



First wind profiler radar observations in Africa

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During AMMA (African Monsoon Multidisciplinary Analyses) field campaign three wind profilers (UHF or VHF) will be used in a continuous mode: at Bamako (Mali), Ouagadougou (Burkina-Faso) and probably Djougou (Bénin). The radar at Bamako and Ouagadougou belong to ASECNA, the civil African aviation. The Bamako UHF profiler has been working in a survey mode (for low level strong wind shear detection) since February 2004. It is the first wind profiler ever installed in Africa. At Ouagadougou the next UHF wind profiler will be made into operation in March 2005. A network of six airport UHF radar is planned in West Africa by ASECNA for a near future. EGU colloquium gives the opportunity to present the first profiler observations in Africa and discuss about the importance of such a network for the study of the different physical process affecting the lower troposphere in tropical regions. We give an example of a three-day period of observations made during the dry season, that shows the development during the night of a strong nocturnal jet. During the day, mid-level cloud convection activity prevails. Thus, the data clearly show how vertical transport occurs during daytime while horizontal advection dominates during the night.