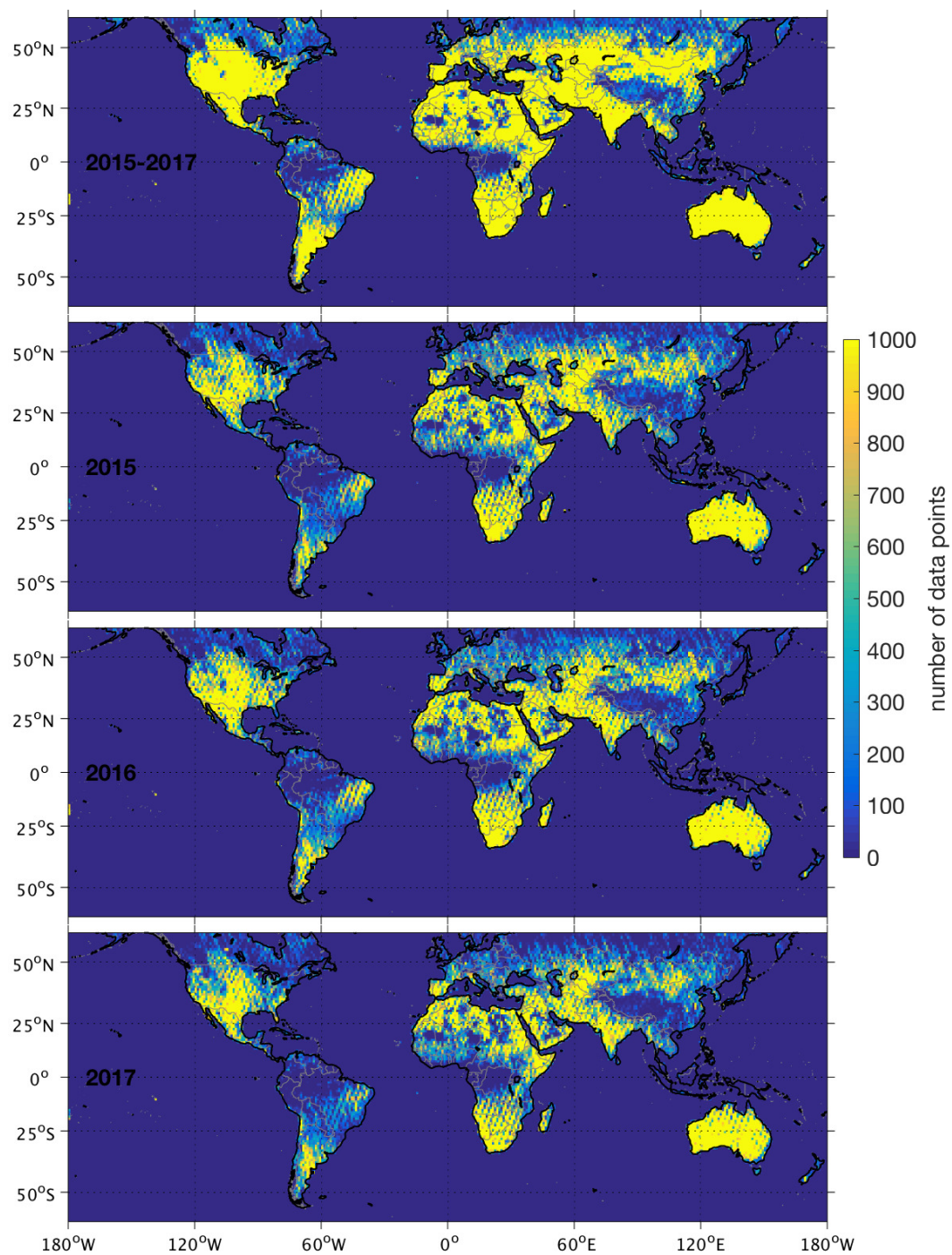


*Supplement of*

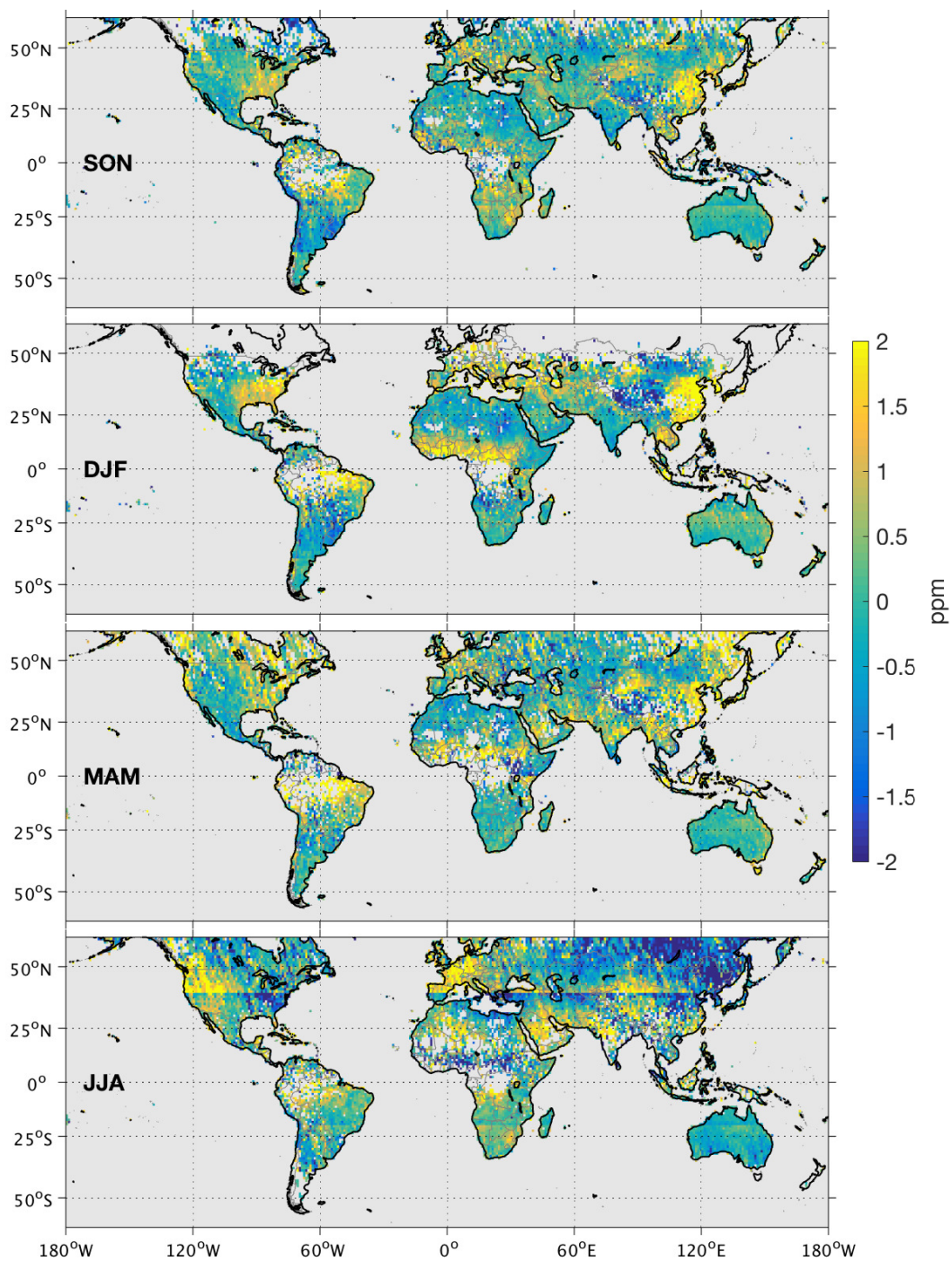
# **Global XCO<sub>2</sub> anomalies as seen by Orbiting Carbon Observatory-2**

**Janne Hakkarainen et al.**

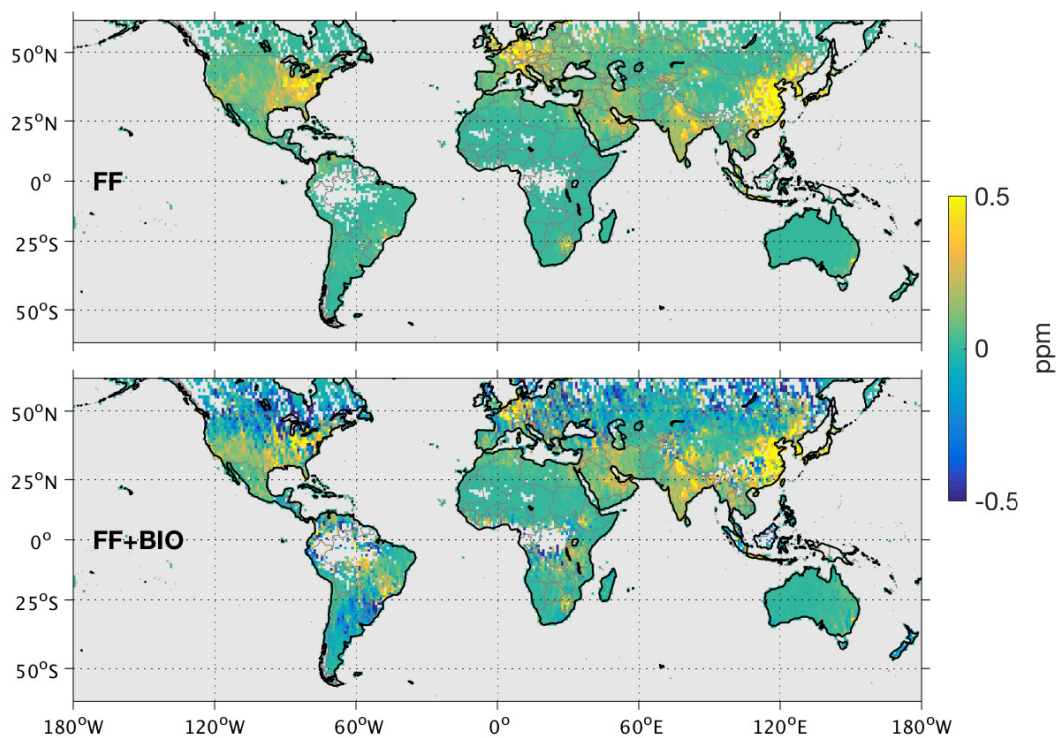
*Correspondence to:* Janne Hakkarainen (janne.hakkarainen@fmi.fi)



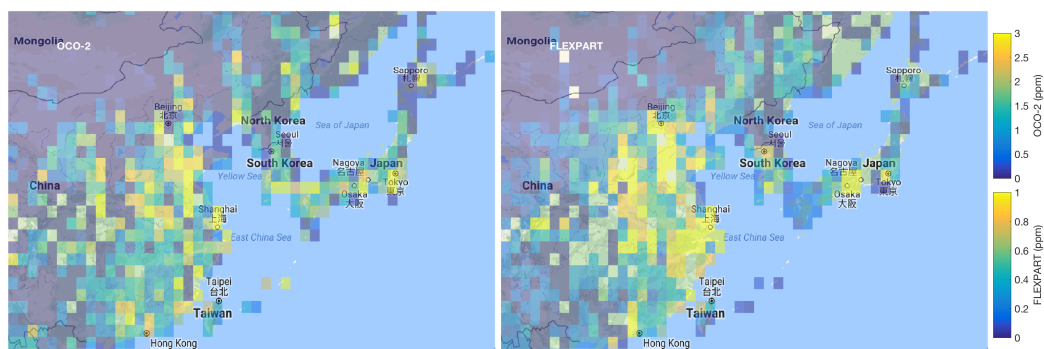
**Figure S1.** Number of data points on each  $1^\circ \times 1^\circ$  grid cell.



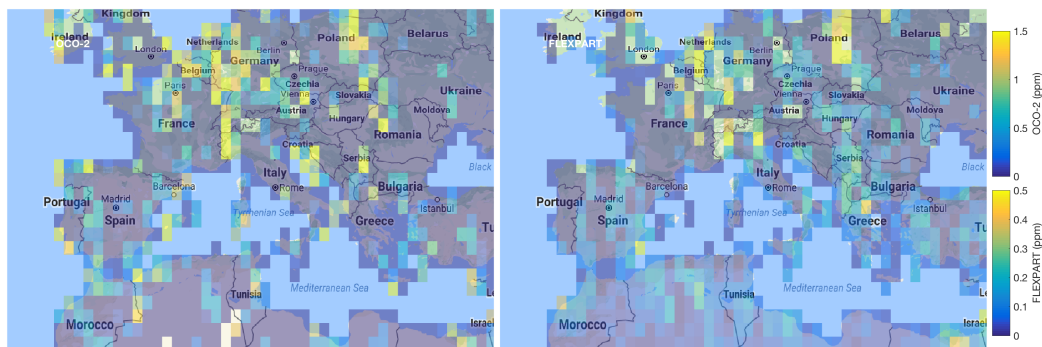
**Figure S2.** Seasonal XCO<sub>2</sub> anomalies. Same as Fig. 3, but anomalies calculated with 20-degree latitude bands.



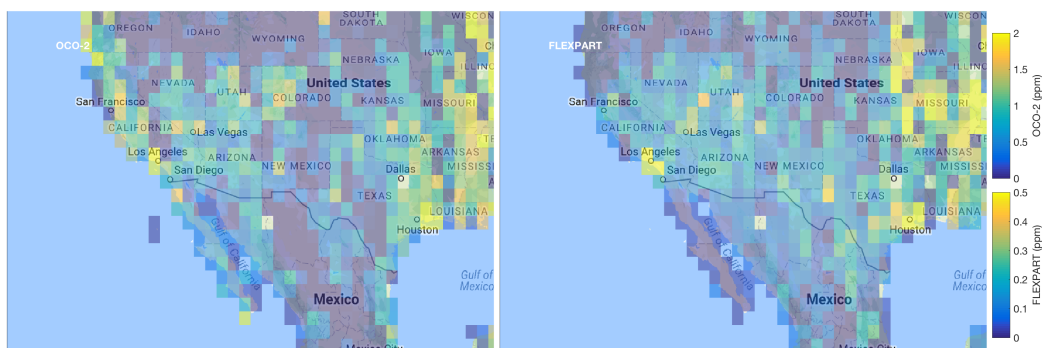
**Figure S3.** FLEXPART simulation results for the year 2016 with contribution from fossil fuel combustion (FF) only and also with biospheric component (FF+Bio). Supplementary material includes also the year 2016 and seasonal analysis.



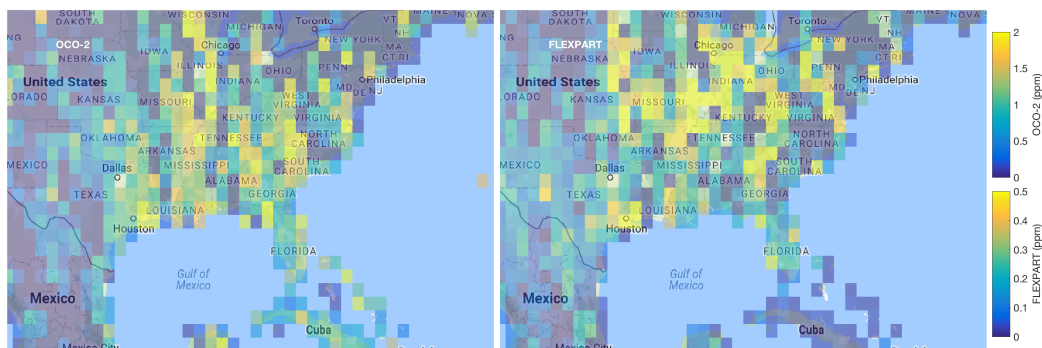
**Figure S4.** Case studies for the year 2015. OCO-2 XCO<sub>2</sub> anomalies and FLEXPART XCO<sub>2</sub> enhancements are overlapped to the Google map background.



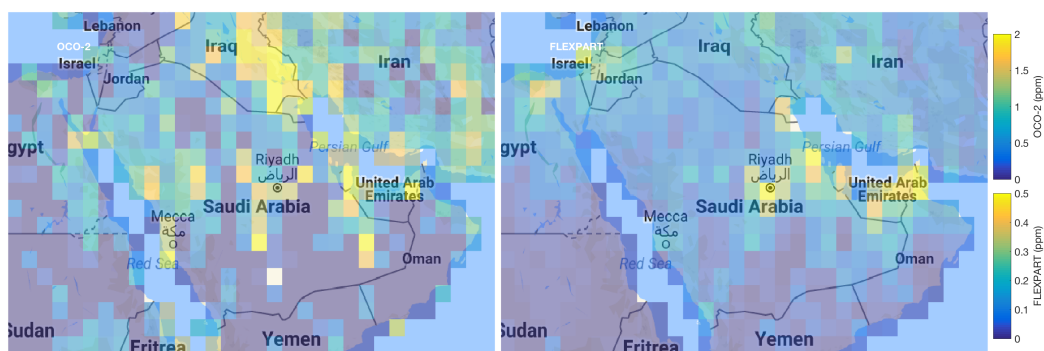
**Figure S5.** Case studies for the year 2015. OCO-2 XCO<sub>2</sub> anomalies and FLEXPART XCO<sub>2</sub> enhancements are overlapped to the Google map background.



**Figure S6.** Case studies for the year 2015. OCO-2 XCO<sub>2</sub> anomalies and FLEXPART XCO<sub>2</sub> enhancements are overlapped to the Google map background.



**Figure S7.** Case studies for the year 2015. OCO-2 XCO<sub>2</sub> anomalies and FLEXPART XCO<sub>2</sub> enhancements are overlapped to the Google map background.



**Figure S8.** Case studies for the year 2015. OCO-2 XCO<sub>2</sub> anomalies and FLEXPART XCO<sub>2</sub> enhancements are overlapped to the Google map background.