



## **Ultrafine particles in the West-African UT/LS: In-situ measurements during AMMA in the August 2006 monsoon period**

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In-situ data from the Upper Troposphere and Lower Stratosphere (UT/LS) in tropical West-Africa are scarce. During the recent field deployment of the Russian high altitude research aircraft M55-"Geophysica" in Ouagadougou (Burkina Faso) within the AMMA project measurements of ultrafine aerosol particles and cloud particles were performed at altitudes up to 19 km. The COPAS (COndensation PArticle System) from the University of Mainz and the Max-Planck-Institute for Chemistry measured ambient particle number densities for sizes larger than 6 nm, than 10 nm and 14 nm. In addition a pre-heated COPAS channel detected the number concentration of residual particles which are nonvolatile at temperatures of 250 degrees C thus providing information on particle sulfuric acid content. The obtained vertical profiles of ambient number densities and volatility from Ouagadougou are presented and juxtaposed with our tropical UT/LS measurements from Brazil (TROCCINOX, 2005) and Australia (SCOUT-O3, 2005) as the African profiles significantly differ from those in the other regions. Also the measurements from the transfer flights crossing the Sahara at 14 km and 17 km altitude are shown and compared to data on similar potential temperature levels from the transfers to Brazil and Australia.