

In-Situ Measurement of Total Alkyl- and Multifunctional Nitrates During MILAGRO

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Observations and model calculations show that alkyl and multifunctional nitrates (Σ ANs) represent 15-20% of the NO_x sink in the continental boundary layer. There are few observations or analyses of the fate of Σ ANs exported from the PBL to the free troposphere or in boundary layer air that has been aged more than a day or so. We observed Σ ANs from 1000-30,000 ft agl aboard the NASA-DC8 using Thermal Dissociation Laser Induced Fluorescence (TD-LIF) during INTEX-B. Here we describe observations during phase 1 of INTEX-B which included sampling in Mexico City and Houston, their outflow regions and over the Caribbean. The observations are compared to box model calculations of Σ ANs production and loss and to similar observations made during INTEX-NA (2004).