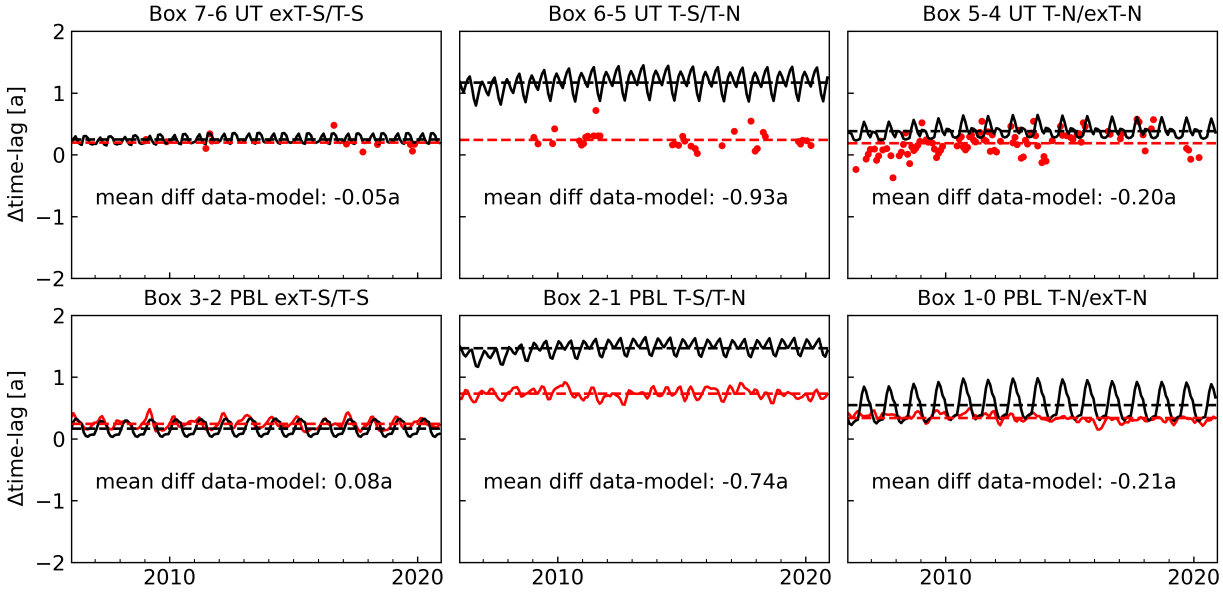

Figure S6. Time lag difference between horizontally neighbouring boxes for the AGAGE 12-box model (black lines) and observations (coloured lines and symbols).

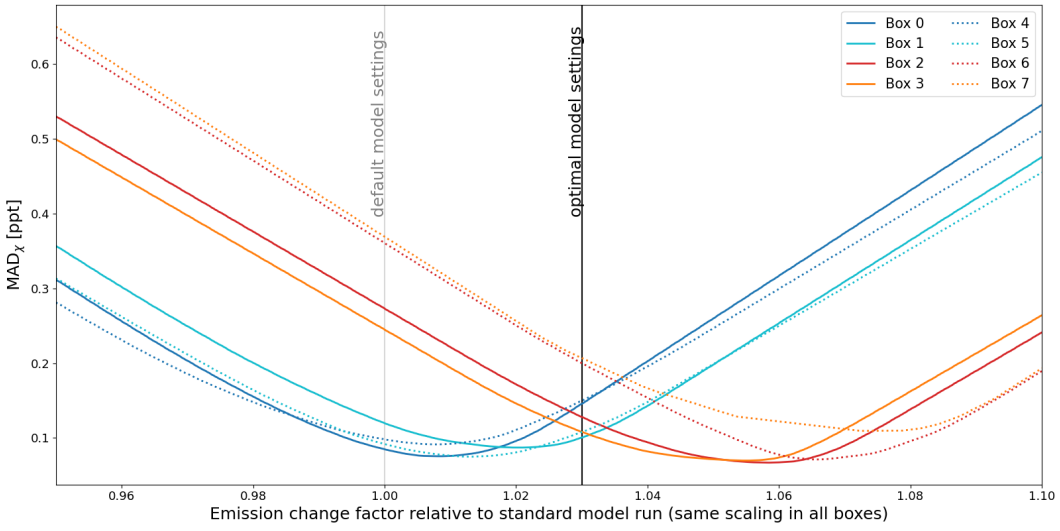

Figure S7. Mean absolute deviation of modelled and observed mixing ratios in the lower troposphere for all model boxes. The lowest overall MAD is obtained for an upscaling of EDGAR 7.0 emissions by 3.25 % indicated by the black vertical line.