



## Supplement of

## **Emissions of halocarbons from India inferred through atmospheric measurements**

Daniel Say et al.

Correspondence to: Daniel Say (dan.say@bristol.ac.uk)

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Figure S1. Average sensitivity to surface emissions from all samples collected over India across the entire NAME model domain.



**Figure S2.** Comparison of wind direction (°), as measured from the research aircraft (black circles) with those simulated by the NAME model (red circles), for each flight on a minute by minute basis. The points in time at which samples were collected are indicated by vertical purple lines.



**Figure S3.** Comparison of wind speed (m  $s^{-1}$ ), as measured from the research aircraft (black circles) with those simulated by the NAME model (red circles), for each flight on a minute by minute basis. The points in time at which samples were collected are indicated by vertical purple lines.



**Figure S4.** Comparison of posterior NCI halocarbon emissions estimates. Black bars are based on prior emissions distributed using the NOAA night lights distribution; red bars are based on prior emissions distributed using uniformly across the model domain; yellow bars are based on the NOAA night lights distribution, but has removed observations where the observed and model simulated wind speed/direction differed by more than 20% removed. Error bars represent the  $5^{th} - 95^{th}$  percentiles of the posterior PDF. Note that DCM and chloroform are presented on their own y-axis for clarity.