



Quantifying CO Emissions over South America

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Substantial uncertainties exist in present emission inventories for South America and improved techniques are needed to reduce the range of uncertainties. We are presenting an optimized CO emissions inventory for the year 2004 using a priori emissions based on daily MODIS fire counts, MOPITT CO observation and the NCAR chemistry transport model MOZART 4. The inverse technique solves for biomass burning, anthropogenic and biogenic sources of CO, while the long-range transport of CO to South America is considered through data assimilation of MOPITT CO into MOZART outside the source region. In addition to direct emissions of CO, we are investigating the contribution of CO from isoprene oxidation by tagging the production path in the model. We discuss the seasonality of the individual source terms and their contributions to the global CO budget.