



Synoptic typing and its application to the investigation of weather - air pollution relationships in Kuwait

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Principal components analysis and cluster analysis of surface meteorological data were used to derive the different air mass types for Kuwait. The air mass types were analysed in terms of their mean meteorological and associated weather chart characteristics in order to relate them to their different synoptic situations. The air mass types were subsequently analysed with air pollutant concentration data. Here we report on the identified air mass types, their seasonal dependence and their pollution characteristics. Analysis of the air mass types according to pollutant mean and extreme values helps to identify the different meteorological and transport conditions influencing pollution in this region.