VOC Measurements aboard the C-130 during MILAGRO

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Measurements of volatile organic compounds (VOCs) obtained from canister samples collected on the C-130 during MILAGRO (Spring 2006) are presented here. These samples were analyzed using GC-MS/FID/ECD in order to measure non-methane hydrocarbons (NMHCs), halogenated species, and alkyl nitrates. In total 811 samples were collected on the 12 local flights flown out of Veracruz, Mexico. Not surprisingly the highest concentrations of most NMHC were measured during fly-bys of Mexico City. A maximum propane concentration of 25 ppbv was seen during local flight 8 on March 22, 2006. Correlation of butanes and pentanes with propane were extremely good for all local flights (r-squared greater than 0.90). This is due to a consistent source of these alkanes and the fact that most of the airmasses encountered were fresh. Alkyl nitrates concentrations are also analyzed in order to determine the evolution of these species.