

1 **Tropospheric methanol observations from space: Retrieval**
2 **evaluation and constraints on the seasonality of biogenic**
3 **emissions**

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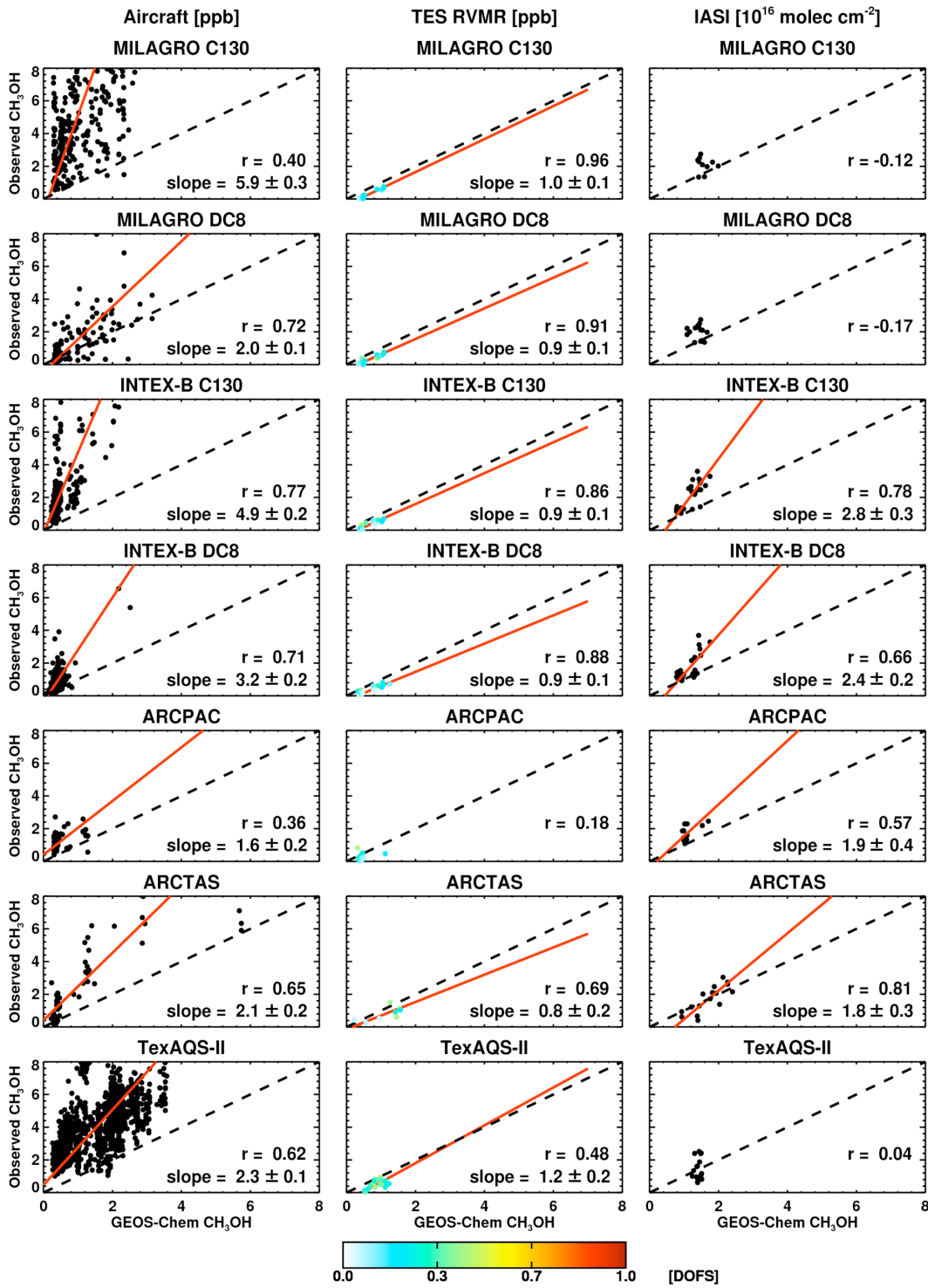
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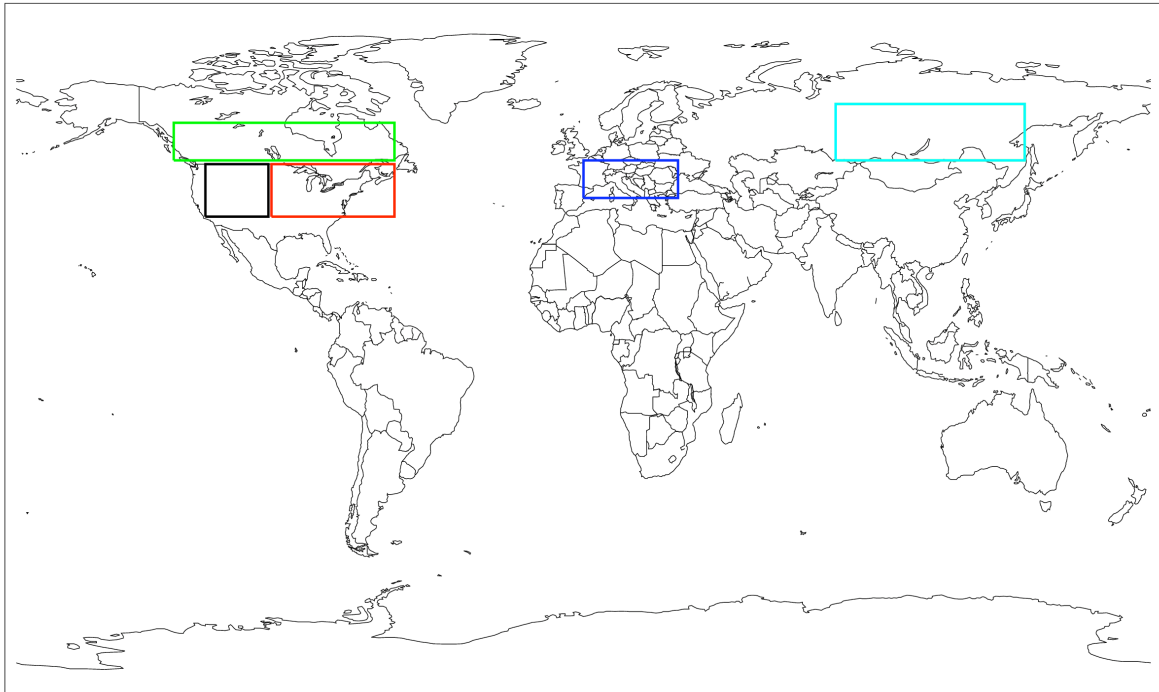
1 Supplemental Information

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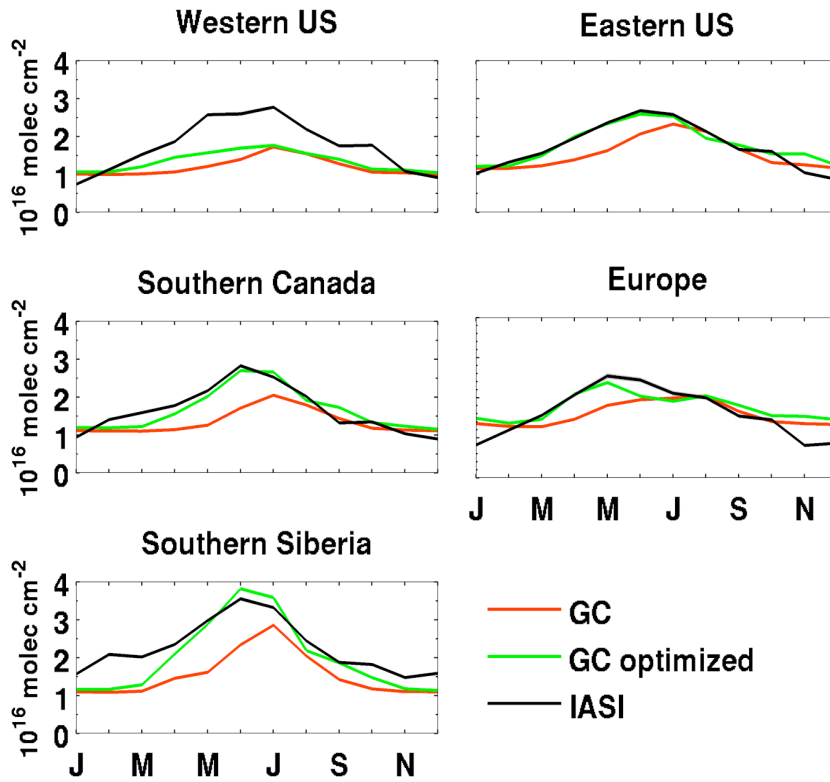


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2 Figure S1. Comparison of TES, IASI and airborne methanol measurements using GEOS-Chem as
3 an intercomparison platform. Methanol abundance as modeled by GEOS-Chem (base-case
4 simulation) is compared to aircraft (left column, ppb), TES (middle column, ppb) and IASI (right
5 column, 10^{16} molec cm^{-2}) measurements for the field campaigns shown in Fig. 2. TES data are
6 colored according to their DOFS; only DOFS < 0.5 are shown. Red lines correspond to a reduced
7 major axis fit to the data (only performed for $r > 0.25$). Uncertainty estimates correspond to the
8 standard error of the regression.
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3 Figure S2. Midlatitude regions considered in this study: Western US (black), Eastern US (red),
4 Southern Canada (green), Europe (blue), and Southern Siberia (cyan).
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3 Figure S3. Seasonal cycle in atmospheric methanol over midlatitude regions as measured by IASI
 4 (black) and predicted by the GEOS-Chem base-case (red) and optimized (green) simulations.

5 Data are for 2009. Lines show the mean for each of the midlatitude regions of Fig. S2.

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