

Clouds and aerosols detected by balloonborne lidars and backscattersondes in the UTLS during the SCOUT-AMMA campaign

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A survey of the observations obtained from lidars and backscattersondes balloon flights during the SCOUT-AMMA campaign, held in Niamey, Niger, during the west African monsoon season is presented. The deployment of the instruments aimed at the in-situ optical characterization of high altitude clouds and aerosol in the tropical UTLS, both in quiescent conditions and when intense mesoscale convective systems, which are generated in the region and travel to the West, impacted the atmospheric circulation and the transport of chemical species and aerosols in the upper atmosphere. Four backscattersonde flights and one lidar flight have been successfully carried out.

On some occasion, presence of particle scattering has been detected well above the local tropopause.

An overview of the meteoreological situation at the time of the flights and experimental observations acquired are hereby presented and discussed.