



Longterm observation of clouds in the 4D Lindenberg column

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Since 1996 a GVaP reference station could be established at the Richard-Aßmann-Observatory, where the core instruments - a cloud radar, a Raman lidar, microwave profiler - allow the observation of water vapour variabilities and cloud properties on a routine basis. Together with additional observations (radiation, turbulent fluxes at surface, precipitation, whole sky imager, radiosounding) the development of clouds, the occurrence of clouds, their microphysical properties and the end of the clouds can be monitored in the 4D Lindenberg column. This column is located at Lindenberg (South-East of Berlin) and has the extension of 20x20x40km. The time resolution to characterise the cloud life cycle of individual clouds is up to 1 minute. Thus, detailed cloud studies can be carried out. In this presentation, some examples of specific cloud events will be presented. This will also give a detailed view to all measurements of the longterm measuring programme at the Lindenberg site.