

Supplement of:

A multi-model intercomparison of halogenated very short-lived substances (TransCom-VSLS): linking oceanic emissions and tropospheric transport for a reconciled estimate of the stratospheric source gas injection of bromine

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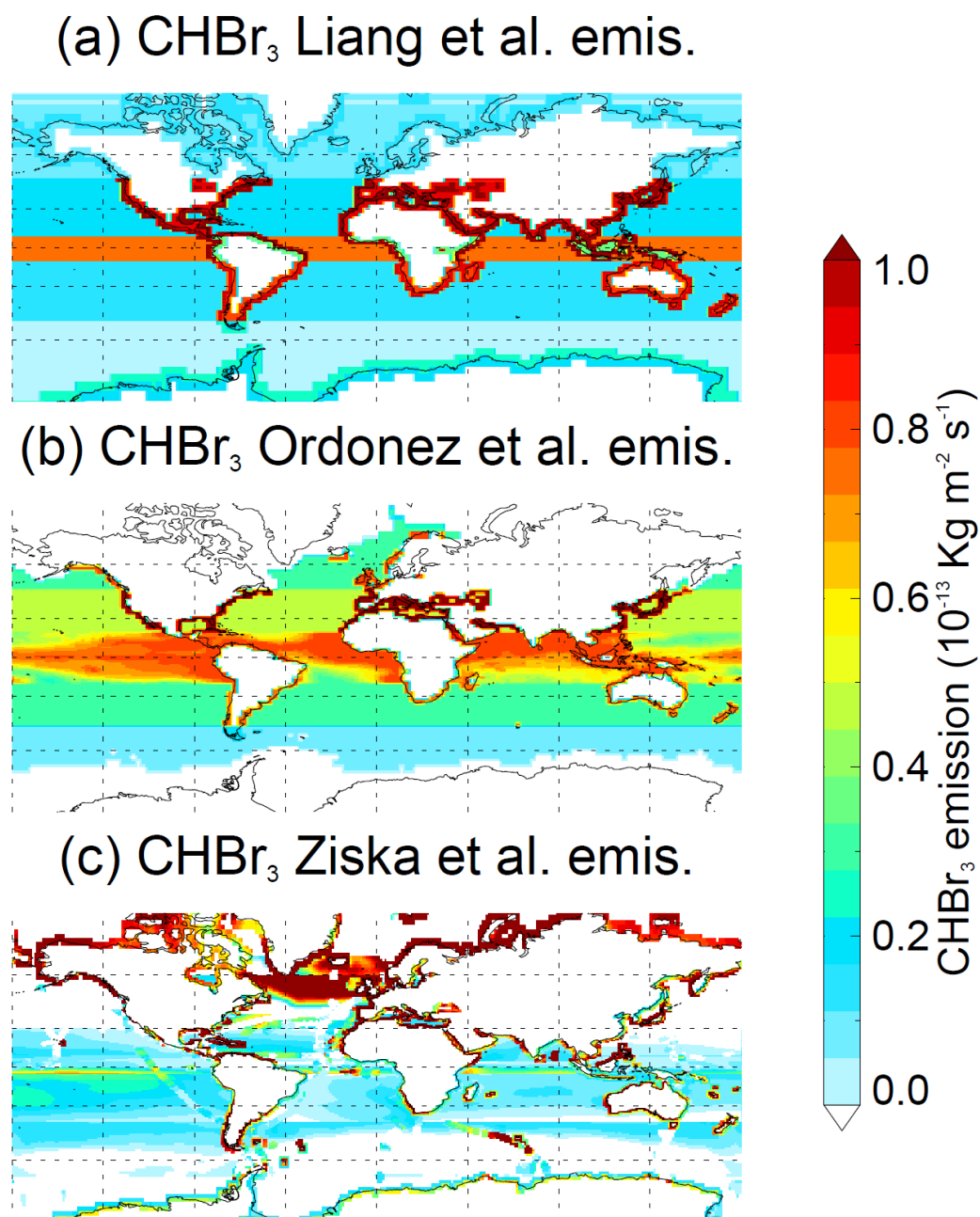
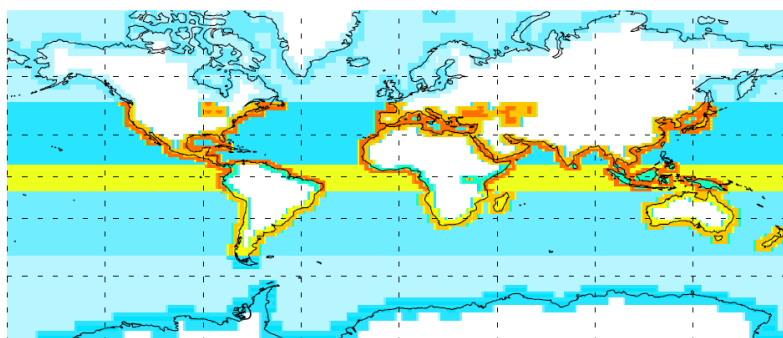
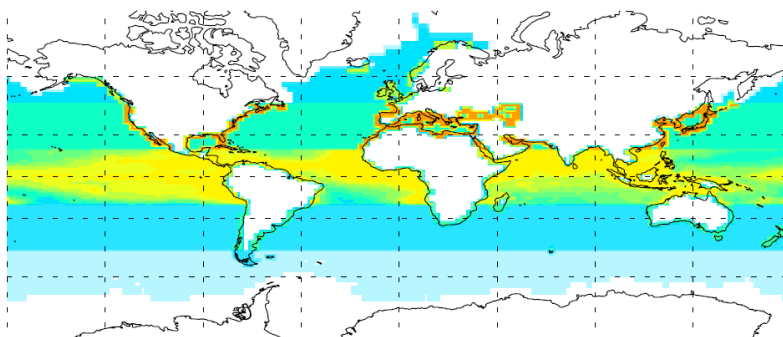


Figure S1: Bromoform (CHBr_3) surface emission field ($10^{-13} \text{ kg m}^{-2} \text{ s}^{-1}$) on $1^\circ \times 1^\circ$ grid from the (a) Liang et al. (2010), (b) Ordóñez et al. (2012) and (c) Ziska et al. (2013) inventories.

(a) CH_2Br_2 Liang et al. emis.



(b) CH_2Br_2 Ordóñez et al. emis.



(c) CH_2Br_2 Ziska et al. emis.

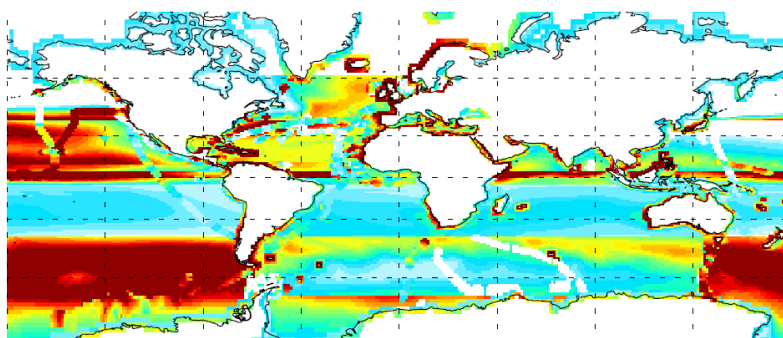


Figure S2: Dibromomethane (CH_2Br_2) surface emission field ($10^{-14} \text{ kg m}^{-2} \text{ s}^{-1}$) on $1^\circ \times 1^\circ$ grid from the (a) Liang et al. (2010), (b) Ordóñez et al. (2012) and (c) Ziska et al. (2013) inventories.

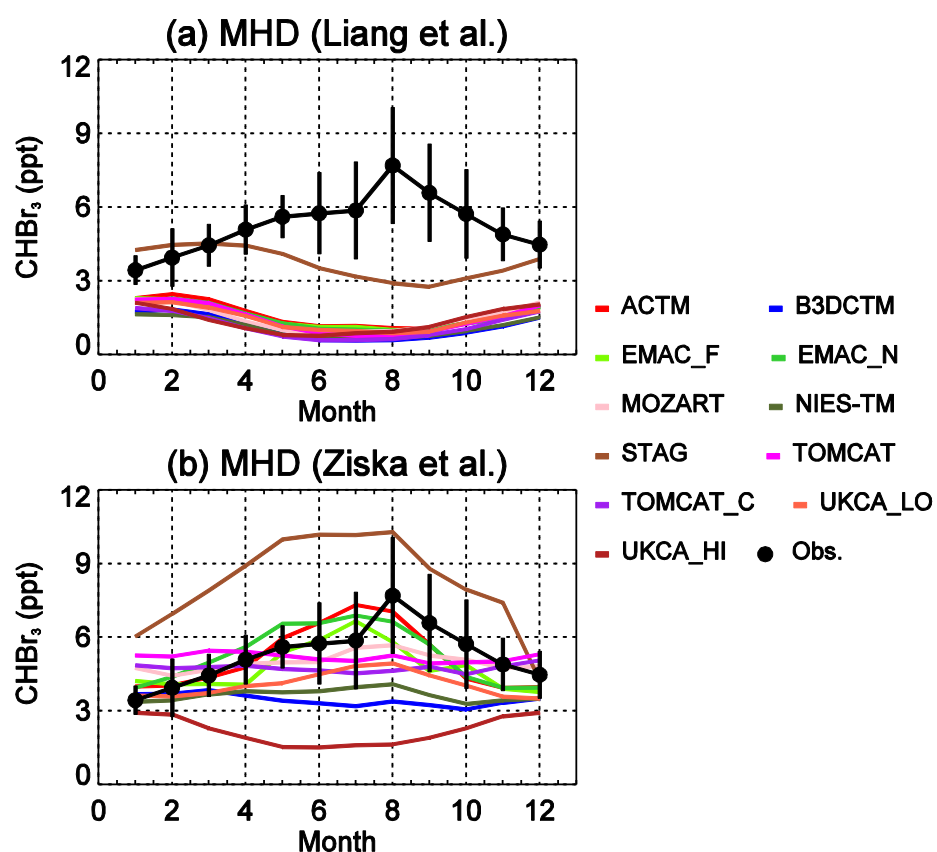


Figure S3: Comparison of observed CHBr_3 surface mixing ratio (ppt) at Mace Head (MHD) to models using (a) Liang et al. (2010) emissions inventory and (b) Ziska et al. (2013) emissions inventory. The data show climatological monthly averages. Vertical bars denote ± 1 standard deviation from the monthly mean.

Model	r
ACTM	0.79
B3DCTM	-0.64
EMAC-F	0.66
EMAC-N	0.73
MOZART	0.87
NIES-TM	0.66
STAG	0.73
TOMCAT	-0.37
TOMCAT_C	-0.52
UKCA_LO	0.87
UKCA_HI	-0.77

Table S1: Correlation coefficient (r) between the observed and simulated climatological monthly mean CHBr_3 volume mixing ratio (ppt) at Mace Head. Model output based on $\text{CHBr}_3\text{-Z}$ tracer (i.e. using aseasonal emissions inventory of Ziska et al. 2013). See main text also.