Attribution of the accelerating increase in atmospheric methane during 2010–2018 by inverse analysis of GOSAT observations

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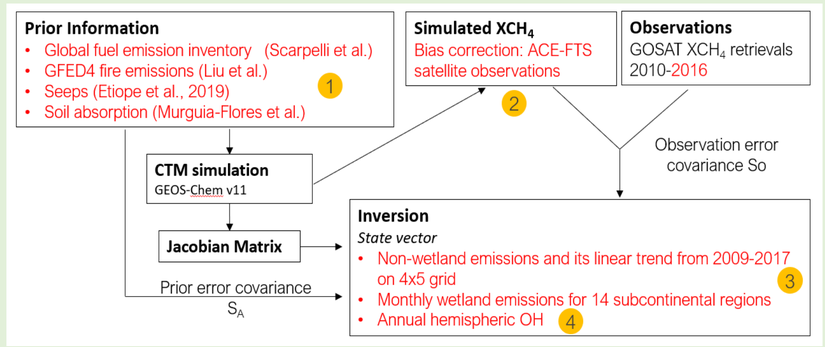
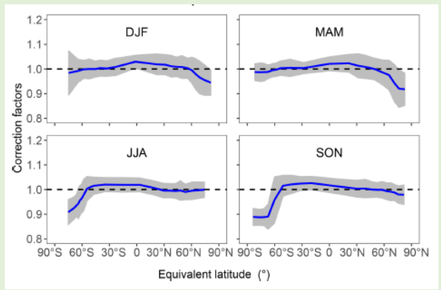
Improved inverse analysis of GOSAT data 2010-2018

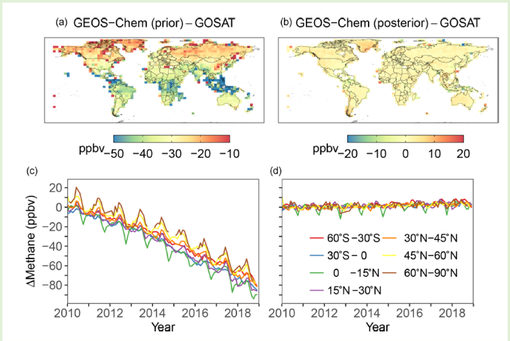


1. Best available prior information
2. New stratospheric bias correction
3. Better treatment for wetland
4. Annual hemispheric OH

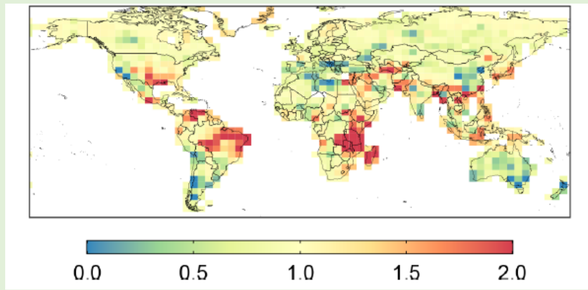
Stratospheric model bias correction using ACE-FTS



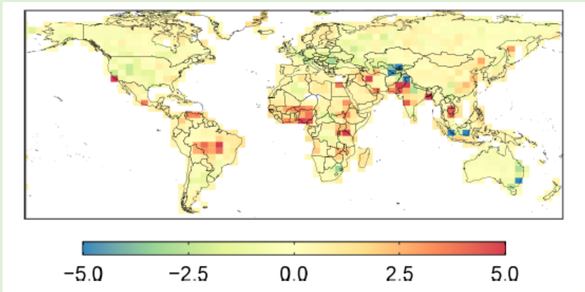
Inversion improves fit to GOSAT



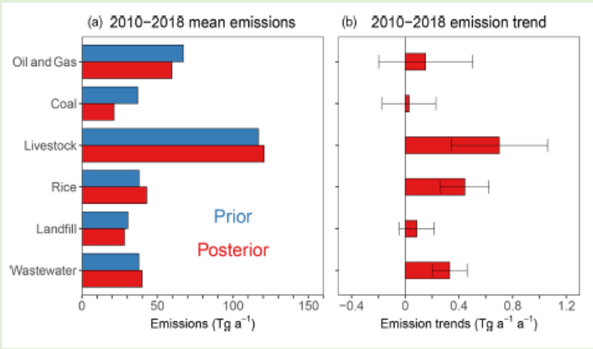
Posterior/prior emission ratios



2010-2018 linear trend (% a^{-1})



Anthropogenic emissions by sector



Attribution of annual growth rates