



Behaviour and fate of formaldehyde during the AMMA Special Observation Period in the summer of 2006

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One aim of the AMMA programme was to evaluate the impact of West Africa Monsoon (WAM) on the global atmospheric composition and climate. To achieve this objective, the gas phase has to be well characterized. Indeed, the existence of major sources of ozone precursors makes this region a significant contributor to the global oxidizing capacity of the atmosphere. Once emitted the chemical constituents and their chemical degradation products are rapidly uplifted into the free troposphere by deep convection where they are transported over long distances away from source region. This communication presents for the first time the distribution of formaldehyde concentrations during the AMMA Special Observation Period in the summer of 2006 (SOP 2a2). Indeed, formaldehyde is one of the most abundant carbonyl compound originating from both primary processes and atmospheric photooxidation of Volatile Organic Compounds. Formaldehyde is known to have a strong influence on the global mixing ratio of ozone and OH radicals, which govern the oxidative capacity of the troposphere. This is why its atmospheric concentration is often required, especially as a signature of atmospheric oxidation processes. During AMMA SOP2a2, a new off line instrumentation (AMOVOC) was deployed on both French aircraft for formaldehyde measurements. It is based on an original wet chemical technique using a diffusion scrubber at a time resolution of 10 min. We will highlight the spatial and temporal

variability of formaldehyde over the AMMA domain and its implication on tropical tropospheric chemistry.