

Supplementary Material: Emissions Probability Density

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Here we present the Probability density function (PDF) of emission from the aggregated regions shown elsewhere in the supplementary material. Figure S2 shows PDF for the regions, based on the EDGAR v4.0 emissions. The solid line shows the PDF predicted from an exponential distribution (equation 6 in the main text), with the exponential parameter equal to the inverse of the mean regional emission rate. Despite a few outliers at high emission rate, the predicted PDF is well approximated by the EDGAR regional estimates.

It is interesting to note that the PDF of the non-aggregated ($0.1^\circ \times 0.1^\circ$) EDGAR v4.0 emissions more closely approximates a power-law distribution than an exponential (not shown).

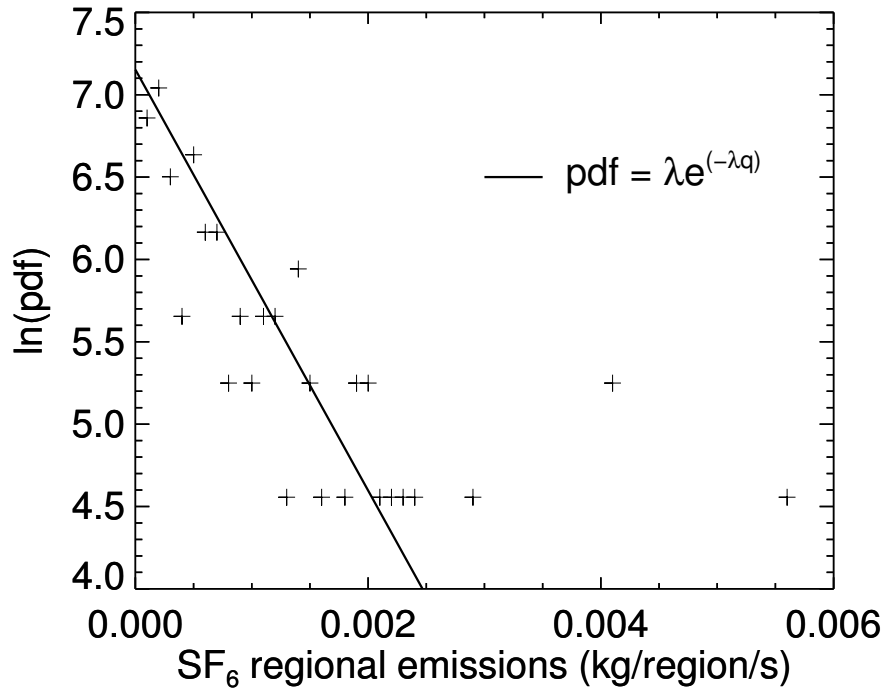


Figure S 2: Probability density function (PDF) for aggregated regional emissions (crosses). The solid line shows the PDF predicted by an exponential distribution (where $\lambda = 1/\text{mean}(q)$, q being the emissions from each region).