



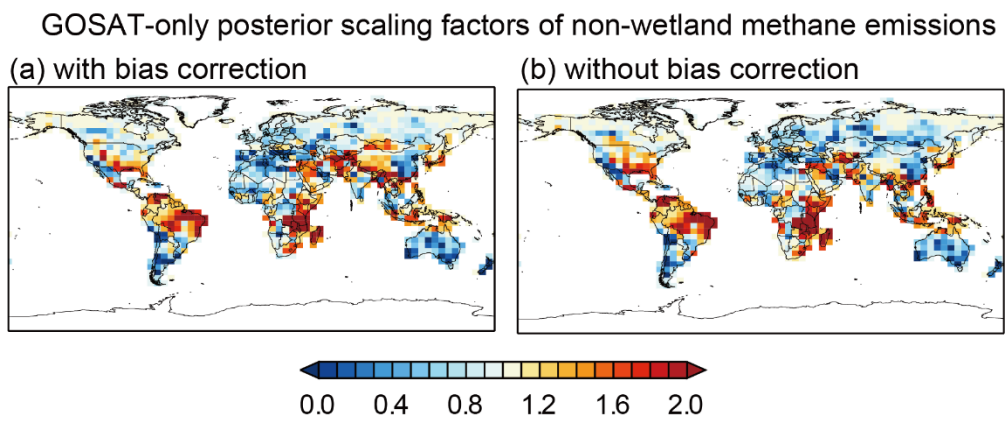
*Supplement of*

**Global methane budget and trend, 2010–2017: complementarity of inverse analyses using in situ (GLOBALVIEWplus CH<sub>4</sub> ObsPack) and satellite (GOSAT) observations**

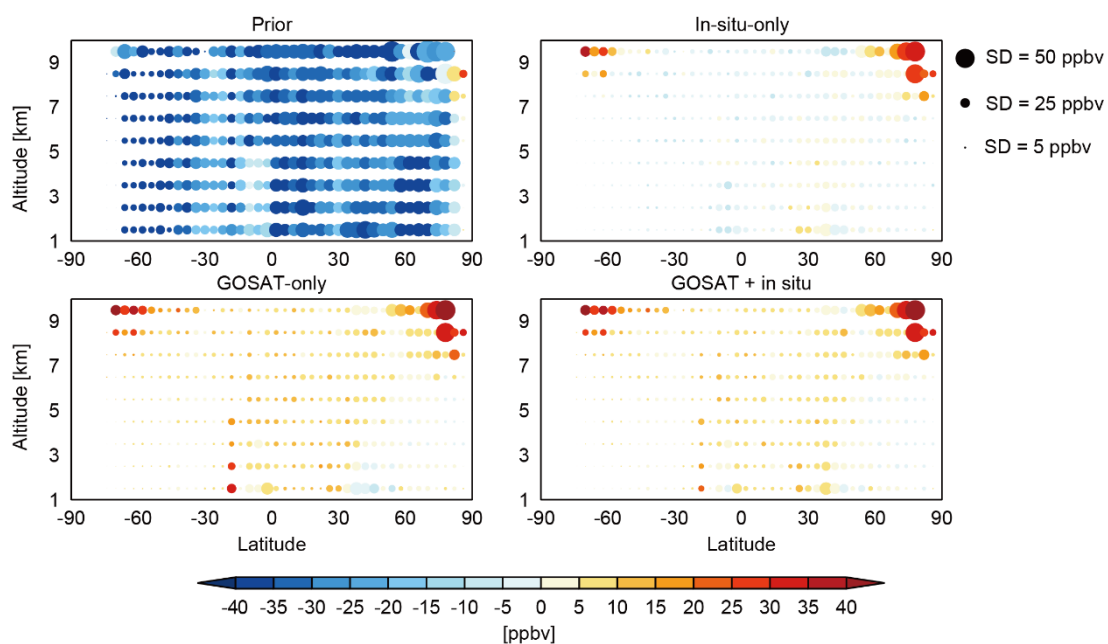
**Xiao Lu et al.**

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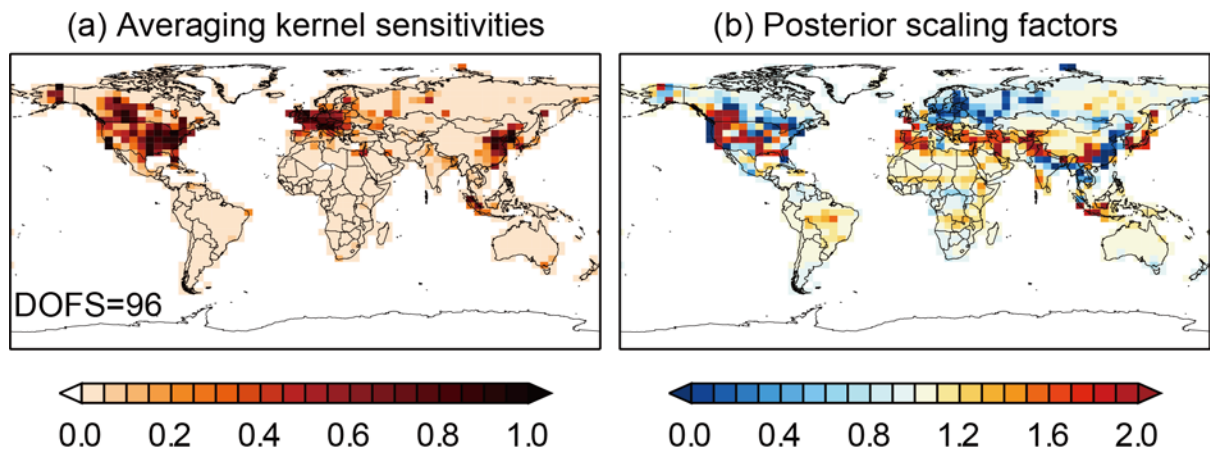
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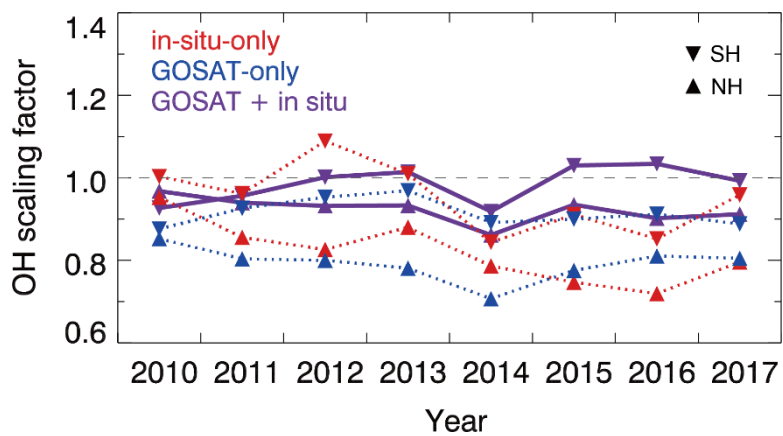
**Figure S1.** Posterior scaling factors of non-wetland methane emissions from GOSAT-only inversion (a) with GOSAT stratospheric bias corrections and (b) without GOSAT stratospheric bias corrections.



**Figure S2.** Differences between simulated and observed aircraft methane concentrations from the GLOBALVIEWplus ObsPack data product using GEOS-Chem with prior estimates and with posterior estimates from the in-situ-only, GOSAT-only, and GOSAT + in situ inversions. The size of the dots represents the standard deviation (SD).



**Figure S3.** Same as Figure 8a and 8b but from a sensitivity inversion using only surface and tower methane observations.



**Figure S4.** OH scaling factors for the Southern Hemisphere (SH) and the Northern Hemisphere (NH) from the three inversions.