

Airborne measurements of volatile organic compounds during MIRAGE-MEX

Volatile organic compounds (VOCs) were measured aboard the NCAR C-130 with the Trace Organic Gas Analyzer (TOGA) during MIRAGE-MEX. TOGA measurements were combined with whole air sample analyses from the University of California, Irvine to obtain an understanding of the distribution of non-methane hydrocarbons (NMHCs), oxygenated volatile organic compounds (OVOCs), halogenated compounds and acetonitrile, an important tracer for biomass burning in the MCMA and areas of Mexico away from the city. Emission ratios $\Delta\text{VOC}/\Delta\text{CO}$ were determined for a number of species and compared to literature values from studies done in the United States. Above the MCMA, the most abundant VOC measured was methanol followed by propane, formaldehyde, acetone, and acetaldehyde. VOCs will be discussed in terms of OH-reactivity and speculation will be given on which VOC species are the most photochemically important in and around the MCMA.

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