

Isoprene accounts for ~50% of global emissions of non-methane volatile organic compounds. It is a major precursor of secondary organic aerosols and tropospheric ozone, impacting human health, climate and air quality. Formaldehyde satellite observations (Ω_{HCHO}) have been used to better quantify isoprene emissions (E_{ISOP}) and test current emission inventories, such as the Model of Emissions of Gases and Aerosols from Nature (MEGAN). Africa is a major source of E_{ISOP} , but has thus far received little attention.

Here we estimate E_{ISOP} for Africa using OMI HCHO observations during 2005-2009. We remove HCHO produced from biomass burning and anthropogenic sources with proxy observations from space. We identify and exclude HCHO displaced from the source of E_{ISOP} with the GEOS-Chem chemical transport model and MEGAN.

Procedure to isolate a biogenic HCHO signal from OMI and convert biogenic Ω_{HCHO} to E_{ISOP}

