



Photochemical activity in episodes of formation of convective clouds on the basis of radical measurements

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Peroxy radicals (HO_2 and its organic homologues RO_2) play a central role in the oxidation mechanisms of the atmosphere and in particular in the ozone photochemistry of the troposphere and lower stratosphere. They can therefore provide valuable information about the photochemical activity of air masses.

During the monsoon season in summer 2006, the total sum of peroxy radicals was measured over West Africa by the Institute of Environmental Physics of the University Bremen on board the German DLR Falcon research aircraft. The measurement technique bases on the chemical amplification of radicals and ulterior chemiluminescence detection of NO_2 . Six flights with a payload comprising in situ measurements of trace gases and aerosol properties were conducted from 4.08.2006 to 16.08.2006 in order to investigate the chemical processing of mesoscale convective systems

This presentation will analyse the observations of radicals obtained during this scientific mission with special focus on the in situ photochemical processing within convective cells.