



Global patterns of the temperature dependence of cloud cover and humidity derived from satellite observations

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From new UV/vis satellite instruments like GOME and SCIAMACHY it is possible to retrieve the total column precipitable water over both oceans and continents with similar sensitivity. In addition, it is also possible to derive information on cloud properties from the measured absolute intensity and the absorption of atmospheric O₂. From GOME observations we analysed global time series of these quantities from 1996 to 2003. We calculated monthly mean anomalies and correlated them to the monthly anomalies of the surface near temperature. Such investigations allow to derive information on the feedback mechanisms. We find a substantial positive correlation between temperature and the total column precipitable water almost over the whole globe. In contrast, the correlation between the temperature and cloud properties shows areas of both positive and negative correlations.